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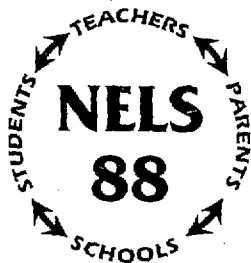
User's Manual

March 1995

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National Education Longitudinal Study of 1988

## Second Follow-Up: Transcript Component Data File User's Manual



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"The purpose of the Center shall be to collect, and analyze, and disseminate statistics and other data related to education in the United States and in other nations."—Section 406(b) of the General Education Provisions Act, as amended (20 U.S.C. 1221e-1).

March 1995

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## Foreword

This manual has been produced to familiarize data users with the procedures followed for data collection and processing of the high school transcript component of the National Education Longitudinal Study of 1988 (NELS:88). A corollary objective is to provide the necessary documentation for use of the data files.

Use of the data set does not require the analyst to be a statistician or sophisticated computer programmer. Most social scientists and policy analysts should find the data set organized in a manner that facilitates straightforward production of statistical summaries and analyses. This manual provides extensive documentation of the content of the data files and how to use them. **Chapter VI and Appendix F, in particular, contain essential information that allows the user to immediately proceed with minimal startup cost. A careful reading of Chapter VI and Appendix F will help users to avoid common mistakes that result in costly computer job failures or incorrect results.**

The rest of the manual provides a wide range of information on the National Education Longitudinal Study of 1988 (NELS:88). Chapter I begins with an overview and history of NCES's National Education Longitudinal Studies program and the various studies that it comprises. Chapter II contains a description of the data collection materials and procedures used in the NELS:88 second follow-up transcript component. Appendix N contains information about data collection instruments, procedures, and results for the second follow-up student and dropout surveys.

The sample design and weighting procedures used in the second follow-up are documented in Chapter III, as well as non-sampling measurement errors and problematic variables. Appendix O describes sample design and weighting procedures for the base year and first follow-up studies.

Chapter IV describes data control and data preparation activities such as monitoring receipt of transcripts, data entry and coding, and retrieval and archiving. Data processing, including the conversion of transcript data to machine-readable form, machine editing, and construction of the merged, clean data tapes is the subject of Chapter V. Finally, Chapter VI describes the organization and contents of the data files and provides important suggestions for using them.

Additional appendices contain printouts of the transcript data entry screens; specifications for weights, flags, and composite variables included on the transcript file; lists of CSSC courses included in course credit summary composite variables; and complete lists of CSSC codes and primary titles, sorted by code and by course title. Codebooks for the transcript data constitutes Appendix I.

Earlier NCES longitudinal studies that may be of interest to NELS:88 users are also described in Appendix B of *NELS:88 Second Follow-Up: Student Component Data File User's Manual*. They include: the High School and Beyond (HS&B) base year files; merged HS&B first, second, third and fourth follow-up files; related HS&B files; and assorted files related to the National Longitudinal Study of the High School Class of 1972 (NLS-72).

## **A Note on Data Use and Confidentiality**

The NELS:88 second follow-up data files are released in accordance with the provisions of the General Education Provisions Act (GEPA) [20-USC 122e 1] and the Carl D. Perkins Vocational Education Act. The GEPA assures privacy by ensuring that respondents will never be individually identified.

The National Center for Education Statistics (NCES) is responsible under Public Law 100-297 for protecting the confidentiality of individually identifiable respondents, and is releasing this data set to be used for statistical purposes only. Record matching or deductive disclosure by any user is prohibited.

To ensure that the confidentiality provisions contained in PL 100-297 and the Privacy Act have been fully implemented, procedures commonly applied for disclosure avoidance in other Government-sponsored surveys were used in preparing the data files associated with this manual. These include suppressing, abridging, and recoding identifiable variables. Every effort has been made to provide the maximum research information that is consistent with reasonable confidentiality protections. Deleted, abridged, and/or recoded variables appear with an explanatory footnote in the codebook attached to each user's manual.

For confidentiality reasons, the transcript data file is available only on a restricted use basis, under a signed licensure agreement with NCES.

## **Acknowledgements**

A study such as this is built first and foremost upon the students, dropouts, teachers, school administrators, and parents who have so generously provided its basic data. We are grateful for their cooperation. We also thank the considerable numbers of school personnel who have assisted in the implementation of NELS:88.

We are also grateful to the members of NCES staff in the Longitudinal and Household Studies Branch who worked closely with us on this project. Jeffrey Owings, chief of the Longitudinal and Household Studies Branch; Peggy Quinn, project officer for the second follow-up; as well as other branch staff--Ralph Lee, Shi-Chang Wu, and Jerry West--who contributed to various aspects of this study. Bob Burton of the Statistical Standards and Methodology Division supplied statistical advice and review. Marilyn McMillen provided technical review of this document.

We would like to express our appreciation to the members of what began in the base year as our National Advisory Panel, and became in 1989 the NELS:88 Technical Review Panel. The panelists--Jerald G. Bachman, Gordon Ensign, Lyle V. Jones, Nancy Karweit, Richard J. Murnane, Patricia Shell, Marshall S. Smith, and John Stiglmeier--provided wise counsel on many difficult issues of design, instrumentation and implementation. As consultants to the second follow-up, Aaron Pallas, Joan Talbert, the late Leigh Burstein, Anthony Bryk, Barbara Schneider, and Senta Raizen also contributed importantly to the design and ultimate success of the study.

We would also like to thank Stanley Legum and Nancy Caldwell of Westat, Inc. for invaluable information related to the 1987 and 1990 NAEP High School Transcript Studies. The project also benefitted from the comments and suggestions of John Tuma of MPR Associates, Ken Rasinski of NORC, Becky Hayward of the Research Triangle Institute, and Robert H. Meyer of the University of Chicago.

Steven J. Ingels was overall NELS:88 second follow-up project director. Katy Dowd was associate project director responsible for the transcript component, with John Taylor serving as the transcript survey task leader and Lisa Thalji as associate project director responsible for securing school cooperation and locating NELS:88 cohort members. Terri Migler served as the financial manager for the second follow-up. Laura Reed and Virginia Bartot were the data processing managers, and Martin R. Frankel was the task leader for sampling and statistics. Susan Heine and Bronwyn Nichols supervised transcript data entry and course coding.

The authors also wish to acknowledge those who contributed to the production of this manual. Doug Barge, Michael Ma, Gloria Rauens, Supriti Sehra, Shio-Ling Tsai-Ma, and Hsiuling Young provided a great deal of their time and expertise to produce the statistics reported throughout the manual.

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## I. Introduction

This manual provides guidance and documentation for users of the data for the transcript component of the National Education Longitudinal Study of 1988 (NELS:88). Information about the purpose of the study, data collection materials, sample design, data collection, and data processing procedures is presented in the manual. This chapter describes the purpose of the transcript survey, its sample design, and the structure of the transcript data files, and offers an overview of the National Center for Education Statistics' National Education Longitudinal Studies Program. More detailed information about NELS:88 study objectives, base year, first follow-up, and second follow-up study and sample design, and data tapes and documentation may be found in the first chapter of the *NELS:88 Second Follow-Up: Student Component Data File User's Manual*.

### 1.1 The NELS:88 Second Follow-Up Transcript Survey

The NELS:88 second follow-up transcript data set is a unique information source supporting a wide spectrum of analyses. Transcript data, when merged with student and dropout data from the base year and first and second follow-up surveys and the contextual data files (school administrator, teacher, and parent) provide a valuable framework for the analysis of academic persistence and educational outcomes in relation to tracking, course-taking, and curriculum exposure. Transcripts furnish reliable and objective indicators of educational outcomes, as measured by course grades and credits, and provide key data points for the years (1989 and 1991) in which sample members were not surveyed. NELS:88 transcript data will further provide a baseline against which future outcomes can be compared (for example, they can be used to quantify the degree to which high school course-taking is predictive of persistence and achievement in postsecondary education, or of later position in the occupational structure).

The transcript data set may also be used in stand-alone analyses of course-taking and curriculum exposure for various NELS:88 longitudinal panels and cross-sectional cohorts. Furthermore, NELS:88 transcript data will illuminate trends when contrasted to the 1982 HS&B high school transcript study and the 1987 and 1990 National Assessment of Educational Progress (NAEP) high school transcript studies.

### 1.2 The Second Follow-Up Transcript Survey Sample

Transcript data spanning the three or four years of high school (ninth or tenth through twelfth grades) were collected for 1) students attending, in the spring of 1992, one of the second follow-up contextual schools;<sup>1</sup> 2) all dropouts and dropouts in alternative programs who had attended high school for a minimum of one term; 3) all early graduates, regardless of whether they attended one of the contextual schools; and 4) triple ineligibles enrolled in the twelfth grade in the spring of 1992, regardless of whether they attended a contextual school. Triple ineligibles are sample members who were ineligible for the base year, first follow-up, and second follow-up surveys due to mental or physical disability, or language barrier. The transcript data collected from schools included student-level data (e.g., number of days absent per school year, standardized test scores) and complete course-taking histories. Complete high school course-taking records were, of course, obtained only for those transcript survey sample members who graduated by the end of the spring term of 1992; incomplete records were collected for sample members who had dropped out of school, had fallen behind the modal progression sequence, or were enrolled in a special education program requiring or allowing more than twelve years of schooling.

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<sup>1</sup> Schools selected for the contextual components of the second follow-up--the school administrator and teacher surveys--are referred to as *contextual* schools. Sample members enrolled in those schools are referred to as *contextual* students.

### 1.3 Structure of the Transcript Component Data Files

Two data files, the student file and the course file, constitute the transcript component data set. The student file contains one record for every sample member for whom a transcript was collected. The student record includes the student identification number; transcript survey weight; student-level variables abstracted from transcripts (e.g., number of absences per school year, class rank, class size); flags and composites copied from the base year, first follow-up, and second follow-up student component data files; and flags and composites constructed from course-level data (e.g., F2RENG\_C, total number of Carnegie units earned in English courses). The course file contains one record for every secondary school course taken by sample members on the student file. Course records consist of the student identification number, the term and course identification number sequentially assigned to the course by the data entry program, and course-specific variables, including course title, course code (assigned from the Classification of Secondary School Courses), grade level at the time the course was taken, credits earned, and grade. Student and course files may be merged using student identification numbers.

### 1.4 Overview

#### 1.4.1 NCES's National Education Longitudinal Studies Program

The U.S. Department of Education's National Center for Education Statistics (NCES) is mandated to "collect and disseminate statistics and other data related to education in the United States" and to "conduct and publish reports on specific analyses of the meaning and significance of such statistics" (Education Amendments of 1974-Public Law 93-380, Title V, Section 501, amending Part A of the General Education Provisions Act).

Consistent with this mandate and in response to the need for policy-relevant, time-series data on nationally representative samples of elementary and secondary school students, NCES instituted the National Education Longitudinal Studies (NELS) program. The general aim of the NELS program is to study the educational, vocational, and personal development of students at various grade levels, and the personal, familial, social, institutional, and cultural factors that may affect that development. The NELS program currently consists of three major studies: the National Longitudinal Study of the High School Class of 1972 (NLS-72); High School and Beyond (HS&B); and the National Education Longitudinal Study of 1988 (NELS:88). Taken together, these studies represent the educational experience of youth from three decades--the 1970s, 1980s, and 1990s. Figure 1-1 illustrates the increasing number of issues that have become part of NCES's National Education Longitudinal Studies research agenda. A brief description of these issues is followed by a review of NELS:88.

#### 1.4.2 The National Longitudinal Study of the 1970s: NLS-72

The first of the NELS projects, the National Longitudinal Study of the High School Class of 1972 (NLS-72), began in the spring of 1972 with a survey of a national probability sample of 19,001 seniors from 1,061 public, secular private, and church-affiliated high schools. The sample was designed to be representative of the approximately three million high school seniors enrolled in more than 17,000 schools in the spring of 1972. Each sample member was asked to complete a student questionnaire and a 69-minute test battery. School administrators were also asked to supply survey data on each student, as well as information about the schools' programs, resources, and grading systems. (Transcript data provided by school administrators in the NLS-72 base year survey included the student's high school grade average, college admission test scores [SAT, ACT], courses taken, and major course of study.) Five follow-ups, conducted in 1973, 1974, 1976, 1979, and 1986, have been completed.

In addition to background information, the NLS-72 base year and follow-up surveys collected data on respondents' educational activities, such as schools attended, grades received, and degree of satisfaction with their educational institutions. Participants were also asked about work experiences, periods of unemployment, job satisfaction, military service, marital status, and children. Attitudinal information on self-concept, goals, participation in political activities, and ratings of their high schools are other topics for which respondents have supplied information.

### 1.4.3 High School and Beyond of the 1980s: HS&B

The next major longitudinal study sponsored by NCES was High School and Beyond. HS&B was initiated in order to capture changes that had occurred in education-related and more general social conditions, in federal and state programs, and in the needs and characteristics of students since the time of the earlier survey. Thus, HS&B was designed to maintain the flow of education data to policymakers at all levels who need to base their decisions on data that are reliable, relevant, and current.

Base year data collection was conducted in the spring of 1980. Students were selected using a two-stage probability sample with schools as the first-stage units and students within schools as the second-stage units. Unlike NLS-72, HS&B included cohorts of both tenth and twelfth graders. Since the base year data collection in 1980, four follow-ups of the HS&B cohorts have been completed: one in the spring of 1982; one in the spring of 1984; one in the spring of 1986, and (for the sophomore cohort only) one in the spring of 1992. High school transcripts were collected for a subsample comprising 15,941 members of the tenth-grade cohort in the fall of 1982, as part of the first follow-up survey.

The four NELS program cohorts (NLS-72 seniors, the HS&B sophomores and seniors, and NELS:88 eighth graders) are displayed in Figure 1-2 according to their initial and subsequent survey years and their modal age at the time of each survey. As illustrated, NLS-72 seniors were first surveyed in 1972 at age eighteen and have been resurveyed five times since, with the last survey occurring in 1986, when these respondents were about thirty-two years of age. The HS&B cohorts have been surveyed at points in time that would permit as much comparison as possible with the time points selected for NLS-72. NELS:88 is designed to fit into this larger analytical scheme. The NELS:88 first follow-up sophomore class of 1990 parallels the HS&B sophomore class of 1980; similarly, the second follow-up senior class of 1992 will parallel the 1980 and 1982 HS&B, and 1972 NLS-72 senior classes.<sup>2</sup>

## 1.5 The National Education Longitudinal Study of 1988: Overview

The base year of the National Education Longitudinal Study of 1988 (NELS:88) represented the first stage of a major longitudinal effort designed to provide trend data about critical transitions experienced by students as they leave elementary school and progress through high school and into postsecondary institutions or the work force. This study of the 1988 eighth-grade cohort collects data about educational processes and outcomes pertaining to student learning, early predictors of dropping out,

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<sup>2</sup> Note, however, that the HS&B 1980 sophomore cohort in 1982 does not strictly constitute a representative sample of the nation's 1982 seniors, but rather a representative sample of 1980 sophomores two years later. Because of the sample freshening that took place in NELS:88 (but not in HS&B), the subset of NELS:88 sample members who were high school seniors in the spring of 1992 are nationally representative of seniors and are comparable to the NLS-72 and HS&B 1980 probability samples of twelfth graders. See Ingels and Baldrige, 1994, *Conducting Trend Analyses of NLS-72, HS&B and NELS:88 Seniors*, NCES, and Appendix A of this manual for a more complete discussion of cohort comparability issues.

Figure 1-1: Development of key research issues for the NCES National Education Longitudinal Studies Program

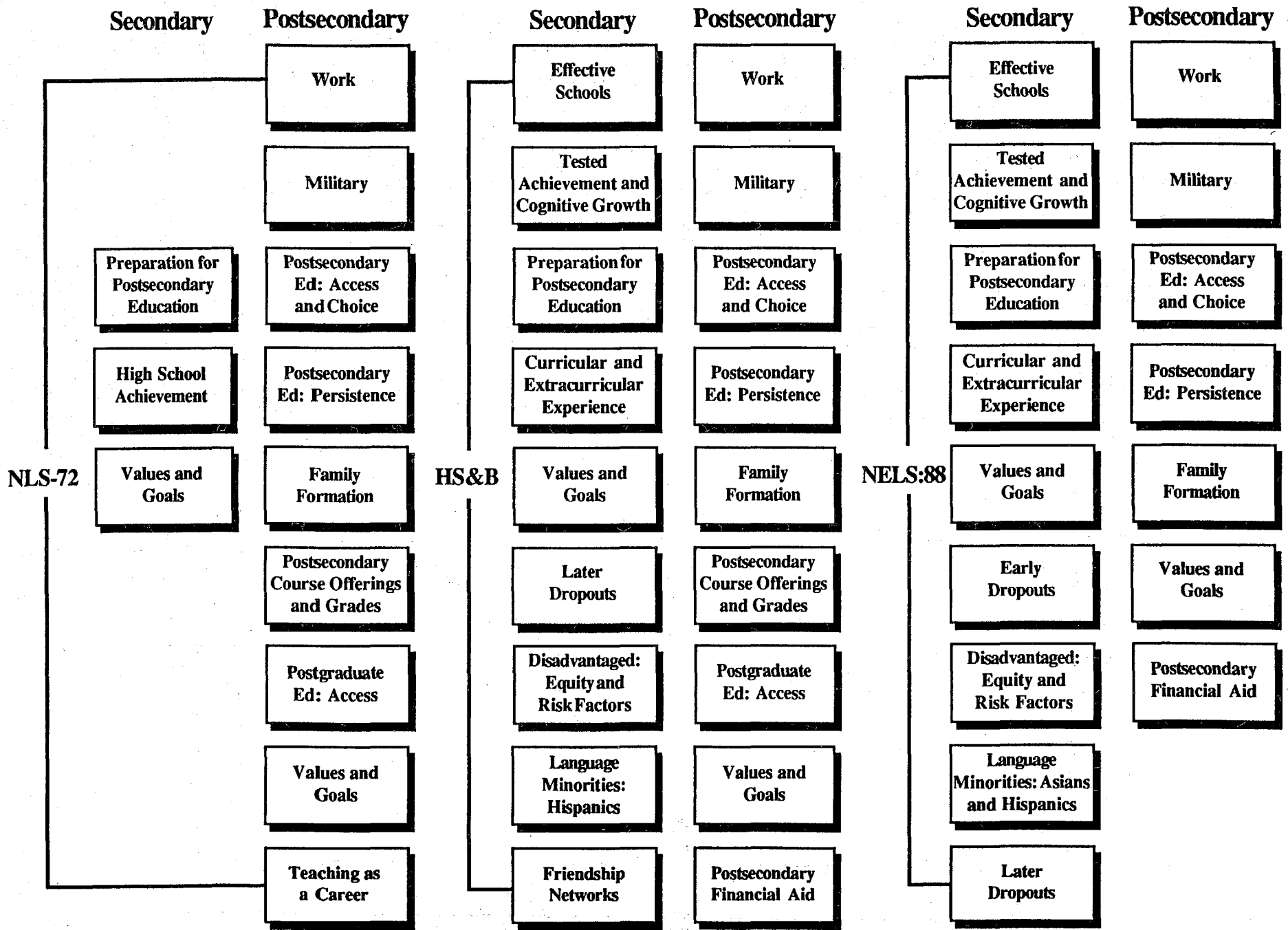
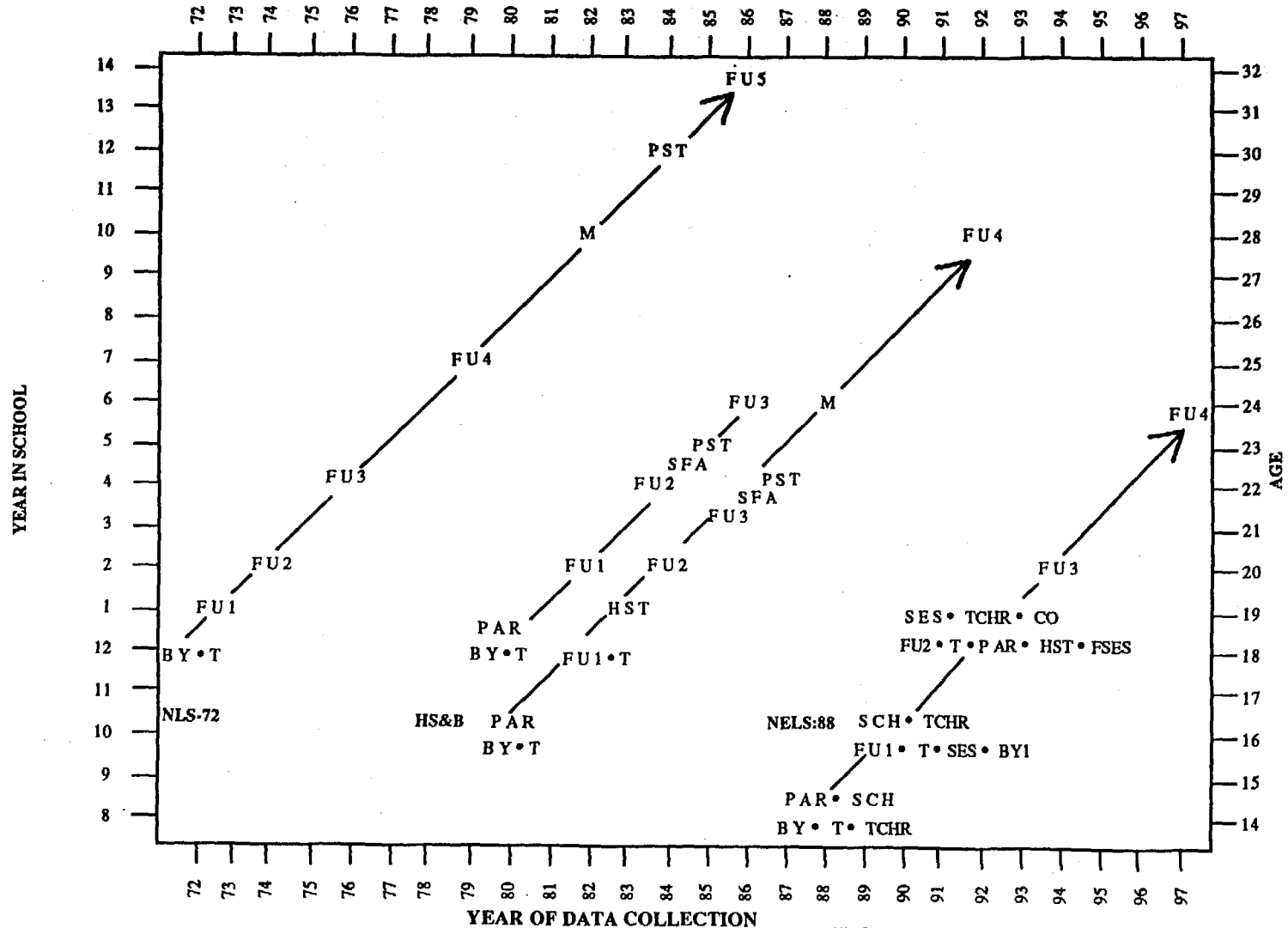


Figure 1-2: Research design for the NCES National Education Longitudinal Studies (NELS) program



NLS:72 = National Longitudinal Study of the High School Class of 1972  
 BY = Base year data collection  
 FU1 = First follow-up data collection  
 FU2 = Second follow-up data collection  
 FU3 = Third follow-up data collection  
 FU4 = Fourth follow-up data collection  
 FU5 = Fifth follow-up data collection  
 M = Maintenance of address date  
 PST = Postsecondary education transcripts  
 T = Cognitive test administration

HS&B = High School & Beyond: 1980  
 BY = Base year data collection  
 FU1 = First follow-up data collection  
 FU2 = Second follow-up data collection  
 FU3 = Third follow-up data collection  
 FU4 = Fourth follow-up data collection  
 HST = High school transcripts  
 M = Maintenance of address date  
 PAR = Survey of parents  
 PST = Postsecondary education transcripts  
 SFA = Student financial aid records  
 T = Cognitive test administration

NELS:88 = National Education Longitudinal Study of 1988  
 BY = Base year data collection  
 BY1 = Base Year Ineligible Study  
 FSES = Followback Study of Excluded Students  
 FU1 = First follow-up data collection  
 FU2 = Second follow-up data collection  
 FU3 = Third follow-up data collection  
 FU4 = Fourth follow-up data collection  
 HST = High school transcripts  
 CO = Course offerings  
 PAR = Survey of parents  
 SCH = School administrator survey  
 SES = School effectiveness study  
 T = Cognitive test administration

TCHR = Survey of teachers

and the effects of schools on students' access to programs and equal opportunity to learn.

The **first follow-up** in 1990 provided the first opportunity for longitudinal measurement of the 1988 baseline sample. It also provided a comparison point to high school sophomores ten years before, as studied in HS&B. The study captured the population of early dropouts (those who leave school between the end of eighth grade and the end of tenth grade), while monitoring the transition of the student population into secondary schooling. Freshening the NELS:88 sample to represent the tenth-grade class of 1990 makes trend comparisons with the HS&B sophomore cohort possible.

The **second follow-up** took place in 1992, when most sample members entered the second term of their senior year. The second follow-up provides a culminating measurement of learning in the course of secondary school, and also collects information that will facilitate investigation of students' transition into the labor force and postsecondary education after high school. The NELS:88 second follow-up resurveyed all students from the eighth-grade cohort, including students who were identified as dropouts in 1990, and identified and surveyed those additional students who left school after the first follow-up. In addition, freshening the NELS:88 sample to represent the twelfth-grade class of 1992 makes trend comparisons with the senior cohorts that were studied in NLS-72 and HS&B possible.<sup>3</sup> In the fall of 1992, high school transcripts were collected for a subsample of students and all dropouts, dropouts in alternative programs, and early graduates.

The **third follow-up** is occurring in 1994, when most sample members are in postsecondary education or in the labor market. The goals of the 1994 round are to provide data for trend comparisons with NLS-72 and HS&B, and to continue cross-wave comparisons with previous NELS:88 rounds. The third follow-up will permit researchers to assess the effect of eighth grade and high school curricular experiences on postsecondary education choice. The third follow-up will provide the means by which access of individuals with different backgrounds to quality educational institutions can be examined. The third follow-up will facilitate study of the influences of high school education experiences on postsecondary education and employment opportunities and choices. Labor force participation, postsecondary persistence, curricular progress, and family formation are further research topics which will be explored by the third follow-up. Additionally, the third follow-up will provide a basis for assessing how many dropouts have returned to school and by what route, and will measure the access of dropouts to vocational training programs and to other postsecondary institutions. A **fourth follow-up** will take place in 1998.

## 1.6 NELS:88 Second Follow-Up Tapes, CD-ROMs, and Documentation

In addition to the manual accompanying the transcript component restricted use data file, five user's manuals are available for the NELS:88 second follow-up public release files, one to accompany each of the following: student, dropout, teacher, school, and parent. Each manual furnishes the user with general information and documentation both about NELS:88 and a specific public release data file. Although the five user's manuals are written for use with the public release data files, they may also be

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<sup>3</sup> The process referred to here as "freshening" added students who were not in the base year sampling frame, either because they were not in the country or because they were not in eighth grade in the spring term of 1988. The 1990 freshening process provided a representative sample of students enrolled in tenth grade in the spring of 1990. The 1992 freshening process provided a representative sample of students enrolled in twelfth grade in the spring of 1992. Section 3.1 provides a detailed description of the freshening process.

utilized with the restricted use files. An additional manual is being produced for use with the school effectiveness study restricted use data files.

The second follow-up magnetic tapes and CD-ROM comprise all components of the second follow-up survey, as well as updated base year and first follow-up files. The cognitive test scores have been rescaled for the second follow-up release of the base year, first follow-up, and second follow-up files, and the ECB features windows with both weighted as well as unweighted frequencies and percentages. A user's guide is available for the ECB and CD-ROM products.

Other second follow-up restricted data files, such as the high school transcript survey, the school effectiveness study (SES), and the early graduate supplement, also appear on CD-ROM but not in the ECB format. These files can be downloaded to floppy diskette or hard drive on a PC, and/or uploaded to mainframe or other machines. The files can be converted to systems files for use with standard statistical software packages. Chapter VI contains additional information on the magnetic tape and CD-ROM releases.

Additional forms of second follow-up documentation, including an in-depth assessment of sampling and non-sampling error, the sampling design, the psychometric properties of the cognitive tests, and various analysis reports are planned. These reports, and their estimated release dates, are listed in Appendix P.



## II. Transcript Survey Data Collection Materials and Procedures

This chapter provides a brief description of the transcript survey data collection materials and procedures. (Detailed information about the instruments and procedures for the student and dropout components of the second follow-up is included in Appendix N.) The development of materials and procedures was informed by the 1982 High School and Beyond Transcript Survey and a field test of the transcript component conducted in 1991 as part of the NELS:88 second follow-up field test.

### 2.1 Data Collection Materials

Data collection materials, mailed to principals in August 1992, guided school personnel in the preparation of transcripts and related documents. Specific information requested in these materials included:

#### Student-level information

- Number of absences per year or term
- Rank in class and class size
- Date student left school
- Participation in special programs
- Reason student left school (graduated, transferred, etc.)
- Cumulative GPA
- Standardized test scores for the PSAT, SAT, ACT, College Board Achievement tests, and Advanced Placement tests

#### Course-taking histories for grades 9 (or 10) through 12, including:<sup>1</sup>

- Course title
- Year, grade level, and term course taken
- Number of credits earned
- Grade assigned

Data collection materials, which appear in Appendix B, included:

- **Cover letter.** Two different cover letters--for schools participating in the student survey, and for those not participating in the survey--were employed.
- **Transcript Preparation Instructions.** This sheet gave the preparer instructions on what data elements to include on the transcripts, how to complete the Transcripts Cover Sheet,

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<sup>1</sup> Although 13.5 percent of the contextual students for whom school administrator data were collected attended schools spanning only grades 10 through 12, grade 9 course data were generally collected regardless of the specific grade span of schools.

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Program Identification Sheet, and Student Checklist, and how to request reimbursement for preparation expenses.

- **Student Checklist.** The NORC identification numbers, names, birthdates, withdrawal dates (for dropouts), and enrollment status of the sample members associated with the school were listed on this form. Transcript preparers were asked to note transfer schools and their addresses on this form, if applicable.
- **Student Program Identification Sheet.** The transcript preparer used this form to identify sample members who had been enrolled in a special education, bilingual education, or gifted program or course at any time during high school.
- **Transcripts Cover Sheet.** The transcript preparer recorded the school's grading scale on this sheet, and identified requested data elements that were not available from the school, such as class rank or student attendance histories.
- **Disclosure Notices.** Federal regulations required that school staff place a copy of a disclosure notice in the school file of each sample member whose transcript was released to the NELS:88 second follow-up.
- **Transcript Release Forms.** Sample members were asked to sign a transcript release form at the time they were surveyed. These forms were included in the packets mailed to schools not participating in the second follow-up student survey, to encourage school participation in the transcript study; release forms demonstrated the students' participation in the student survey and their willingness to release transcript data to project personnel.

## 2.2 Data Collection Procedures

The groundwork for the collection of high school transcripts was laid in the spring and fall of 1991, during pre-data collection activities for the second follow-up. At that time, the principals of schools selected for contextual data collection were apprised of the study's intent to collect transcripts in the fall of 1992 for all sample members associated with the school, and school participation in the transcript survey was sought. Principals were asked to provide any materials--such as course catalogs, student manuals or handbooks, course lists, and registration forms--that would aid transcript course coding.

In mid-August 1992, survey materials were mailed to 1,374 contextual schools and 468 noncontextual schools attended by sample members who were high school dropouts, alternative completers, or early graduates. Transcripts for 19,320 contextual students, 2,859 dropouts and alternative completers, and 93 early graduates not enrolled in contextual schools were requested. Transcripts were also requested for 93 students who were ineligible to participate in the base year, first follow-up, and second follow-up student surveys because of physical or mental disability or a language barrier and who were enrolled in the twelfth grade at the time of the second follow-up. Transcripts were not requested for eligible sample members who refused during the student or dropout survey to sign forms granting permission for the release of transcripts. Transcripts were requested for sample members who did not sign transcript release forms, but who had not explicitly refused to grant permission. The student refusal rate was very low, only 0.3 percent. Signed release forms were obtained for 86.5 percent of the students and early graduates eligible for the transcript component, and 45.5 percent of the dropouts/alternative completers. The high proportion of missing release forms for dropouts may be attributable to the

disproportionate number of dropouts surveyed by telephone and to sample member disengagement from school.

Telephone follow-up of nonresponding schools was begun at the end of September, six weeks after survey packets had been mailed. Both contextual schools and noncontextual schools were prompted to return transcripts. Nonresponding schools contacted during telephone prompting frequently requested remailing of the data collection materials. Despite assurances that Federal regulations permitted the release of transcripts to the study without student or parental permission, many schools (approximately 50 percent) requesting a second set of materials also requested copies of transcript release forms. School staff appeared to be particularly reluctant to release the transcripts of dropouts without permission.

Telephone follow-up continued through March 1993. Additional measures were implemented during this period to ensure an adequate completion rate for dropouts and alternative completers. Collection of transcripts for these sample members was hampered by incorrect school information reported by dropouts in the second follow-up dropout questionnaire, the frequency with which sample members transferred schools and dropped in and out of school, and inaccurate school records. School staff frequently reported, contrary to study records, that dropouts had never been enrolled in their schools, or reported that records had been archived or forwarded to another school and were not retrievable. Dropouts occasionally were enrolled in a school for too brief a period to accumulate a course-taking record, and came and left with little or no record of their origin or destination. In February, a survey packet was mailed to responding and nonresponding schools from which dropout and alternative completer transcripts had not been received. Packet materials emphasized the importance of collecting transcripts for school-leavers and provided withdrawal dates from the second follow-up dropout questionnaire to assist in record recovery. An additional round of prompting calls was made to the schools after the mailing of the packets.

### **2.3 Data Collection Results**

A total of 1,287 contextual schools and 256 noncontextual schools responded to the request for transcripts. Reasons cited by school staff for not complying with the request included: inadequate permission for transcript release (some schools required parental permission for the release of minors' transcripts); no record of the sample member, or no course-taking record because of brevity of enrollment; insufficient staff for transcript preparation (despite offers of remuneration for preparation costs); and archiving or transfer of sample member records. Final school completion rates are shown in Table 2.3-1. Student-level coverage rates are shown in Table 2.3-2, and coverage rates for the second follow-up panels and the twelfth-grade cross-sectional cohort appear in Table 2.3-3. (See Tables 3.7-1 and 3.7-2 in Appendix N for completion and coverage rates for the student, dropout, parent, school administrator, and teacher components.)

**Table 2.3-1 NELS:88 second follow-up: Transcript survey participation rates for contextual schools, by school type, urbanicity, and region**

|                    | Participating (%) | Nonresponding (%) | Total (%)         |
|--------------------|-------------------|-------------------|-------------------|
| <b>School Type</b> |                   |                   |                   |
| Public             | 1,078 (94.2)      | 66 (05.8)         | 1,144 (83.3)      |
| Catholic           | 98 (94.2)         | 6 (05.8)          | 104 (07.6)        |
| NAIS, Private      | 75 (93.7)         | 5 (06.3)          | 80 (05.8)         |
| Other Private      | 36 (78.3)         | 10 (21.7)         | <u>46 (03.3)</u>  |
|                    |                   |                   | 1,374 (100.0)     |
| <b>Urbanicity</b>  |                   |                   |                   |
| Urban              | 461 (92.2)        | 39 (07.8)         | 500 (36.4)        |
| Suburban           | 484 (94.2)        | 30 (05.8)         | 514 (37.4)        |
| Rural              | 342 (95.0)        | 18 (05.0)         | <u>360 (26.2)</u> |
|                    |                   |                   | 1,374 (100.0)     |
| <b>Region</b>      |                   |                   |                   |
| Northeast          | 252 (89.0)        | 31 (11.0)         | 283 (20.6)        |
| South              | 445 (92.9)        | 34 (07.1)         | 479 (34.9)        |
| Midwest            | 305 (96.2)        | 12 (03.8)         | 317 (23.1)        |
| West               | 285 (96.6)        | 10 (03.4)         | <u>295 (21.5)</u> |
|                    |                   |                   | 1,374 (100.0)     |
| <b>Total</b>       | 1,287 (93.7)      | 87 (6.3)          | 1,374 (100.0)     |

**Table 2.3-2 NELS:88 second follow-up: Transcript coverage rates by sample eligibility**

|                                | Total Transcript Survey Sample Coverage Rates <sup>e</sup> |            | Contextual Student Sample <sup>a</sup> Coverage Rates <sup>e</sup> |            | Dropout/Alternative Completer Sample <sup>b</sup> Coverage Rates <sup>e</sup> |            |
|--------------------------------|--|------------|--|------------|---|------------|
|                                | Weighted   | Unweighted | Weighted   | Unweighted | Weighted  | Unweighted |
| <b>Total</b>                   | 87.8   | 89.5       | 92.0   | 92.5       | 69.9  | 74.2       |
| Participated                   | 17,285   |            | 15,091   |            | 2,120   |            |
| Selected                       | 19,320 <sup>d</sup>  |            | 16,315   |            | 2,859   |            |
| <b>Sex</b>                     |  |            |  |            |   |            |
| Male                           | 88.5   | 89.7       | 92.5   | 92.7       | 71.6  | 75.3       |
| Female                         | 87.2   | 89.2       | 91.4   | 92.3       | 68.1  | 72.9       |
| <b>Ethnicity</b>               |  |            |  |            |   |            |
| Asian/PI                       | 91.4   | 91.8       | 94.2   | 94.2       | 74.8  | 69.5       |
| Hispanic                       | 83.1   | 85.2       | 88.8   | 90.3       | 66.1  | 70.0       |
| Black                          | 79.9   | 83.8       | 87.1   | 89.4       | 58.2  | 66.5       |
| White                          | 90.5   | 91.3       | 93.2   | 93.2       | 76.6  | 79.5       |
| Am. Indian                     | 81.7   | 86.4       | 95.8   | 94.2       | 60.8  | 71.0       |
| Refused/Missing                | 56.8   | 66.7       | 71.2   | 78.1       | 39.4  | 49.2       |
| <b>School type<sup>e</sup></b> |  |            |  |            |   |            |
| Public                         | NA <sup>f</sup>  | NA         | 92.4   | 92.6       | NA  | NA         |
| Catholic                       | NA   | NA         | 92.7   | 93.0       | NA  | NA         |
| NAIS, Private                  | NA   | NA         | 91.3   | 94.5       | NA  | NA         |
| Other Private                  | NA   | NA         | 78.9   | 79.4       | NA  | NA         |
| <b>Urbanicity<sup>e</sup></b>  |  |            |  |            |   |            |
| Urban                          | NA   | NA         | 87.3   | 90.8       | NA  | NA         |
| Suburban                       | NA   | NA         | 93.1   | 92.2       | NA  | NA         |
| Rural                          | NA   | NA         | 94.7   | 94.5       | NA  | NA         |
| <b>Region<sup>e</sup></b>      |  |            |  |            |   |            |
| Northeast                      | NA   | NA         | 86.8   | 88.2       | NA  | NA         |
| South                          | NA   | NA         | 90.5   | 91.0       | NA  | NA         |
| Midwest                        | NA   | NA         | 95.7   | 96.1       | NA  | NA         |
| West                           | NA   | NA         | 95.1   | 94.8       | NA  | NA         |

- <sup>a</sup> The contextual sample includes early graduates enrolled in the second follow-up in schools selected for the contextual surveys.
- <sup>b</sup> The dropout/alternative completer sample includes sample members with real and imputed (for weighting) dropout/alternative completer enrollment status.
- <sup>c</sup> The transcript coverage rates presented in this table are independent of questionnaire completion.
- <sup>d</sup> 93 triple ineligibles and 53 early graduates not enrolled in contextual schools were selected for the transcript component, in addition to contextual students and dropouts/alternative completers.
- <sup>e</sup> Refers to 12th-grade school.
- <sup>f</sup> Not applicable -- Completion rates by school type, urbanicity, and region are calculated based on the school a student attended in the second follow-up. Because dropouts are included in the total transcript survey coverage rate but are not linked to schools on the public use magnetic tape, it is not possible to calculate overall coverage rates for these subgroups.

**Table 2.3-3 NELS:88 second follow-up: Transcript coverage rates for second follow-up panels and 12th-grade cross-sectional cohort participants**

|                                | Base Year to<br>Second Follow-Up<br>Panel <sup>a</sup> |            | First to Second Follow-Up<br>10th-Grade<br>Panel <sup>b</sup> |            | 12th-Grade<br>Cross-Sectional Cohort<br>Participants <sup>c</sup> |            |
|--------------------------------|--|------------|---|------------|---|------------|
|                                | Coverage Rates   |            | Coverage Rates  |            | Coverage Rates  |            |
|                                | Weighted<br>(F2PNLWT)                                  | Unweighted | Weighted<br>(F2F1PNWT)  | Unweighted | Weighted<br>(F2QWT)   | Unweighted |
| <b>Total</b>                   | 80.9   | 86.6       | 82.4  | 87.3       | 81.8  | 87.3       |
| Participated                   | 14,283   |            | 14,625  |            | 14,315  |            |
| Selected                       | 16,489   |            | 16,749  |            | 16,399  |            |
| <b>Sex</b>                     |  |            |   |            |   |            |
| Male                           | 82.7   | 87.4       | 83.7  | 88.0       | 82.9  | 87.8       |
| Female                         | 79.1   | 85.9       | 81.2  | 86.6       | 80.7  | 86.8       |
| <b>Ethnicity</b>               |  |            |   |            |   |            |
| Asian/PI                       | 88.0   | 90.0       | 84.5  | 88.2       | 82.3  | 87.3       |
| Hispanic                       | 78.6   | 83.7       | 78.6  | 84.3       | 78.4  | 84.6       |
| Black                          | 70.5   | 80.8       | 76.0  | 82.0       | 74.9  | 83.3       |
| White                          | 83.2   | 87.8       | 84.2  | 88.6       | 83.6  | 88.5       |
| Am. Indian                     | 68.7   | 76.4       | 75.7  | 81.3       | 76.6  | 81.3       |
| Refused/Missing <sup>d</sup>   | 48.1   | 77.8       | 49.5  | 75.0       | 48.6  | 63.0       |
| <b>School type<sup>e</sup></b> |  |            |   |            |   |            |
| Public                         | 81.7   | 86.7       | 84.6  | 88.2       | 83.4  | 87.6       |
| Catholic                       | 76.1   | 85.5       | 73.4  | 85.1       | 74.3  | 86.3       |
| NAIS, Private                  | 85.2   | 89.9       | 81.3  | 90.4       | 81.0  | 92.6       |
| Other Private                  | 71.5   | 80.4       | 61.2  | 74.7       | 56.8  | 71.4       |
| <b>Urbanicity<sup>e</sup></b>  |  |            |   |            |   |            |
| Urban                          | 71.6   | 83.8       | 75.6  | 84.7       | 74.4  | 85.3       |
| Suburban                       | 82.6   | 86.3       | 84.7  | 87.8       | 83.5  | 86.7       |
| Rural                          | 86.4   | 89.3       | 88.6  | 90.8       | 87.1  | 90.5       |
| <b>Region<sup>e</sup></b>      |  |            |   |            |   |            |
| Northeast                      | 78.0   | 83.9       | 81.2  | 85.2       | 80.6  | 84.9       |
| South                          | 78.3   | 85.0       | 80.9  | 86.3       | 79.4  | 86.1       |
| Midwest                        | 84.1   | 89.5       | 86.9  | 90.8       | 85.8  | 90.8       |
| West                           | 84.2   | 88.4       | 84.9  | 88.9       | 83.3  | 87.7       |

- <sup>a</sup> Includes all panel members, regardless of type of F1 or F2 questionnaire completed.
- <sup>b</sup> Includes all panel members in the tenth grade in the F1, regardless of type of F1 or F2 questionnaire completed.
- <sup>c</sup> Includes members of the spring-defined cohort only.
- <sup>d</sup> Refused/Missing refers only to the status of a sample member's ethnicity. It does not refer to sample members who did not participate in the second follow-up.
- <sup>e</sup> For BY to F2 panel, refers to 8th-grade school. For F1 to F2 panel, refers to 10th-grade school. For 12th-grade cross-sectional cohort, refers to 12th-grade school.

### III. Second Follow-Up Sample Design and Implementation; Survey Error Assessment

This chapter describes the design and procedures used for selecting schools and students into the NELS:88 second follow-up samples, including the transcript survey sample. It provides information on the calculation of sample weights and the relative efficiency of the sample design. The chapter also provides information about procedures used to adjust sample weights for nonresponse and about the effect of unit and item nonresponse and other potential sources of bias on estimates. (See Appendix O for information on the base year and first follow-up sample designs, sampling procedures, and standard errors.)

#### 3.1 Second Follow-Up Sample Design

There were five basic objectives for the NELS:88 second follow-up sample design. **First**, the sample was to constitute a valid probability sample of all students enrolled in the twelfth grade in the 1991-1992 school year. This entailed freshening the sample with students who were twelfth graders in 1992 but were not in the eighth grade in the U.S. in the 1987-88 school year, just as the first follow-up sample had been freshened in 1989 to achieve a 1990-91 representative sample of sophomores. Additionally, it was necessary to reassess the eligibility status of selected students found in previous waves to be ineligible, and to include them in the cohort if they were determined to be eligible for the second follow-up. **Second**, to continue the examination of the dropping out phenomenon, dropouts were to be retained with certainty. **Third**, it was highly desirable for policy analysis purposes to retain the maximum number of Hispanics, Asians, and American Indians from the first follow-up sample. **Fourth**, to minimize nonresponse bias first follow-up nonrespondents were to be retained with certainty. **Fifth**, the sample was to be clustered in 1,500 schools from which contextual data—including school administrator, teacher, and transcript data—would be collected. It was hoped that these goals could be achieved with minimal loss to both sample efficiency and effective sample size.

**Longitudinal Cohort.** When second follow-up tracing of cohort members was completed, it was found that the first follow-up sample (that is, the sum of base year respondents and nonrespondents retained after first follow-up subsampling and first follow-up freshened students) was much more widely dispersed than had been anticipated. After eliminating the locations of the "known" dropouts<sup>1</sup> ( $N=1,564$ ) from consideration (dropouts were sampled with certainty), the remaining eligible sample of students ( $N=18,726$ ) was dispersed among 3,224 schools/locations.<sup>2</sup>

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<sup>1</sup> In the second follow-up, dropouts were defined differently for sampling purposes than for data collection purposes. (See the *NELS:88 Second Follow-Up: Dropout Component Data File User's Manual*, section 4.3.1 for further details regarding the definition of dropouts for data collection and questionnaire assignment.) For sampling purposes, dropouts comprised all individuals who were classified in the first follow-up as ever having dropped out—that is, dropouts (individuals who were not enrolled in school in the spring term of 1990) and stopouts (spring term 1990 students with a recorded 1988-1990 dropout episode), regardless of their school enrollment status as of the second follow-up spring term 1991 tracing effort. In other words, dropouts who had since returned to school and stopouts who remained in school were still counted as dropouts for sampling purposes, along with institutionalized individuals and the additional dropouts identified during second follow-up tracing. Some dropouts for sampling purposes who were out of school after tracing returned to school and were interviewed as spring term 1992 students.

<sup>2</sup> Including dropouts, there were 4,788 locations. Once non-school locations associated with dropouts, early graduates, institutionalized sample members, home study students, and unlocatables were subtracted from the total, there were 2,258 school sites. Of these, 1,008 had a cluster of one student,

It was clear that even if no attempt were made to satisfy the second goal—retention with near certainty of Hispanics, Asians, and American Indians from the first follow-up sample—that the fifth goal of achieving a cluster of students in 1,500 schools could not be met without significant losses in sample efficiency, effective sample size, or both. Table 3.1.3-1 shows the distribution of students eligible for second follow-up sampling (excluding dropouts) by school size, as well as the number of schools with at least one sample member who was either Hispanic, Asian, or American Indian. Of the schools in which second follow-up sample members were clustered, 160 schools had a cluster size of two, 60 had a cluster size of three, and 1,030 had a cluster size of four or more students. The data in the table indicated that to achieve disproportionate retention of minority students most of the schools containing these students would have to be selected, leaving few additional sample selections to distribute among the remaining school sites and contradicting the initial sampling plan to include with certainty any school with at least five NELS:88 sample members enrolled at the school.

After consideration of several alternative allocations—taking into account the negative effects of subsampling on sample efficiency, the strong desire to retain as many Hispanics, Asians, and American Indians as possible, and the substantial investment made in two prior rounds in obtaining student, parent, teacher, and school data for those students who would have been subsampled out—it was decided to include all first follow-up sample members in the second follow-up sample.

**Table 3.1.3-1 Clustering of first follow-up sample members eligible for second follow-up (schools [N=2,258] and non-school locations)**

| School Size | Total Schools | Total Schools With API,HIS,AI | Total Schools Without |
|-------------|---------------|-------------------------------|-----------------------|
| 1           | 1974          | 579                           | 1395                  |
| 2           | 160           | 70                            | 90                    |
| 3           | 60            | 25                            | 35                    |
| 4           | 53            | 35                            | 18                    |
| 5           | 38            | 14                            | 24                    |
| 6           | 26            | 17                            | 9                     |
| 7           | 27            | 17                            | 10                    |
| 8           | 33            | 20                            | 13                    |
| 9           | 21            | 10                            | 11                    |
| 10          | 36            | 22                            | 14                    |
| 11          | 43            | 31                            | 12                    |
| 12          | 35            | 20                            | 15                    |
| 13          | 47            | 37                            | 10                    |
| 14          | 51            | 35                            | 16                    |
| 15          | 57            | 41                            | 16                    |
| 16          | 53            | 37                            | 16                    |
| 17          | 82            | 48                            | 34                    |
| 18          | 72            | 48                            | 24                    |

160 had a cluster size of two, 60 had a cluster size of three, and 1,030 had a cluster size of four or more students.



**Table 3.1.3-1 (cont'd) Clustering of first follow-up sample members eligible for second follow-up (schools [N=2,258] and non-school locations)**

|       |      |      |      |
|-------|------|------|------|
| 19    | 77   | 58   | 19   |
| 20    | 65   | 43   | 22   |
| 21    | 55   | 43   | 12   |
| 22    | 40   | 31   | 9    |
| 23    | 32   | 27   | 5    |
| 24    | 22   | 21   | 1    |
| 25    | 13   | 12   | 1    |
| 26    | 6    | 6    | 0    |
| 27    | 6    | 5    | 1    |
| 28    | 5    | 3    | 2    |
| 29    | 7    | 6    | 1    |
| 30    | 4    | 2    | 2    |
| 31    | 5    | 5    | 0    |
| 32    | 2    | 1    | 1    |
| 33    | 1    | 1    | 0    |
| 34    | 1    | 1    | 0    |
| 35    | 2    | 2    | 0    |
| 36    | 3    | 3    | 0    |
| 37    | 1    | 1    | 0    |
| 38    | 1    | 0    | 1    |
| 40    | 1    | 1    | 0    |
| 41    | 2    | 1    | 1    |
| 44    | 1    | 0    | 1    |
| 45    | 1    | 1    | 0    |
| 50    | 1    | 1    | 0    |
| 53    | 1    | 1    | 0    |
| 60    | 1    | 1    | 0    |
| Total | 3224 | 1383 | 1841 |

Note: known school-leavers are not included in the numbers above.

Teacher, school administrator, and student transcript components were limited to a maximum of 1,500 schools. For this reason it was still necessary to select a sample of schools, although the students falling outside that sample would not be excluded from the study. For students in the 1,500 schools selected, the full range of data--student, parent, teacher, school administrator, and transcript data--were collected; for the students in a school not among those selected, only student and parent data were collected. Transcript data were also collected for all dropouts, early graduates, and twelfth-grade sample members ineligible for the base year, first follow-up, and second follow-up surveys owing to a language, physical, or mental barrier.

A total of 2,258 schools were identified in the second follow-up tracing of the NELS:88 first follow-up sample; 1,500 of these were targeted for contextual data collection. All 1,030 schools identified as having four or more first follow-up sample members enrolled were included in the school-level sample with certainty (i.e., probability of 1.0). Schools with three or fewer students were subjected to sampling according to the following process. A random sample of 321 of the 1,008 (probability=0.31845) schools identified as containing one first follow-up sample member was selected for retention in the sample. A random sample of 104 of the 160 (probability=0.65) schools containing two first follow-up sample members was selected for retention. Finally, a random sample of 45 of the 60 (probability=0.75) schools containing three sample members was selected. Figure 3-1 provides an illustration of the longitudinal sample design of the base year and first follow-up, as well as that of the second follow-up.

Users should note that school-level data from this sample of schools, to be used in analysis with second follow-up student data, must be adjusted with a weight calculated separately for these students. If that weight is not applied, there will be a potential for systematic bias with respect to those factors associated with attendance at schools with fewer NELS:88 students. For example, students who are more likely to transfer to different schools will be under-represented if the weight is not applied. Further details can be found in section 3.2 on second follow-up weighting.

**Freshened Senior Sample.** The sample "freshening" process was once again employed in the second follow-up to ensure that 1992 twelfth graders who had no opportunity for selection in the base year or first follow-up were included, thus eliminating one of two obstacles to the cohort being a valid probability sample of 1991-1992 high school seniors. (The second obstacle was the prior exclusion of some 1988 eighth graders, which is addressed in the next section.) The procedure was implemented in four steps as described in Appendix O, section 2.1.2, with the exception that second follow-up freshening was also performed for students who were added to the NELS:88 cohort through freshening in the first follow-up; in other words, a first follow-up freshened student was treated like any cohort member and could bring in another student through freshening in the second follow-up.

This freshening procedure is an essentially unbiased method for producing a probability sample of students who were enrolled in the twelfth grade in 1992 but were not enrolled in the eighth grade in the U.S. in 1988. There is a very small bias introduced by the omission of eligible twelfth graders attending schools that included *no* students who were eighth graders in 1988.<sup>3</sup> There is an additional small bias introduced by not freshening on the members of the sample of base year ineligible. All other 1992 twelfth graders who qualify for the freshening sample had some chance of selection. Because each 1988 eighth grader added through first follow-up freshening had a calculable, non-zero probability of selection into the base year sample, we can calculate the selection probabilities for all students eligible for the freshening sample. Thus, the freshening procedure produces a sample that meets the criterion for a probability sample.

Implementation of student sample freshening in the first and second follow-ups was subject to a set of eligibility rules that were patterned after but not identical to those of the base year. While again students with overwhelming physical, mental, or linguistic barriers to participation were excluded, students not sufficiently proficient in English to complete the tests or regular questionnaire but able to complete the student questionnaire in Spanish were classified as eligible and asked to complete the

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<sup>3</sup> For purposes of implementation of the freshening process, a "school" was defined as an institution whose primary purpose is the provision of instruction and which grants diplomas or certificates. This definition categorically excludes certain types of places of instruction (e.g., prison schools).

**Figure 3-1: NELS:88 8th-grade spring defined cohort status distribution in first and second follow-ups**

| <u>Base Year</u>       | <u>First Follow-Up Status</u> | <u>Second Follow-Up Status</u> |            |
|------------------------|-------------------------------|--------------------------------|------------|
| Students<br>N = 20,062 | Dropouts<br>N = 1,029         | > Dropout                      | N = 611    |
|                        |                               | > Alt. Completer <sup>a</sup>  | N = 222    |
|                        |                               | > Student                      | N = 69     |
|                        |                               | > Out of Scope                 | N = 9      |
|                        |                               | > Status Unknown               | N = 118    |
|                        | Students<br>N = 18,270        | > Dropout                      | N = 1,041  |
|                        |                               | > Alt. Completer <sup>a</sup>  | N = 542    |
|                        |                               | > Student                      | N = 16,339 |
|                        |                               | > Out of Scope                 | N = 82     |
|                        |                               | > Status Unknown               | N = 266    |
|                        | Out of Scope<br>N = 129       | > Dropout                      | N = 11     |
|                        |                               | > Alt. Completer <sup>a</sup>  | N = 6      |
|                        |                               | > Student                      | N = 11     |
|                        |                               | > Out of Scope                 | N = 83     |
|                        |                               | > Status Unknown               | N = 18     |
|                        | Status Unknown<br>N = 634     | > Dropout                      | N = 58     |
|                        |                               | > Alt. Completer <sup>a</sup>  | N = 20     |
|                        |                               | > Student                      | N = 466    |
|                        |                               | > Out of Scope                 | N = 6      |
|                        |                               | > Status Unknown               | N = 84     |

<sup>a</sup>Alt. Completer = Alternative Completer or Alternative Student

Note: In addition to the 20,062 sample members listed above, an additional 1,126 sample members were added due to sample freshening. Thus, 20,062 and 1,126 equals the 21,188 cases found on the second follow-up student public use data file.

translated instrument. (Through the first follow-up base year ineligibles study and second follow-up followback study of excluded students, this liberalized eligibility criterion was also applied to excluded 1987-88 eighth graders at two points in time.) Of the 366 students initially sampled through the freshened process, 288 were found to be eligible and were brought into the cohort; 266 of the 288 were identified as being eligible to participate in the second follow-up. Some 22 of the 266 (8.3%) were later determined to be ineligible; 8 were excluded owing to physical or mental disabilities, 13 because they had moved out of the country, and 1 for language reasons.

It also should be noted that the school sample from which school contextual data (teacher questionnaires, school administrator questionnaires, and transcripts) were collected is not identical to the school sample as used for freshening. Freshening took place at all schools at which there were NELS:88 sample members as of the first day of the 1991-92 school year.<sup>4</sup> The school sample, for purposes of collecting contextual data, comprised the 1,387 schools that represent selected clusters (as traced in Phase 1 of the second follow-up) at which 1) NELS:88 sample members were still present in the 1991-92 school year, and 2) provided at least one completed student questionnaire.

**Followback Study of Excluded Students.** In the second follow-up, base year ineligibles who were found to be eligible in the first follow-up--whether dropouts or students--were treated as full cohort members. The base year ineligibles who were found to be still ineligible in the first follow-up constituted the bulk of the sample in the 1992 followback study of excluded students. Two additional groups of students, however, were also included in this component. First, a small number of first follow-up students selected for freshening were declared ineligible and were therefore included. Second, a quite small number of sample members who were eligible for participation in the base year became ineligible for the first follow-up or the second follow-up. These sample members eligible in a previous round(s) were a generally rare group to whom mentally or physically incapacitating events occurred, rendering them ineligible for the second follow-up main study but now eligible for the study of ineligibles.

The second follow-up followback study of excluded students pursued essentially the same objectives as informed the first follow-up base year ineligible study. Since the competence of any of these previously excluded students may change between waves, their eligibility status was reassessed through informed sources (typically, a special education teacher, guidance counsellor, or English-as-a-Second-Language teacher). Additionally, complete school enrollment status information was obtained, as well as confirmation of basic demographic characteristics.

This approach implemented in the first and second follow-ups allows for some deviance from the traditional definition of survey participation and a special weight creation to calculate dropout rates adjusted for ineligibility. The HS&B and NELS:88 base year definition of survey participation was, at minimum, completion of the student questionnaire. Nonrespondents, or those for whom there is no completed questionnaire in a round, receive no final (nonresponse-adjusted) weight and do not appear in the final data file, except for summary demographics and status flags.

The alternative approach is to acknowledge a second level of presence in the study, based on whether school enrollment status information and the most basic sociodemographic classification variables

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<sup>4</sup> Only those freshened sample members who remained in school through the spring term became members of the HS&B-comparable NELS:88 sophomore cohort. However, autumn sophomores who had dropped out by spring were surveyed in both first and second follow-up. While these "freshened dropouts" were included on the original first follow-up public release, in the current re-release these cases appear only on the restricted use files.

can be obtained. Particularly for the generation of school retention and dropout statistics, and in order to statistically accommodate students who are incapable of participation in the most strict sense of questionnaire and test completion (and those who are capable but did not participate) basic sociodemographic and school persistence information has been collected through school personnel or by proxy (usually a parent or guardian) for both nonparticipants and ineligible. A special weight has been created to reflect this expanded definition of the "participating" population and can be applied to calculate, for example, adjusted national dropout rates for the periods between eighth, tenth and twelfth grades.

**Transcript Survey Sample.** Transcripts were collected for the following groups, regardless of whether they completed a second follow-up questionnaire:

1. students attending one of the second follow-up contextual schools in the spring of 1992;
2. all dropouts and dropouts in alternative programs who had attended high school for a minimum of one term;
3. all early graduates, regardless of whether they attended one of the second follow-up contextual schools; and
4. triple ineligible enrolled in the twelfth grade in the spring of 1992, regardless of whether they were enrolled in a contextual school. (The 1987 and 1990 NAEP transcript studies of seniors collected transcripts for both NAEP-eligible and excluded special education students.)<sup>5</sup>

The section below details the generalizability of the transcript sample when employed with the transcript cross-sectional and panel weights.

### 3.2 Calculation of Second Follow-Up Weights

The general purpose of weighting survey data is to compensate for unequal probabilities of selection and to adjust for the effects of nonresponse. Weights are often calculated in two main steps. In the first step, unadjusted weights are calculated as the inverse of the probabilities of selection, taking into account all stages of the sample selection process. In the second step, these initial weights are adjusted to compensate for nonresponse; such nonresponse adjustments are typically carried out separately within multiple weighting cells. This is the process that was applied to weighting NELS:88 data in all rounds. The calculation of second follow-up sample weights is discussed below. Information on the calculation of base year and first follow-up sample weights is included in Appendix O.

**Explanation of Weights.** Eight weights were developed for inclusion on the data files. They include:

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<sup>5</sup> Triple ineligibles are sample members who were ineligible for the base year, first follow-up, and second follow-up surveys owing to mental or physical disability, or a language barrier. Base year ineligibles who had become eligible in the second follow-up had a chance of selection into the transcript sample. Some members of this group were 1992 seniors. This resulted in the collection of transcripts for base year ineligibles with complete high school transcripts. (That is, they were 1992 seniors regardless of their 1992 eligibility status.)

- F2TRSCWT** This cross-sectional weight applies to all early graduates, dropouts, students in sampled schools during spring data collection, and all sample members who were both ineligible for all three rounds of NELS:88 and were in the twelfth grade during the 1991-92 school year for whom a transcript was received.
- F2TRP1WT** This panel weight applies to sample members who were participants in 1988, 1990, and 1992 (all three rounds of NELS:88) and for whom transcript data are available. F2TRP1WT allows analysts to perform panel analyses using transcript data in conjunction with 1988, 1990, and 1992 test and questionnaire data.
- F2TRP2WT** This panel weight applies to sample members who were participants in 1990 and 1992 (the first and second follow-up) and for whom transcript data are available. F2TRP2WT allows analysts to perform panel analyses using transcript data in conjunction with 1990-1992 test and questionnaire data. By selecting on the appropriate panel flag, projections can be made to the 1990 sophomore cohort two years later.
- F2QWT** This cross-sectional weight applies to all members of the second follow-up sample who completed a second follow-up questionnaire, regardless of their participation status in previous rounds. It allows projections to the population consisting of all persons who were either in the eighth grade during the 1987-88 school year or in the tenth grade during the 1989-90 school year, or in the twelfth grade in the 1991-92 school year. By selecting the appropriate sample members with flag G12COHRT, analysts can use F2QWT to make unbiased projections to such populations as 1992 twelfth graders.
- F2PNLWT** This panel weight applies to sample members who completed a questionnaire in all three rounds of NELS:88. This can be used to make projections to the population of 1988 eighth graders.
- F2F1PNWT** This panel weight applies to all sample members who completed both a first follow-up and a second follow-up questionnaire, regardless of base year status. This allows projections to the population consisting of persons who were in the eighth grade in 1988 or in the tenth grade in 1990. By selecting appropriate sample members with flag F2F1PNFL, analysts can use F2F1PNWT to make projections to such populations as 1990 tenth graders.
- F2CXTWT** This cross-sectional weight applies to students who attended the schools selected for inclusion in the teacher and school administrator components and who completed a second follow-up questionnaire. The population was restricted to early graduates and students who were in the schools during spring data collection. This weight allows analysts to generate national statistics using the teacher and school administrator data despite the bias against small cluster sizes in sample selection.
- F2PAQWT** This cross-sectional weight applies to all students for whom a parent questionnaire was collected during the second follow-up.

**Process for calculation of second follow-up weights.** A basic four-step process was defined for the calculation of all eight sample weights. The first step, developing a classification scheme, was done at the beginning of the weighting process for all students in the sample. The values remained static and were used throughout the process for all weights. Steps 2 through 4 were followed for all weights, but the results of each were tailored according to the characteristics of each weight's specific population.

**Step 1. Develop a classification scheme.**

All sample members were divided into basic sample groups depending upon their status during data collection for each of the three rounds of NELS:88. Freshened students were assigned the status of their linked student for those rounds where they had not been in the sample. Students for whom status was unknown had their status imputed based upon the distribution of status across others in their base year, first follow-up or second follow-up categories and, where group size permitted, race and gender were also considered. The eight basic classification categories for a single round are defined as:

1. Eligible, dropout as of survey date
2. Eligible, in school, in expected grade
3. Eligible, in school, not in expected grade
4. Ineligible
  - a. in school, in expected grade
  - b. in school, not in expected grade
  - c. not in school
5. Out of scope (deceased or out of country)
6. Eligible, freshened, dropout as of survey date
7. Eligible, freshened, in school
8. Ineligible, freshened

In this classification scheme, "dropout" (following the High School and Beyond definition) generally refers to a student who has left a diploma-granting high school program. This included members who were not pursuing an education at all, home study students, members who were continuing their education in a non-traditional setting (e.g., preparing for the GED examination), and institutionalized sample members. There are two exceptions to this general rule. First, early graduates were included in the "in school" category. Second, because sample members who attended non-traditional schools during the first follow-up were classified as students then, they were treated as such during the calculation of their first follow-up status.

"Ineligible" refers to members who were not given the questionnaires due to a language barrier or a mental or physical incapacity.

"Expected grade" means tenth grade in the first follow-up and twelfth grade or early graduate in the second follow-up.

**Step 2. Establish second follow-up design weight.**

The design weight reflects the selection probabilities for each case for a given population. Sample members may have multiple design weights that vary depending upon the weight that is being calculated. For the weights unaffected by school sampling (F2QWT, F2PNLWT, F2F1PNWT) and for the dropouts, early graduates, and ineligible twelfth graders in F2TRSCWT, the design weight used is equal to the first follow-up design weight.<sup>6</sup> Second follow-up freshened students take on the first follow-up design weight of the student they were linked to in the freshening process. When sample members are included due to their association with a sampled school in F2TRSCWT and for all members in the F2CXTWT population, it is equal to the first follow-up design weight divided by their school's second follow-up selection probability. For students represented in the parent sample, the calculation of F2PAQWT uses the first follow-up design weight divided by the parent's second follow-up selection probability.

**Step 3. Adjust for second follow-up nonresponse.**

Nonresponse adjustment cells were based upon combinations of the classification values from step 1 as well as race (Hispanic, API, other, unknown), and gender for the members of that weight's population. The second follow-up design weight for each responding sample member was inflated by a factor equal to the inverse of the weighted response rate for their cell. This yielded their nonresponse adjusted weight. This step was performed independently for each weight calculated. For second follow-up freshened students the nonresponse adjusted weight serves as their final weight.

**Step 4. Perform multidimensional raking.**

Sample members who were not freshened in the second follow-up had their second follow-up nonresponse adjusted weight further adjusted through a raking step. The total sum of the weights and percentage distributions that were used in raking were developed as follows:

a) Targets were developed that used the second follow-up expanded sample weight. The second follow-up expanded weight is a weight that was calculated for every sample member in order to estimate national dropout rates.<sup>7</sup> It was used in developing total sum of weights targets to ensure consistency in dropout rates derived when using sample weights. These targets were calculated separately for each of the six sample weights and reflected the characteristics of each weight's inference population. Two types of target numbers were developed. The sum of expanded weights for a given sample weight's inference population was used as the target total population for that sample weight. Weighted frequency distributions using the expanded weights associated with a sample weight's inference population were

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<sup>6</sup> Included on the transcript data files are 52 students who were ineligible in all three rounds of NELS:88 and were seniors in 1992, as described under the subheading "Transcript Survey Sample" in section 3.1.

<sup>7</sup> For sample members not freshened in the second follow-up, the process involved using a multidimensional raking procedure to adjust the second follow-up design weight where the marginal target categories were based on roster race (API, Hispanic, other, unknown) and gender, base year school type, base year school region, base year school urbanicity, and the status values from the classification scheme described above in step 1. Target margins for the expanded weight were calculated using the first follow-up expanded sample weight (a similar weight developed in the first follow-up for estimating the 1988-90 dropout rate) for students for whom one was calculated and first follow-up design weights for the first follow-up sample members who did not receive a first follow-up expanded weight (such as the freshened). Second follow-up freshened students have their second follow-up design weight as their expanded sample weight. This step was performed for the sample as a whole.



**Table 3.2-1**  
**NELS:88 second follow-up statistical properties of the**  
**transcript sample and panel weights**

| WEIGHT                                    | F2TRSCWT   | F2TRP1WT   | F2TRP2WT   |
|---|------------|------------|------------|
| Mean                                      | 187.09     | 204.95     | 201.28     |
| Variance                                  | 109,293.20 | 135,735.87 | 126,020.98 |
| Standard Deviation                        | 330.59     | 368.42     | 354.99     |
| Coefficient of Variation ( $\times 100$ ) | 176.71     | 203.00     | 188.26     |
| Minimum                                   | 2.21       | 2.45       | 2.47       |
| Maximum                                   | 12,532.08  | 13,753.89  | 13,440.62  |
| Skewness                                  | 17.25      | 17.68      | 16.88      |
| Kurtosis                                  | 480.52     | 470.46     | 441.84     |
| Sum                                       | 3,233,775  | 2,927,223  | 3,147,076  |
| Number of Cases                           | 17,825     | 14,282     | 15,635     |

calculated for dropout rates between base year and first follow-up, dropout rates between first follow-up and second follow-up, first follow-up status (from step 1) and second follow-up status (from step 1).

b) Additional percentage targets were developed for raking using first follow-up weights. Calculated independently for each of the six weights according to the characteristics of each inference population, these targets used F1QWT for sample members who had been eligible for the first follow-up questionnaire or the first follow-up design weight for those who were not. Weighted frequencies calculated using these weights were used as target distributions. These target categories included race (White, Black, Hispanic, API, American Indian, unknown), gender, base year school region, base year school type, and base year school urbanicity.

**Results of weighting.** To check the transcript sample case weight, we analyzed the statistical properties of the weight; Table 3.2-1 above displays the mean, variance, standard deviation, coefficient of variation, minimum, maximum, skewness, and kurtosis for the weight. Tables showing results for the remaining five weights can be found in the student (questionnaire and panel weights) data file user's manual, in the forthcoming school (contextual weight) and parent (parent weight) data file user's manuals, and in the *NELS:88 Second Follow-Up Sample Design Report*.

### 3.3 Standard Errors and Design Effects

In this section we discuss the calculation of standard errors as a measure of sampling variability in survey results; the standard error is an estimate of the expected difference between a statistic from a particular sample and the corresponding population value.

**Survey Standard Errors.** Because the NELS:88 sample design involved stratification, disproportionate sampling of certain strata, and clustered (i.e. multi-stage) probability sampling, the resulting

statistics are more variable than they would have been had they been based on data from a simple random sample of the same size.

The calculation of exact standard errors for survey estimates can be difficult and expensive. Popular statistical analysis packages such as SPSS (Statistical Program for the Social Sciences) or SAS (Statistical Analysis System) do not calculate standard errors by taking into account complex sample designs. Several procedures are available for calculating precise estimates of sampling errors for complex samples. Procedures such as Taylor Series approximations, Balanced Repeated Replication (BRR), and Jackknife Repeated Replication (JRR) produce similar results.<sup>8</sup> Consequently, it is largely a matter of convenience which approach is taken. For NELS:88, NORC used the Taylor Series procedure to calculate the standard errors.

**Design Effects.** The impact of departures from simple random sampling on the precision of sample estimates is often measured by the design effect (designated as DEFF). For any statistical estimator (for example, a mean or a proportion), the design effect is the ratio of the estimate of the variance of a statistic derived from consideration of the sample design to that obtained from the formula for simple random samples. The square root of the design effect (also called the root design effect, and designated as DEFT) is also useful. The following formulas define the design effects and root design effect for this section:

$$\text{DEFF} = \frac{(\text{DESIGN-SE})^2}{(\text{SRS-SE})^2} \quad (1)$$

$$\text{DEFT} = \frac{\text{DESIGN-SE}}{\text{SRS-SE}} \quad (2)$$

where DESIGN-SE designates the standard error of an estimate calculated by taking into account the complex nature of the survey design, and SRS-SE designates the standard error of the same estimate calculated as if the survey design was a simple random sample.

**Second Follow-Up Transcript Standard Errors and Design Effects.** Standard errors and design effects were calculated for 30 means and proportions based on the NELS:88 second follow-up student and dropout transcript data.

**Selection of Second Follow-Up Transcript Items.** While standard errors and design effects have not previously been included in transcript study documentation (neither for HS&B nor either of the NAEP studies), it was considered important to calculate these for the NELS:88 second follow-up transcript study. As in HS&B and other rounds and components of NELS:88, the calculation of SEs and DEFFs for statistics derived from NELS:88 second follow-up transcript data should be based on the means or proportions of 30 variables. The variables were selected for deriving SE/DEFFs for the transcript sample as a whole. Because SEs were not calculated in the past, the identification of transcript variables that were used in previous studies could not be used as a starting point. Rather, the nonresponse was analyzed, and those items with combined unit and item nonresponse rates above the NCES standard of 30 percent were eliminated from the pool of possible items. All remaining items were then divided and constructed into "categorical/ordinal" or "interval level" variables. Next, variables were selected from

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<sup>8</sup> Frankel, M.R., *Inference from Survey Samples: An Empirical Investigation* (Ann Arbor: Institute for Social Research, 1971).

both categories known to be of interest to analysts; this resulted in the identification of 13 variables. The remaining 17 variables were selected randomly from those remaining in the pool.

**Results.** Standard errors and design effects were calculated for each of the items for the sample as a whole and for selected subgroups. The subgroups were based on the respondent's dropout status (students and dropouts), sex (male and female), race/ethnicity (Asian and Pacific Islander, Black, Hispanic, and white), school type (public, Catholic, and other private), socioeconomic status (lowest quartile, middle two quartiles, and highest quartile), and urbanicity (urban, suburban, and rural).

The individual item standard errors, design effects (DEFF) and root design effects (DEFT) for all respondents (students and dropouts) are presented along with summary design effect statistics in Table 3.3-1.

The design effects in the second follow-up transcript data are high. For example, for the statistics calculated for the entire sample, the average design effect is 6.63 (see Table 3.3-2). The corresponding figure for the second follow-up questionnaire data was only 3.59. In a two-stage sample design, such as the one used to select the NELS:88 sample, the design effect mainly reflects two factors--the degree of clustering in the sample and the variability in the case weights. The degree of clustering, in turn, reflects the cluster size (that is, the number of students selected in each school) and the intraclass correlation (that is, the expected correlation between the data for any two students selected from a single school). At least one of the variables of the 30--class size--for which design effects were calculated has an extremely high intraclass correlation; class size should be nearly identical for all students sampled from the same school. This variable has a design effect of 15.89 for the whole sample; it also has the highest design effect for each of the subgroups for which design effects were calculated.

The variability of the transcript weights is also quite high, contributing to the comparatively high design effects (see Table 3.2-1). The variability of the weights is usually measured in terms of the relative variance, or relvariance (see Table 3.3-3); this is the variance of the weights divided by the square of the average weight. Under certain assumptions, the design effect due to unequal weighting is equal to one plus the relvariance of the weights. The impact of unequal weighting multiplies the effects

**Table 3.3-1 NELS:88 second follow-up:  
Standard errors and design effects, all respondents; full transcript sample (N=17,285)**

| All Students and Dropouts                      |          |               |                             |       |      |       |                          |
|--|----------|---------------|-----------------------------|-------|------|-------|--------------------------|
| Item   |          | Esti-<br>mate | Design<br>S.E. <sup>a</sup> | DEFF  | DEFT | N     | SRS<br>S.E. <sup>b</sup> |
| Left school in 1992 <sup>c</sup>               | F2RDTLYR | 0.85          | 0.01                        | 4.00  | 2.00 | 16380 | 0.003                    |
| Left school with standard diploma <sup>d</sup> | F2RREASL | 0.76          | 0.01                        | 7.11  | 2.67 | 16939 | 0.003                    |
| HS program: Rigorous Academic                  | F2RTRPRG | 0.15          | 0.01                        | 5.44  | 2.33 | 17285 | 0.003                    |
| Class rank for last year attended <sup>e</sup> | F2RRANK  | 127.79        | 3.00                        | 7.85  | 2.80 | 13393 | 1.071                    |
| Class size for last year attended              | F2RCSIZE | 260.96        | 5.88                        | 16.47 | 4.06 | 14149 | 1.450                    |
| Total Carnegie units in English                | F2RHEN_C | 3.46          | 0.03                        | 6.02  | 2.45 | 17285 | 0.011                    |
| Total CUs in mathematics                       | F2RHMA_C | 2.68          | 0.03                        | 8.41  | 2.90 | 17285 | 0.010                    |
| Total CUs in science                           | F2RHSC_C | 2.47          | 0.03                        | 7.84  | 2.80 | 17285 | 0.010                    |
| Total CUs in social studies                    | F2RHSC_C | 2.94          | 0.03                        | 6.76  | 2.60 | 17285 | 0.010                    |
| Average grade in English                       | F2RHENG2 | 6.95          | 0.04                        | 5.19  | 2.28 | 16523 | 0.018                    |
| Average grade in mathematics                   | F2RHMAG2 | 7.30          | 0.05                        | 5.86  | 2.42 | 16376 | 0.019                    |
| Average grade in science                       | F2RHSCG2 | 7.24          | 0.04                        | 5.36  | 2.32 | 16524 | 0.019                    |
| Average grade in social sciences               | F2RHSOG2 | 6.83          | 0.04                        | 5.36  | 2.32 | 16559 | 0.019                    |
| Total CUs in archit/env design                 | F2R04_C  | 0.00          | 0.00                        | 3.06  | 1.75 | 17285 | 0.000                    |
| Total CUs in area/ethnic studies               | F2R05_C  | 0.22          | 0.01                        | 12.25 | 3.50 | 17285 | 0.004                    |
| Total CUs in business/office                   | F2R07_C  | 0.88          | 0.02                        | 4.94  | 2.22 | 17285 | 0.009                    |
| Total CUs in health sciences                   | F2R18_C  | 0.00          | 0.00                        | 1.78  | 1.33 | 17285 | 0.000                    |
| Total CUs in home economics                    | F2R19_C  | 0.00          | 0.00                        | 5.44  | 2.33 | 17285 | 0.000                    |
| Total CUs in parks/recreation                  | F2R31_C  | 0.00          | 0.00                        | 4.00  | 2.00 | 17285 | 0.000                    |
| Total CUs in philosophy/religion               | F2R38_C  | 0.19          | 0.02                        | 10.03 | 3.17 | 17285 | 0.006                    |
| Total CUs in theology                          | F2R39_C  | 0.01          | 0.01                        | 6.25  | 2.50 | 17285 | 0.002                    |
| Total CUs in mechanics/repairs                 | F2R47_C  | 0.15          | 0.01                        | 3.36  | 1.83 | 17285 | 0.006                    |
| Total CUs in subject area services             | F2R56_C  | 0.14          | 0.01                        | 2.78  | 1.67 | 17285 | 0.006                    |
| Total CUs in earth sciences                    | F2REAR_C | 0.19          | 0.01                        | 11.11 | 3.33 | 17285 | 0.003                    |
| Total CUs in foreign languages                 | F2RFOR_C | 1.37          | 0.03                        | 8.46  | 2.91 | 17285 | 0.011                    |
| Total CUs in history                           | F2RHIS_C | 1.70          | 0.02                        | 9.00  | 3.00 | 17285 | 0.007                    |
| Total CUs in mathematics                       | F2RMAT_C | 2.76          | 0.03                        | 8.35  | 2.89 | 17285 | 0.009                    |
| Total CUs in other math courses                | F2ROMA_C | 0.56          | 0.02                        | 7.11  | 2.67 | 17285 | 0.006                    |
| Total CUs in physics                           | F2RPHY_C | 0.20          | 0.01                        | 9.00  | 3.00 | 17285 | 0.003                    |
| Total CUs in agriculture                       | F2RVAG_C | 0.13          | 0.01                        | 4.00  | 2.00 | 17285 | 0.005                    |
| Mean   |          |               |                             | 6.75  | 2.53 |       |                          |
| Minimum  |          |               |                             | 1.78  | 1.33 |       |                          |
| Maximum  |          |               |                             | 16.47 | 4.06 |       |                          |
| Standard Deviation                             |          |               |                             | 3.05  | 0.57 |       |                          |
| Median   |          |               |                             | 6.50  | 2.55 |       |                          |

<sup>a</sup> Standard error calculated taking into account the sample design.

<sup>b</sup> Standard error calculated under assumptions of simple random sampling.

<sup>c</sup> As a result of inconsistency resolution nine cases in the data file were coded into this category after the calculation of standard errors/design effects, and one case not in the category was recoded as missing.

<sup>d</sup> As a result of inconsistency resolution fourteen cases in the data file moved out of this category after the calculation of standard errors/design effects, and three additional cases in the category were recoded as missing.

<sup>e</sup> The effective response rate (weighted unit response times weighted item response) for class rank is 66.4 percent. This is lower than the NCES standard of 70 percent for analytic reports, and suggests that the estimate should be interpreted with caution.

**Table 3.3-2 NELS:88 second follow-up:  
Mean design effects (DEFFs) and root design effects (DEFTs)  
for transcript data--full sample (N=17,285)**

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| <u>Group</u>                       | <u>Mean DEFF</u> | <u>Mean DEFT</u> |
|------------------------------------|------------------|------------------|
| All Respondents                    | 6.75             | 2.53             |
| Students                           | 7.15             | 2.61             |
| Dropouts                           | 2.39             | 1.51             |
| Male <sup>a</sup>                  | 5.43             | 2.24             |
| Female                             | 4.90             | 2.14             |
| White                              | 6.92             | 2.54             |
| Black                              | 4.31             | 2.02             |
| Hispanic                           | 4.24             | 1.99             |
| Asian/Pacific Islander             | 5.20             | 2.17             |
| American Indian/<br>Alaskan Native | 3.41             | 1.75             |
| Public schools                     | 6.26             | 2.39             |
| Catholic schools                   | 5.73             | 2.33             |
| Other private schools              | 21.66            | 4.36             |
| Low SES                            | 3.54             | 1.81             |
| Middle SES                         | 4.35             | 2.01             |
| High SES                           | 6.69             | 2.48             |
| Urban                              | 7.01             | 2.52             |
| Suburban                           | 6.95             | 2.53             |
| Rural                              | 7.30             | 2.57             |

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<sup>a</sup>Sex categories are based on the composite sex variable.

Note: Each mean is based on 30 items.

**Table 3.3-3 NELS:88 second follow-up:  
Coefficients of variation and relvariance of  
transcript sample case weights by subgroup—full sample (N=17,285)**

| <u>Group</u>                       | <u>Coefficient of<br/>Variation</u> | <u>Relvariance</u> |
|------------------------------------|-------------------------------------|--------------------|
| Students                           | 1.8703                              | 3.4980             |
| Dropouts                           | 1.1797                              | 1.3918             |
| Male <sup>a</sup>                  | 1.8937                              | 3.5862             |
| Female                             | 1.6444                              | 2.7041             |
| White                              | 1.7520                              | 3.0694             |
| Black                              | 1.8139                              | 3.2904             |
| Hispanic                           | 1.5828                              | 2.5052             |
| Asian/Pacific Islander             | 1.8024                              | 3.2487             |
| American Indian/<br>Alaskan Native | 1.5005                              | 2.2515             |
| Public schools                     | 1.7199                              | 2.9582             |
| Catholic schools                   | 1.4199                              | 2.0160             |
| Other private schools              | 5.8955                              | 34.7571            |
| Low SES                            | 1.5120                              | 2.2861             |
| Middle SES                         | 1.7255                              | 2.9773             |
| High SES                           | 2.4023                              | 5.7712             |
| Urban                              | 2.1509                              | 4.6262             |
| Suburban                           | 2.0045                              | 4.0178             |
| Rural                              | 1.3462                              | 1.8123             |

<sup>a</sup>Sex categories are based on the composite sex variable.

of clustering. For the whole sample, the relvariance of the transcript weights is 3.12 (leading to an expected design effect due to unequal weighting of more than 4). Many of the differences across subgroups in the average design effect appear to reflect differences in the variability of the weights. For example, the average design effect is 8.73 for estimates from students and dropouts from other private schools versus 6.46 for estimates from public schools and 5.25 for estimates from Catholic schools. The relvariances of the weights were 34.75 for the other private school cases, 2.96 for cases from public schools, and 2.01 for cases from Catholic schools. The relvariance of the weights for other private schools is high because of the relatively small number of such schools selected for the transcript study and the lower rate of participation by these schools in the study.

**Design Effects and Approximate Standard Errors.** Researchers who do not have access to software for computing accurate estimates of standard errors can use the mean design effects presented in Table 3.3-2 to approximate the standard errors of statistics based on the NELS:88 second follow-up

transcript data. Design-corrected standard errors for a proportion can be estimated from the standard error computed using the formula for the standard error of a proportion based on a simple random sample and the appropriate mean root design effect (DEFT):

$$SE = DEFT \times (p(1-p)/n)^{1/2} \quad (1)$$

where  $p$  is the weighted proportion of respondents giving a particular response,  $n$  is the size of the sample, and DEFT is the mean root design effect.

Similarly, the standard error of a mean can be estimated from the weighted variance of the individual scores and the appropriate mean DEFT:

$$SE = DEFT \times (\text{Var}/n)^{1/2} \quad (2)$$

where Var is the sample variance,  $n$  is the size of the sample, and DEFT is the mean root design effect.

The design effect table presented in the preceding section make it clear that the design effects and root design effects vary considerably by subgroup. It is therefore important to use the mean DEFT for the relevant subgroup in calculating approximate standard errors for subgroup statistics.

Standard error estimates may be needed for subgroups that are not tabulated here. One rule of thumb may be useful in such situations: design effects will generally be smaller for groups that are formed by subdividing the subgroups listed. (This is because smaller subgroups will generally be less affected by clustering than larger subgroups.) Estimates for Hispanic males, for example, will generally have smaller design effects than the corresponding estimates for all Hispanics or all males. For this reason, it will usually be conservative to use the subgroup mean DEFT to approximate standard errors for estimates concerning a portion of the subgroup. This rule applies only when the variable used to subdivide a subgroup crosscuts schools. Sex is one such variable, since most schools include students of both sexes. It will not reduce the average cluster size to form groups that are based on subsets of schools.

Standard errors may also be needed for other types of estimates than the simple means and proportions that are the basis for the results presented here. A second rule of thumb can be used to estimate approximate standard errors for comparisons between subgroups. If the subgroups crosscut schools, then the design effect for the difference between the subgroup means will be somewhat smaller than the design effect for the individual means; consequently, the variance of the difference estimate will be less than the sum of the variances of the two subgroup means from which it is derived:

$$\text{Var}(b-a) < \text{Var}(b) + \text{Var}(a) \quad (3)$$

in which  $\text{Var}(b-a)$  refers to the variance of the estimated difference between the subgroup means, and  $\text{Var}(a)$  and  $\text{Var}(b)$  refer to the variances of the two subgroup means. It follows from equation (3) that  $\text{Var}(a) + \text{Var}(b)$  can be used in place of  $\text{Var}(b-a)$  with conservative results.

A final rule of thumb is that more complex estimators show smaller design effects than simple estimators.<sup>9</sup> Thus, correlation and regression coefficients tend to have smaller design effects than

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<sup>9</sup> Kish, L., and Frankel, M. (1974). Inference from complex samples. *Journal of the Royal Statistical Society: Series B (Methodological)*, 36, 2-37.

subgroup comparisons, and subgroup comparisons have smaller design effects than means. This implies that it will be conservative to use the mean root design effects presented here in calculating approximate standard errors for complex statistics, such as multiple regression coefficients. The procedure for calculating such approximate standard errors is the same as with simpler estimates: first, a standard error is calculated using the formula for data from a simple random sample; then, the simple random sample standard error is multiplied by the appropriate mean root design effect.

One analytic strategy for accommodating complex survey designs is to use the mean design effect to adjust for the effective sample size resulting from the design. For example, one could create a new rescaled, design effect-adjusted weight, which is the product of the inverse of the design effect and the rescaled case weight, and use this new weight to deflate the obtained sample size to take into account the inefficiencies due to a sample design that is a departure from a simple random sample. Using this procedure, statistics calculated by a statistical program such as SPSS will reflect the reduction in sample size in the calculation of standard errors and degrees of freedom. Such techniques capture the effect of the sample design on sample statistics only approximately. However, while not providing a complete accounting of the sample design, this procedure is a decidedly better approach than conducting analysis that assumes the data were collected from a simple random sample. The analyst applying this correction procedure should carefully examine the statistical software he or she is using, and assess whether the program treats weights in such a way as to produce the effect described above.

### 3.4 Additional Sources of Nonobservational Error

Analysis of survey error is important for understanding the potential bias in making inferences from an obtained sample to a population. Sampling errors occur because the data are collected from a sample rather than a census of the population. Sampling error analyses for NELS:88 (documenting standard errors of measurement and design effects for key variables) were presented earlier in this chapter (see section 3.3). In this section, other sources of nonobservational error are discussed.

Nonobservational error results from measurements not being taken from a portion of the population.<sup>10</sup> Several factors comprise nonobservational error, including nonresponse biases caused by unit and item nonresponse and undercoverage. Nonresponse is readily quantified. While many data quality factors are difficult to measure in the non-experimental context of large-scale survey administration, NELS:88 offers the possibility of comparing reports from multiple sources, thereby permitting some approximate but useful validity parameters. Below, we discuss two kinds of nonobservational error in the NELS:88 second follow-up: undercoverage and nonresponse.

#### 3.4.1 Biases Caused by Undercoverage of Special Populations

**Undercoverage of Non-English Speakers.** There is significant undercoverage in the NELS:88 data of the portion of the language minority population that is more severely limited in English proficiency (LEP) or non-proficient (NEP) in English. This undercoverage is most severe for the base year questionnaire data, and for test results from all waves of NELS:88. Undercoverage bias will affect estimates for LEPs and NEPs, but will also affect certain estimates for racial-ethnic subgroups that have large numbers of LEPs and NEPs when individuals in these groups generally differ in a relevant

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<sup>10</sup> Groves, R. M., *Survey Errors and Survey Costs*. New York: John Wiley and Sons, 1989, page 11.



characteristic from other non-LEP/NEP Asians, Hispanics or others.<sup>11</sup> Although, for example, Hispanics and Asians were selected at a higher than normal rate in the base year, have been disproportionately retained in subsequent follow-ups, and have been added to the cohort as their eligibility status was found to have changed, significant numbers of LEPs were excluded from the base year sample.

Specifically, among the total number of eighth-grade students enrolled in the 1,052 fully participating base year schools, 1.9 percent of the potential sample (3,831 of 202,966) were excluded by their schools for reasons of a language barrier to participation. Had no students been excluded for language reasons, the NELS:88 baseline would have included an additional 532 students. All of these students would be classifiable as LEPs or NEPs; 270 of these excluded students were Hispanics, 175 were Asians, and the remaining 87 language-excluded eighth-grade students were of another race/ethnicity (neither Hispanic nor Asian). Some 24,599 students (out of 26,432 sample members) participated in the base year, and of these participants, 642 were classified either by self-report or teacher report as of limited English proficiency. If one counts as LEP all students reported as LEP by either source, then just over half of the LEPs in the potential sample were captured by the base year sample design and contributed data to the base year. (If one uses the more stringent criterion of counting only those so identified by both sources--self-report and teacher--or counts only those identified by teachers, then less than half of the potential LEPs are represented in the base year data.)

Initially in the first follow-up and then in the second follow-up, two measures were adopted to increase coverage of students with limited English language proficiency. 1) Eligibility rules were modified so that the number of LEPs obtained through sample freshening would be maximized. The modified eligibility rules were applied also to the sample of base year ineligibles in the first follow-up and to the ineligibles in the second follow-up followback study of excluded students. 2) In addition, base year and first follow-up ineligibles who had gained sufficient proficiency to complete survey forms in the first and second follow-ups were added to the cohort. Students with a language barrier who were reclassified were administered the student questionnaire in Spanish or English, or the dropout questionnaire (in English or Spanish) if they were school-leavers. Enrollment status data was gathered for those students who were classified as being still unable to complete the NELS:88 survey forms. Transcript data were also collected in the second follow-up for students ineligible for all three waves of NELS:88 who were enrolled in the twelfth grade.

**LEPs who Entered the Sample through Freshening.** Substantial numbers (236 total in the first and second follow-up rounds of freshening) of limited English-proficient students entered NELS:88 through the freshening process. LEPs are, of course, disproportionately present in the population of students who fall behind the modal progression through school. While, by the most generous count (that is, self-report or teacher report), only 2.6 percent (or, weighted, 2.3%) of the base year respondents were LEPs, around 17 percent of the freshening sample in first follow-up were classified by their schools as LEPs (176 out of 1,060). Virtually all of the LEP students selected in the freshening process were retained for the first follow-up.<sup>12</sup> Similarly, 69 of the 288 (24%) students identified in the second

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<sup>11</sup> Of course, elements excluded from the sampling frame are not accounted for by sample weighting so that population estimates from the data file fall appropriately short of full 1987-88 eighth-grade enrollment figures. Nevertheless, such exclusions limit one's ability to describe in an unbiased way special populations of interest, such as all dropouts, all language minority students, and so on.

<sup>12</sup> Three had to be excluded because they had physical or mental disabilities that precluded their participation, and eleven were temporarily ineligible (out of scope for the first follow-up because though in the country at the time of freshening, they were outside the country at the time of data collection). The other 158 entered the first follow-up sample.

follow-up freshening process were classified by their schools as LEP; 60 (87%) of these LEP students were added to the NELS:88 cohort during the second follow-up.<sup>13</sup>

As noted above, eligibility rules were modified in the first follow-up to reduce the likelihood that LEP students would be excluded in the sample freshening process. With support from the Office of Bilingual Education and Minority Language Affairs (OBEMLA), the student questionnaire was translated into Spanish for both the 1990 and 1992 rounds; because a translation of the cognitive tests was not feasible, students completing the Spanish questionnaire were not pressed to attempt to complete the test component.

**LEPs who Entered the Sample through Studies of Excluded Students.** The same modified eligibility rules were applied retroactively to a sample of base year language-excluded students in the first and second follow-ups. Language-excluded students whose English proficiency status had changed such that they were able to complete the survey forms were administered the English-language version of the student or dropout questionnaire. Although cognitive test data were not collected for this group in the first follow-up, as many of these students as possible (45, or 34%) were tested in the second follow-up in 1992. The 532 students who would have been chosen for the base year except for language barriers to their participation were represented (with appropriate adjustment to their weights) in the first follow-up base year ineligibles study by 204 individuals; of these, 131 were found to be eligible (of which 118 participated) and were included in the NELS:88 cohort in the second follow-up. The eligibility of the remaining 73 language-excluded students was reassessed in the second follow-up followback study of excluded students (FSES); of these 73, 22 were found to be eligible and 19 (86.4%) participated.<sup>14</sup> Of the 51 second follow-up language-excluded students, only two were enrolled in the twelfth grade and were eligible for the transcript component. A transcript was collected for one of these students in the second follow-up.

LEP students added to the cohort through the freshening process appear on this data file. First follow-up data for base year language ineligible who have become eligible did not appear on the initial 1991 public release student component file, but have been integrated into the first follow-up files and will appear in subsequent combined releases of NELS:88 data (1994 Electronic Codebook release). Since it was not necessary to exclude any freshened students for language reasons in the first follow-up and only one student was excluded in the second follow-up, and because cases representing about 74 percent of the base year language exclusions became eligible in either the first or second follow-up, the net effect of these additions to the data is to substantially reduce undercoverage of current and former limited English-proficient students. However, bias is at best but modestly reduced for the cognitive test data because some of the freshened LEP students and second follow-up FSES eligibles did not complete the cognitive tests, and none of the first follow-up reclassified base year excluded students completed the test battery. Data users should take these potential biases into account in their analyses.

**Undercoverage of Students with Disabilities.** There is significant undercoverage in the NELS:88 data of that portion of the special education population that is most severely mentally or physically disabled. Undercoverage bias may also affect certain estimates for racial or gender subgroups that have large numbers of students in the excluded category. (Our data show, for example, that Blacks and males are disproportionately represented in the class of students excluded owing to mental disability.)

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<sup>13</sup> Of the remaining 9 LEPs identified for freshening in the second follow-up, 5 were out of the country at the time of data collection, 3 had mental or physical disabilities that precluded their participation, and one spoke a language other than Spanish and could not complete survey instruments in English.

<sup>14</sup> Of these 73 excluded students, 40 were screened and determined to be ineligible, 21 had moved out of the country, and 12 remained unscreened.

Coverage of this population was improved in the first follow-up by the fact that in the base year ineligibles study, nine of the 23 students excluded because of physical barriers to participation, and 140 of the 322 students who had been excluded because of mental barriers to participation, were reclassified as eligible. Similarly, 49 of the previously ineligible sample members were found to be eligible in the second follow-up followback study of excluded students; of these 49 excluded students, 44 had been previously excluded due to mental disability and 5 for physical limitations. Of the students excluded from the second follow-up owing to physical or mental disability, 91 were enrolled in the twelfth grade and were eligible for the transcript component. Transcripts were gathered for 51 of these students in the second follow-up.

It is our sense that few of the previously ineligible students with disabilities found to be eligible in the second follow-up actually "changed" substantially between rounds; rather, most reclassifications reflected the process of taking a second look at students at the margin between eligible and ineligible, and aggressively pursuing status information from their special education teachers, information that would permit a more accurate assessment to be made of their ability to complete at least the student questionnaire. Overwhelmingly, the reclassified students would appear to be those with learning disabilities or emotional disturbances, rather than the mentally retarded. Hence students with severe or profound impairments are not represented in the NELS:88 data.

Estimates based on the members of the ineligibles sample are also subject to limitations. By and large, the NELS:88 samples of eligible and ineligible language-excluded students, when combined, provide excellent population coverage. However, for the severely physically and mentally disabled populations, there are two potential sources of exclusion in addition to school-level classification as ineligible. These further sources of undercoverage are 1) exclusion of schools (special purpose schools for the disabled were excluded from the base year sampling frame), and 2) the exclusion of ungraded classrooms in what was by definition a sample of eighth graders.

**Test Score Undercoverage of Dropouts.** Data users are reminded that no special nonresponse adjusted weight was created for cases with a completed questionnaire but without a cognitive test. As in the base year, cognitive test completion rates were sufficiently high that such a weight was not needed. Rates of test completion among in-school sample members were 96.5 percent in the base year and 94.1 percent in the first follow-up, with a decrease to 76.6 percent in the second follow-up.

However, the high overall rate of test completion for students does not apply to dropouts. While 91 percent of identified dropouts provided questionnaire data in the first follow-up, cognitive tests were completed by only half of the sample members who completed a full or abbreviated dropout questionnaire.<sup>15</sup> In the second follow-up, 88 percent of the dropouts provided questionnaire data but only 42 percent completed a cognitive test. This low rate of test completion is attributable to the high percentage of questionnaires that were administered by telephone, as well as to the strategy of obtaining questionnaire data only rather than accepting a refusal from a dropout or alternative completer unwilling to take the cognitive test. Of course, base year test score data are available for most of the individuals for whom first and/or second follow-up test results were not obtained. **It would be hazardous to, for example, draw conclusions about test score gains between 1988 and 1990 or between 1990 and 1992 for dropouts as a separate group, given the amount of 1990 and 1992 test data that are missing.**

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<sup>15</sup> According to the first follow-up design, dropouts administered the abbreviated or modified dropout questionnaires (28% of the dropout sample) were not asked to complete the cognitive test battery; for these sample members only the standard classification variables and a number of key items that differentiate the in-school and out-of-school populations are available for analysis.

### 3.4.2 Unit and Item Nonresponse

**Unit Nonresponse.** In the transcript component, unit nonresponse occurred when a school declined to participate in the transcript survey or failed to submit a transcript for a particular sample member. The contextual school participation (93.7%) and student coverage (92.0% weighted) rates for the transcript survey are high. (See Tables 2.3-1 and 2.3-2 in Chapter II.) Coverage rates vary somewhat by school characteristics and student ethnicity, with slightly lower coverage rates for Blacks, Hispanics, and students attending other private and urban schools.

Coverage rates for the dropout/alternative completer sample are markedly lower (70% weighted, for the total sample), and vary more widely by student ethnicity, from 75 percent for Asians and Pacific Islanders to 58 percent for Blacks. A number of difficulties were encountered in the collection of transcripts for dropouts and alternative completers:

- Signed transcript release forms were collected for only 45 percent of the dropout sample; schools were particularly reluctant to provide transcripts for dropouts without signed forms, despite assurances concerning the legality of doing so.
- School records for dropouts—some of whom had not attended school since 1988—were frequently archived or unlocatable.
- School and sample member reports of enrollment were sometimes inconsistent, making it difficult to determine whether the sample member had attended high school, and if so, what school he/she had last attended.
- For early dropouts who had not participated in the first and second follow-up surveys, all information about high school enrollment was missing, making the pursuit of school records impossible.
- The dropout/alternative completer sample includes 213 sample members with imputed dropout status. Transcripts were collected for only 41 percent of these sample members, who could not be located in the second follow-up, and for whom recent high school enrollment data and signed transcript release forms were not available.

The transcript coverage rate for the dropout and alternative completer sample is an underestimate of the actual coverage rate, since it is likely that some proportion of the dropouts included in the sample did not attend high school and are therefore ineligible for the transcript survey.

**Item Nonresponse.** As noted above, sampling and coverage errors are two key components of total survey error. Sampling error is quantified through the standard errors and design effects for key variables. There are other sources and types of error, including estimate error or bias associated with unit (individual) nonresponse and item nonresponse. In addition to its role as a potential source of bias, item nonresponse also has the effect of diminishing the number of observations that can be used in calculating statistics from affected data elements and thus increases sampling variances. Since item nonresponse is an important potential and uncorrected source of data bias, it is necessary to measure its impact so that analysts can properly take potential response biases into account when developing their analysis plans. NCES's standard asserts that total weighted nonresponse for an item (unit nonresponse multiplied by item nonresponse) should not exceed 30 percent. This section reports specifically on nonsampling measurement error as a function of item nonresponse.

In the transcript component, item nonresponse occurred when school staff failed to provide certain information requested and attempts to retrieve key data elements were unsuccessful. While bias associated with unit nonresponse has been controlled by making adjustments to case weights, item nonresponse has generally not been compensated for in the NELLS:88 transcript component data set.

Unit nonresponse is an additional source of missing item data--transcript data were not collected for approximately 10 percent of eligible sample members. Weights accommodate unit nonresponse by projecting transcript data to the full population, with appropriate adjustments for defined subgroups. However, nonresponse-adjusted weights cannot compensate for the bias that arises if data for nonrespondents and respondents are different. Hence "total response" should be thought of as the survey (unit) coverage rate times the item response rate. (For example, given a cross-sectional weighted transcript coverage rate of 88 percent, and an item response rate of 88 percent, total response would be 77 percent.)

The objective of the following nonresponse analysis is to quantify nonresponse to student-level transcript variables. In order to realize this objective, average nonresponse rates were calculated for each item for all sample members for whom transcripts were collected. The nonresponse analysis of transcript data is quite brief, because of the small number of non-composite student-level items.

#### Definitions.

##### **Definition 1: "Item"**

For purposes of this analysis, "item" refers to each data element or variable. (Transcript variables are listed in Appendix G; frequencies for transcript variables appear in the codebooks, in Appendix I).

##### **Definition 2: "Response Rate"**

NCES standards stipulate that item response rates ( $R_i$ ) "are to be calculated as the number of respondents for whom an in-scope response was obtained (i.e., the response conformed to acceptable categories or ranges), divided by the number of completed interviews for which the question (or questions if a composite variable) was intended to be asked.":

$$R_i = \frac{\text{weighted \# of respondents with in-scope responses}}{\text{weighted \# of completed interviews for which question was intended to be asked}}$$

In-scope responses were considered to be valid answers (including a "don't know" response when this was a legitimate response option). Out-of-scope responses were refusals and missing responses.

##### **Definition 3: "Nonresponse"**

For the transcript component two numerical reserved codes were used to categorize nonresponse. The reserve codes and definitions appear below. The first--8--defines out-of-scope or illegitimate nonresponse, and was used as the basis for this nonresponse analysis.

8 = Missing. The datum is illegitimately missing. That is, a datum that should be present for this sample member is missing.

- 9 = Legitimate Skip. The datum is legitimately missing. That is, owing either to data to preceding filter items or to other sample member characteristics, data for this item should not be present for this sample member. Data coded as reserve code 9 were not included in the nonresponse analysis.

**Item-Level Nonresponse for Student-Level Variables.** Table 3.4.2-1 shows nonresponse rates for student-level transcript items, excluding constructed variables and Advanced Placement and College Board Achievement test items. Critical items are denoted by an asterisk. Rates of nonresponse for most items are high—ranging from 2.2 to 77.1 percent—but are comparable to item-level nonresponse rates in other high school transcript studies, including the 1982 HS&B and 1987 and 1990 NAEP transcript studies.

Nonresponse is particularly high for F2RAB88 through F2RAB91, number of days absent per school year. (Note that for dropouts, F2RAB88 through F2RAB91 were not coded as legitimately skipped for years of nonattendance, resulting in a slight inflation of item nonresponse.) Similar rates of nonresponse for days absent per school year (between 40 and 45 percent, unweighted) were encountered in the 1982 HS&B transcript study

F2RAB88 through F2RAB91 were initially deemed to be critical items. However, retrieval of missing absence information proved to be burdensome to both survey staff, because of the high initial rate of nonresponse, and school staff. School staff frequently refused to provide the requested information. Transcript preparers often reported that retrieving absence information would require pulling attendance records for each sample member and totalling absences across reporting periods for each school year. Retrieval of absence information was deemed to be unfeasible. Consequently, item response for F2RAB88 through F2RAB91 was dependent on the frequency with which schools normally report attendance information on transcripts or provided that information specially for the transcript survey.

Nonresponse is also relatively high for two critical items: class rank, F2RRANK, 24.5 percent; and class size, F2RCSIZE, 21.0 percent. Nonresponse rates for class rank and size in the HS&B transcript study were of similar magnitude: 29.7 percent, unweighted. Some schools in the second follow-up transcript survey did not rank all or some students, such as special education students or dropouts and alternative completers. No attempt was made to distinguish unranked students from ranked students with missing class rank in data collection or in the transcript data file. Weighted item response rates for F2RRANK and F2RCSIZE for contextual students are 85.3 percent and 88.8 percent. As expected, the rates for all other transcript sample members, mostly dropouts and alternative completers, are much lower; the weighted item response rate for F2RRANK for this group is 27.0 percent, and the rate for F2RCSIZE is slightly higher at 30.4 percent.

**Standardized Test Scores.** Standardized test scores—PSAT, SAT, ACT, College Board Achievement, and AP—were requested in transcript data collection materials, but were not deemed to be critical items and were not retrieved from school staff when missing from transcripts. A test score may be missing because it was not reported by the school, or because the sample member did not take that particular test. No attempt was made to distinguish between the two sources of nonresponse in data collection or in the transcript data file. The nonresponse rates for these items are consequently very high, from 72.5 percent (unweighted) for F2RPSATV to almost 100 percent for some Advanced Placement and Achievement tests. (The student questionnaire asked whether the student had taken an Advanced Placement test [and if so, when] or planned to; however, it did not identify the subject. Likewise, the questionnaire asked whether the student had taken the SAT, PSAT or ACT.) Nonresponse rates were equally high for test items in the HS&B transcript study, ranging from a low of 75.1 percent (unweighted)

**Table 3.4.2-1**  
**Nonresponse for student-level transcript items**

| Item      |  | Weighted Percent<br>Missing | Unweighted Percent<br>Missing |
|-----------|--|-----------------------------|-------------------------------|
| F2RAB88   | DAYS ABSENT 88-89 SCHOOL YEAR                    | 43.4                        | 43.3                          |
| F2RAB89   | DAYS ABSENT 89-90 SCHOOL YEAR                    | 42.1                        | 42.2                          |
| F2RAB90   | DAYS ABSENT 90-91 SCHOOL YEAR                    | 44.5                        | 44.0                          |
| F2RAB91   | DAYS ABSENT 91-92 SCHOOL YEAR                    | 45.9                        | 44.0                          |
| F2RSPFLG* | PARTICIPATION IN SPECIALIZED<br>COURSES/PROGRAMS | 2.2                         | 1.8                           |
| F2RRANK*  | CLASS RANK FOR LAST YEAR ATTENDED                | 24.5                        | 22.5                          |
| F2RCSIZE* | CLASS SIZE FOR LAST YEAR ATTENDED                | 21.0                        | 18.1                          |
| F2RDTLMO* | MONTH STUDENT LEFT SCHOOL                        | 4.2                         | 3.8                           |
| F2RDTLYR* | YEAR STUDENT LEFT SCHOOL                         | 3.5                         | 3.1                           |
| F2RREASL* | REASON STUDENT LEFT SCHOOL                       | 2.3                         | 2.0                           |
| F2RGPA    | CUMULATIVE GPA FOR LAST YEAR ATTENDED            | 23.4                        | 21.4                          |
| F2RPSATM  | PSAT (MATHEMATICS)                               | 71.8                        | 66.6                          |
| F2RPSATV  | PSAT (VERBAL)                                    | 71.7                        | 66.6                          |
| F2RSATM   | SAT (MATHEMATICS)                                | 72.5                        | 67.3                          |
| F2RSATV   | SAT (VERBAL)                                     | 72.5                        | 67.3                          |
| F2RACTC   | ACT (COMPOSITE SCORE)                            | 76.8                        | 72.8                          |
| F2RACTE   | ACT (ENGLISH SCORE)                              | 77.1                        | 73.3                          |
| F2RACTM   | ACT (MATH SCORE)                                 | 77.1                        | 73.3                          |
| F2RACTR   | ACT (READING SCORE)                              | 77.1                        | 73.3                          |
| F2RACTS   | ACT (SCIENCE REASONING SCORE)                    | 77.1                        | 73.3                          |

\* denotes a critical item

for the PSAT mathematics component to almost 100 percent for some Advanced Placement and Achievement tests.

For the PSAT and SAT, more accurate estimates of nonresponse may be calculated by comparing test taking by 1992 NELS:88 seniors with College Entrance Examination Board test taking statistics for the cohort.<sup>16</sup> Approximately 45 percent of high school juniors took the PSAT in October 1990. PSAT scores were collected for 34.5 percent (weighted) of the 1992 NELS:88 senior cohort eligible for the transcript survey. Estimated response for the two PSAT items on the transcript component student file is roughly 75 percent. Approximately 40 percent of 1992 seniors took the SAT any time during their high school years, through April 1992.<sup>17</sup> SAT scores were collected for 34 percent (weighted) of the 1992 NELS:88 senior cohort eligible for the transcript survey. This suggests that response for the two SAT items included on the student data file may be as high as 85 percent.

**Item-Level Nonresponse for Course Variables.** As expected in a transcript study, nonresponse to course-level items is negligible, as indicated in Table 3.4.2-2.

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**Table 3.4.2-2  
Nonresponse for selected course-level variables**

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| Item     |   | Unweighted Percent Missing |
|----------|---|----------------------------|
| F2TRSCID | PUBLIC ID OF SCHOOL AT WHICH COURSE WAS TAKEN | 0.8                        |
| F2RYEAR  | SCHOOL YEAR IN WHICH COURSE WAS TAKEN         | 0.0                        |
| F2RGRLEV | GRADE LEVEL IN WHICH COURSE WAS TAKEN         | 0.3                        |
| F2RT_TYP | TERM IN WHICH COURSE WAS TAKEN                | 1.9                        |
| F2RCRED  | SCHOOL-ASSIGNED COURSE CREDITS                | 0.4                        |
| F2RGRADE | STANDARDIZED COURSE GRADE                     | 0.3                        |

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**Incomplete Course Data.** Missing course data is an additional source of nonresponse and potential bias. Course data appearing on the transcript component data file may be incomplete for one of three reasons:

1. School staff occasionally reported that dropouts had not dropped out but had transferred to another school.

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<sup>16</sup> According to the College Entrance Examination Board, 1,094,753 high school juniors took the PSAT/NMSQT in October 1990.

<sup>17</sup> A total of 1,034,131 1992 seniors took the SAT at any time during their high school years through April 1992.



2. A small number of students transferred from contextual schools after student data collection, in the winter or spring of 1992.
3. Some sample members had transferred into the schools submitting transcripts. Incomplete transcripts, which were missing transfer school course data, were occasionally submitted by schools. Survey staff attempted to collect transfer school records for dropouts and transfer students. Schools to which dropouts had reportedly transferred frequently reported that the sample member had never attended the school. Transfer schools, which were usually not part of the NELS:88 school sample, were also less cooperative than survey schools.

The transcript data availability flags (F2RTR09 through F2RTR12) may be used to assess the completeness of course data for individual students and to define for analytic purposes a sample of students with comparably complete transcript data. Complete course-taking histories--consisting of at least one course record for each of grades 9 through 12--were collected for 95 percent (weighted) of twelfth-grade contextual students reported to have graduated. Data for grades 10 through 12 were collected for 96 percent (weighted) of this cohort. The completeness of transcript data for dropouts is difficult to assess, because of the inconsistency of sample member and school reports of enrollment.

## **IV. Data Control and Preparation**

This chapter describes the procedures used to transform student- and course-level transcript data into data files. These procedures included monitoring the receipt of transcripts, identifying missing transcripts or data, retrieving missing information, entering student and course information, coding courses using the 1982 Classification of Secondary School Courses updated for the 1987 and 1990 NAEP high school transcript studies, checking the quality of data entry and coding, and preparing transcripts for archival storage.

### **4.1 Receipt Control**

Receipt control clerks checked transcript packets for completeness and reviewed transmittal documents to ensure that transcripts were returned for the specified sample members. A case-specific, bar-coded label was affixed to each transcript, and a preliminary disposition code was assigned to each sample member associated with the school. This code indicated whether a transcript had been received for the sample member and whether retrieval of missing data elements was necessary. Receipt control clerks entered this disposition code into a microcomputer-based survey management system. Schools were also assigned disposition codes indicating receipt of transcripts, necessity of retrieval, and refusal. School- and sample member-level progress reports were generated from the survey management system on a weekly basis throughout data collection.

Receipt control clerks placed all transcript-related documents—including transcripts, student checklists, course catalogs or other course listings, program identification sheets, and school information forms—in prepared school folders. Throughout data control and preparation, transcripts were processed by school.

### **4.2 Retrieval**

School folders were reviewed by data entry clerks and coders to determine whether contact with transcript preparers was necessary to resolve discrepancies or to retrieve missing transcripts, forms, course catalogs, or data elements. Clerks also identified transfer schools to be contacted for the retrieval of missing course data. Schools not requiring retrieval were routed to data entry.

Missing transcripts, forms, or data were retrieved by telephone or mail. The outcome of each retrieval attempt was thoroughly documented on a problem resolution form before the completed school was forwarded to data entry.

### **4.3 Transcript Entry**

The student- and course-level transcript data were data entered using a computer-assisted data entry system (CADE). The CADE system consisted of sequential data entry screens requesting specific student- and course-level data, such as SAT scores, course title, and credits earned. Screens were grouped by data type (student or course) to facilitate accurate and expedient abstraction. Identifying information (sample member name and identification number and school name and PIN) was preloaded into the data entry system. Valid ranges, data field size, and data type (e.g., numeric or text) were specified for each data element; clerks were required to re-enter data failing these checks.

Printouts of the data entry screens are included as Appendix C.

### 4.3.1 Data Entry Procedures

Each transcript school was assigned to a single clerk for data entry. Data entry clerks thoroughly reviewed all transcript-related documents contained in school folders before beginning to abstract data from transcripts. Variables entered included:

#### **Student-level information.**

*Number of days absent per year* - The number of absences for the 1988, 1989, 1990, and 1991 school years was entered as reported by the school, including fractions of days. Absences reported as hours were converted to days, assuming a seven hour school day. Fractions of days were rounded during machine cleaning to the nearest whole or half day.

*Numerical class rank for last year attended*

*Class size for last year attended* - The base class size--graduating or enrolled students--was not specified in data collection materials.

*Participation in special programs* - Transcript preparers were asked to report sample member participation in a special, bilingual, or gifted education program or course. This information was not verified by checking either transcripts or course catalogs.

*Month and year sample member left school* - The final withdrawal date or graduation date was entered. (Withdrawal dates span the period from winter 1988 to spring 1993, since transcripts were collected through the second term of the 1992-93 school year.)

*Reason sample member left school (graduated, transferred, etc.)*

*Cumulative grade point average* - The sample member's grade point average was entered as reported by the school; the form of grade point average used by schools varied widely, from 4 to 5 point scales to percentages. A few students in the sample have high school GPAs in excess of 100 percent because of extra quality points awarded for particular courses by their schools. No attempt was made to standardize grade point averages to a common metric during data entry or machine cleaning.

*PSAT and SAT scores* - When more than one set of PSAT or SAT scores was reported for a sample member, the set with the highest combined verbal and mathematics scores was data entered.

*ACT scores, including composite, English, mathematics, reading, and science reasoning scores* - When more than one set of ACT scores was reported for a sample member, the set with the higher(est) composite score was entered.

*College Board Achievement Test scores* - When more than one Achievement Test score in a subject area was reported for a sample member, the higher(est) score was entered.

*Advanced Placement Test scores*

**Course-taking histories for grades 9 (or 10) through 12.** For each course, the following information was entered:

*Course title, school-assigned course number, and course department* - Course titles were keyed verbatim from transcripts. When level or track indicators appeared on transcripts in fields separate from the course title field, these indicators were entered in the course title screen of the data entry system. When available, school-assigned course numbers and course departments were entered as separate data elements.

*School at which course was taken* - If the school at which the course was taken was different from the school providing the transcript, the data entry clerk flagged the course and entered the NORC identification number of the transfer school; this PIN was later converted to a public ID for the school.

*School year in which course was taken* - Summer school courses were entered under the preceding school year. Courses taken in the summer of 1991, for example, were entered under the 1990-91 school year (F2RYEAR=90). For students who had fallen behind the modal progression sequence and whose transcripts were received late in the data collection period, course data for the 1992-93 school year was entered (F2RYEAR=92 for these course records).

*Grade level* - The grade in which the sample member was enrolled at the time the course was taken was entered.

*Term type* - The term in which the course was taken, as reported on the transcript, was entered. Some schools reported courses only at the year level; the term in which courses were taken was not documented on transcripts. For these schools—which may be identified by the high proportion of courses with less than one Carnegie unit and term type coded as year—the term type entered may be an unreliable indicator of the actual duration of the course.

*Credits* - The number of credits awarded for the course was entered as reported by the school.

*Grade* - Letter grades were coded using the scales in Appendix D. One scale was used to convert letter grades to standardized grade codes. A second set of scales were used to convert number grades to grade codes.

**Transcript Format and Course Entry.** Schools reported course-taking at the year or term level on transcripts. When schools reported course-taking at the year level and provided final grades, only one entry was made for each course reported. When schools reported course-taking at the year level, but provided only term-level grades, courses were entered as though they had been reported at the term level, with individual course entries being made for each term, and the yearly credits divided among the term-level entries.

In the 1982 High School and Beyond Transcript Survey, courses appearing on transcripts under multiple terms for the same school year were data entered only once; credits were summed across the terms and the grade for the last term was entered. An algebra course, for example, reported on a transcript as having been taken in the first and second semesters, with semester grades and no final grade

reported, was entered as one year-long course with the second semester grade, not as two semester-long courses. To simplify data entry and ensure high quality data, no attempt was made to combine course data across terms. Not doing so precluded much post-entry splitting of combination courses (two or more distinct term-long courses reported as though they were a single year-long course on the transcript, e.g., "AGRICULTURE/ENGLISH II").

**Standardization of Credits.** After data entry, clerks recorded the number of credits awarded by a school for the completion of a one-year academic course taken one period a day, five days a week. This factor, which varied from one to twenty, was used in machine cleaning of the data to standardize school-reported credits to a standard metric, the Carnegie unit. Dividing school-reported credits by the conversion factor yielded credits in Carnegie units. Because of the wide variation in credit systems, and the frequency of transfer courses, credits were sometimes standardized on a course-by-course basis.

#### 4.4 Course Coding

After all transcripts for a school had been data entered, the course data (e.g., course title, credits earned) for each student was uploaded to the transcript coding system. This system consists of a relational database with a CSSC lookup table function. The relational database comprised tables containing school, student, and course data. The CSSC lookup table, which displayed possible transcript title-CSSC course matches and CSSC course descriptions, enhanced both the speed and quality of coding by reducing hardcopy lookup time and eliminating errors from manual entry of CSSC codes. Each coder was given a hardcopy CSSC; however, all CSSC codes were entered through the lookup table function, which checked the validity of the code manually entered before writing it to the course table.

##### 4.4.1 Coder Training

Coders were trained over a two day period. One week prior to training, trainees were given self-study materials, including a coding manual and a copy of the Classification of Secondary School Courses. The first day of training consisted of a discussion of the structure of the CSSC, followed by a walkthrough of the coding software. Coders then practiced coding courses in a training database. On the second day of training, coders continued to code courses in the practice database. At the end of the second day, the coded courses were downloaded and printed, and supervisors checked the appropriateness of the CSSC codes selected. Feedback, primarily related to recognizing track and level indicators, was provided to coders, and coders with acceptable error rates (five percent or less) began actual course coding on the third day.

##### 4.4.2 Coding Procedures

Transcripts were coded by school. Because of the small average school cluster size (ten sample members) and the number of schools participating in the transcript study (over 2,000), no attempt was made to code catalogs prior to transcript coding, with the exception of some of the course catalogs for 247 schools in the course offerings and enrollments component of the school effectiveness study. For most schools, only those courses appearing on sample member transcripts were coded. During coding, coders had full access to all transcript-related documents, including any course catalog or other course listing provided by the school.

In the lookup system, coders retrieved school, student, and course data from database tables. Variables appearing on the coding screen included:

- School name and identification number
- Student name and identification number
- All course information entered in the CADE program (course title, department, and number; term, grade level, year, course school, credits, and grade)

Courses were not batch coded; each sample member's courses were coded individually. Using the lookup table function, coders searched for probable matches between the transcript course title and CSSC courses. After referring as necessary to the course catalog and the CSSC course description displayed in the lookup table, the coder selected the appropriate CSSC code, and the system wrote the code to the course table. Grade level, course level (first, second, third course in a sequence) and track (basic, average, honors) indicators were used in assigning CSSC codes to transcript titles. Coders also routinely checked transcripts to ensure that any such indicators not data entered were taken into consideration in course coding.

Coders flagged sample members with special education courses for coding by a special education specialist. These specialists received training in the application of the special education course coding conventions developed for the 1987 High School Transcript Study. The NELS:88 transcript study, however, did not utilize the seventh digit extension to the regular CSSC code employed in the 1987 and 1990 NAEP transcript studies to identify courses with a regular curriculum title plus a special education identifier. In NELS:88, the special education identifier was ignored in coding; courses were coded according to the regular curriculum title.

For 11 percent of the transcripts coded, no course catalog, student handbook, or other course listing was provided by the school submitting transcripts, despite multiple retrieval attempts. Similarly, course catalogs were frequently not available for courses taken at transfer schools, most of which were not in the school sample. If available, course materials for other schools in the same district were used in coding. If not, coders were required to code courses based on title (and grade level, course level, and track indicators) alone. Courses that could not be assigned a specific CSSC code were assigned an "other" code under a CSSC program or subject area. Some particularly intractable transcript course labels (e.g., "MINI-COURSE") could not be assigned to even a CSSC subject area, even when a course catalog was available; these courses were coded as uncodable (600000). All courses coded as uncodable were reviewed by coding supervisors. Where deemed appropriate, transcript preparers were contacted to clarify coding problems; only 0.2 percent of all courses were uncodable. Transfer credits not reported by course or subject area were assigned CSSC code 600001 (undifferentiated transfer credits).

#### **4.5 Transcript Entry Quality Control**

Coders, who were also trained data entry clerks, were responsible for conducting a 100 percent verification of transcript entry prior to beginning coding. Any data entry errors, excluding trivial typographical errors in course title, were recorded on error sheets; corrections were made in the CADE instrument for the transcript.

#### **4.6 Course Coding Quality Control**

Transcript course coding was reviewed by expert coders. For each school, a printout of course records, including student identification number, course title, grade level, year, and CSSC code, was generated. This school-level coding list was sorted by CSSC code and course title. Coders reviewed lists

to ensure that: 1) CSSC codes had been applied consistently and courses had been coded properly within schools; 2) courses had been coded consistently according to track (basic, general, honors) and sequence level indicators in course titles; and 3) special education courses had been recognized as such and had been coded properly. Any corrections to CSSC codes were made directly in the course file.

## V. Data Processing

Data processing activities spanned the entire length of the NELS:88 second follow-up transcript component, beginning with receipt control, through the preparation of course data tables for the coding system, and ending with the machine editing of the data and the preparation of restricted use data files and user's documentation. This chapter describes the machine editing of data entered in the CADE transcript instrument, as described in the previous chapter, and the creation of student- and course-level files from these data.

### 5.1 Machine Edit

Conventions for editing, coding, error resolution, and documentation adhered as closely as possible to the procedures and standards previously established for HS&B.

The data entry system checked entries to ensure that each conformed to valid ranges or codes defined for the particular data item, including legitimate missing codes. Only those items in which open-ended responses were collected were not subjected to these constraints. The system was also programmed to provide automatic paths through the transcript instrument to enforce skip patterns and impose appropriate inter-item consistency checks. The transcript coding system, used solely to assign CSSC codes to the courses entered in the CADE instrument, also performed complete checking of all code entries to ensure that they conformed to valid CSSC codes. These automatic checks on the data obviated some machine editing.

After transcript data had been entered, sequences of logical machine edits and visual inspection of the output began. The tasks performed included: supplying the appropriate missing data codes for items left blank, detecting illegal codes and converting them to legitimate or missing data codes, and investigating inconsistencies, contradictions, or anomalies in the data. Variable frequencies and crosstabulations were inspected before and after these steps to verify the correctness and appropriateness of the automated machine editing processes.

After all improperly entered data had been corrected or converted to blanks, the transcript data were passed through a second step in the editing program that supplied the appropriate reserve codes to fill blank fields. The reserve codes and their meanings are:

8=MISSING  
9=LEGITIMATE SKIP

If the field is longer than one column, the right-hand column contains one of the above codes and the rest of the columns are filled with "9"s.

Detection of out-of-range codes was completed during data entry for all data items except those permitting an open-ended response. Items with unusually high nonresponse were checked by verifying the data on the transcript hardcopy.

### 5.2 Data File Preparation

The CADE program files were used to generate control statements for both SAS and SPSS. Information from these files, when combined with the actual transcript data abstracted during data capture



and the CSSC codes assigned during coding, was used to produce documentation for the final data files described in detail in Chapter VI.

The conventions used to assign SAS and SPSS-X variable names are as consistent as possible with HS&B and NLS-72. In those two surveys, variable names were assigned according to the survey wave and the component. A similar system was developed for NELS:88. For example, F2RCRED, the number of credits awarded by the school for the course, is from the second follow-up survey (*F2*) transcript component (*R*).

A number of composites, or specially constructed variables, have been added to the transcript component student file to facilitate analyses using course-taking data. Some items add information from study sources that would otherwise be unavailable to users, some reference respondent properties to external standards that would be expensive for individual analysts to create, while still others are recodes or combinations of internal transcript data sources. Some will be used by all, or nearly all, analysts while others will be appropriate to those seeking insights into distinctive populations, relationships, or events. Moreover, some items have appeared in earlier rounds of NELS:88. Specifications for the composites and flags included on the transcript component student file are included in Appendix G.

Only one of the standard reserve codes, described above, is applied to composite variables during construction. For one-column variables an "8" (MISSING) is a valid missing code. This reserve code is used when the sources for data are missing due to either item nonresponse or nonparticipation in all or part of the components of the study.

## VI. Guide to the Transcript Component Data Files and Documentation

This chapter describes the content and organization of the second follow-up transcript component data files, and the associated hardcopy codebooks provided to document the files and assist researchers' conceptual designs for their own analyses.

The transcript data files may be used in stand-alone analyses of high school course-taking. The files also may be used as a contextual data source in conjunction with other NELS:88 data files. Fourteen NELS:88 study components are available to privileged users on magnetic tape or in ASCII format on CD-ROM (Compact Disc-Read Only Memory). Table 6-1 displays these NELS:88 products by study component in the base year, first follow-up, and second follow-up surveys. Public use data files, for all components except transcript for all three waves of NELS:88, are available on magnetic tape and in Electronic Codebook (ECB) format on CD-ROM. Because of issues related to respondent confidentiality, transcript data--with the exception of transcript composite variables added to the final student component public and restricted use data files--are available only as restricted use data files on magnetic tape and will appear in an ECB on CD-ROM.

Magnetic tape releases contain files that are specific to one survey wave and one component, such as the second follow-up student component data. There are two releases of second follow-up CD-ROMs, an interim and a final version. The interim version contains the same information as the BY-F1 CD-ROM that was released in the spring of 1993 and adds student and dropout data from the second follow-up. The final version provides updates to both the cases that appear on the files and to certain composites and test scores, and contains all of the second follow-up public-use survey components as well. The 1994 version of the second follow-up CD-ROM includes both public use and restricted use files, except for the transcript component. The transcript component data, along with all other base year, first follow-up, and second follow-up datasets, will appear on the 1995 NELS:88 third follow-up ECB/CD-ROM.

The student and dropout questionnaire and transcript data sets are the central units of analysis in NELS:88. Each of the student data files may be examined as an independent entity or may be combined for observation of the maturation of the original student cohort over time. The student and dropout data files released in the second follow-up of NELS:88 may be combined with transcript data and data from second follow-up surveys of parents, teachers, and school administrators. The most powerful analyses are possible when students are viewed in this contextual framework across the four-year time frame that is now available. The NELS:88 files are designed to be merged and used to examine how different student and dropout outcomes relate to various structural patterns, as measured by school, parent, teacher influences and transcript data, and/or the ways in which these change over time. Transcript data, when merged with the student and dropout files and the contextual data sets, furnish objective and reliable measures of important aspects of students' educational experiences, including course-taking patterns, curriculum exposure, and educational outcome.

It is important to bear in mind that the school, teacher, and parent data files are dependent upon and subsidiary to the student and dropout files in NELS:88. **These contextual data files cannot stand alone.**<sup>1</sup> The only exception is the base year school file, which is representative of eighth-grade American

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<sup>1</sup> Even for the base year and second follow-up parent surveys--which closely resemble probability samples of parents of the relevant student and dropout populations--there are some departures from the requirements of a stand-alone probability sample. In particular, some unknown number of base year and second follow-up parents had more than one sampled eighth grader, hence more than one chance of selection into the sample. In addition, in both the base year and second follow-up, only one parent was

**Table 6-1**  
**NELS:88 components and survey waves for which both**  
**magnetic tape and CD-ROM products are available**

| <u>Base Year</u>            | Available                                     | Number of Variables<br>on Public Use Version  |
|-----------------------------|---|---|
| Student                     | Yes   | 411   |
| Dropout                     | Not Applicable <sup>a</sup>                   | Not Applicable <sup>a</sup>                   |
| School                      | Yes   | 212   |
| Teacher                     | Yes   | 239   |
| Parent                      | Yes   | 332   |
| Transcript                  | Collected in<br>Second Follow-Up <sup>c</sup> | Collected in<br>Second Follow-Up <sup>c</sup> |
| <br><u>First Follow-Up</u>  |   |   |
| Student                     | Yes   | 695   |
| Dropout                     | Yes   | 562   |
| School                      | Yes   | 834   |
| Teacher                     | Yes   | 463   |
| Parent                      | Not Collected <sup>b</sup>                    | Not Collected <sup>b</sup>                    |
| Transcript                  | Collected in<br>Second Follow-Up <sup>c</sup> | Collected in<br>Second Follow-Up <sup>c</sup> |
| <br><u>Second Follow-Up</u> |   |   |
| Student                     | Yes   | 796   |
| Dropout                     | Yes   | 574   |
| School                      | Yes   | 429   |
| Teacher                     | Yes   | 421   |
| Parent                      | Yes   | 424   |
| Transcript                  | Yes   | --- <sup>c</sup>                              |

<sup>a</sup> Since by definition dropouts could only be identified and studied after the initial round of the survey, there is no base year dropout component.

<sup>b</sup> The parent component was only conducted during the base year and second follow-up.

<sup>c</sup> Transcripts collected during the second follow-up span the entire high school career. The transcript data are available in restricted use form only. Although there is no public use release of the transcript data, the restricted use transcript file includes 236 student-level variables and 251 course-level variables.

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surveyed, and that parent was self-selected.

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schools and their principals in 1988. The first and second follow-up school components reflect characteristics of the secondary schools to which students in the contextual sample migrated after eighth grade, and the secondary schools selected for these components do not constitute representative samples. Inferences from the first follow-up and second follow-up school data files cannot be legitimately made if these data are viewed in isolation from the student files. Although their content is archival, the transcript data, like the student and dropout questionnaire data, are a part of the student-dropout datasets, and inferences can be made about the course-taking patterns and curriculum exposure of the various populations represented by the NELS:88 longitudinal panels and cross-sectional cohorts.

Several types of sample members are included in the transcript component data set, and the user must take care to select the correct set of sample members for analysis. Included in the data set are: 1) sample members who have participated in one, two or all three waves of the survey; 2) students who were added in the first or second follow-ups to freshen the sample; 3) base year ineligible sample members who were reclassified as eligible for inclusion in the first and/or second follow-up surveys of NELS:88<sup>2</sup>; and 4) triple ineligibles, base year ineligible sample members who were ineligible for the first and second follow-up surveys (and were not surveyed) and were in the twelfth grade in the second follow-up. Sample members in the transcript data set may also be categorized by educational outcome as determined from transcript data; these categories include:

1. Students who graduated from high school in the spring term of 1992
2. Students who graduated from high school prior to the spring term of 1992
3. Non-graduating students still enrolled in school as of the fall of 1992
4. Students who transferred to another school and for whom transfer school transcripts could not be obtained
5. Dropouts or dropouts enrolled in alternative programs

One of the first issues that analysts of NELS:88 data must address is defining the population sample for their analysis. Once this is decided, each analyst must use the proper sample identification and questionnaire availability indicators and the appropriate statistical weight. Section 6.1 provides an overview of the sample indicators and weights necessary for using the transcript data. Section 6.2 includes a complete description of the content and organization of the second follow-up transcript data files. Finally, section 6.3 offers an explanation of the hardcopy codebooks.

## **6.1 Basics for Analyses: Second Follow-Up Sample Indicators and Statistical Weights**

### **6.1.1 Transcript Cross-Sectional and Panel Weights**

The transcript weight (F2TRSCWT) is suitable for analyzing transcript data pertaining to the high school careers of the NELS:88 second follow-up sample of students, early graduates, and dropouts. F2TRP1WT and F2TRP2WT are designed for analyses using transcript data in conjunction with questionnaire and test data for the 1988 to 1992 panel sample and the 1990 to 1992 panel sample

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<sup>2</sup> Note however that the sample of reclassified BYIs (i.e., those found to be eligible in the first follow-up and second follow-up rounds) had not been released for analyses prior to the second follow-up wave of NELS:88.

respectively. Like the other sample weights, F2TRSCWT, F2TRP1WT, and F2TRP2WT were adjusted to take into account nonresponse within critical subgroups.

It is important to remember that while transcript data are inherently longitudinal, spanning four year for most individuals, population estimates generated using F2TRSCWT have specific reference to the spring term of the 1991-1992 school year. Because the NELS:88 sample contains both dropouts and students, and represents three independent grade cohorts viewed in the spring term of 1992, the transcript weight does not inflate the sample to a conventional analysis population. Instead, particular analysis populations must be defined--for example, eighth-grade (or sophomore cohort) dropouts in 1992, high school seniors in 1992, graduating seniors in 1992, 1988 eighth graders in 1992, and so on.

### 6.1.2 Defining Analysis Populations

Students and dropouts can be distinguished by use of the various status indicators and flags provided for this purpose on the transcript component student file. Students may further be distinguished in terms of their cohort status (for example, member of the eighth-grade cohort of 1988 [see the flag G8COHORT], the sophomore cohort of 1990 [see the flag G10COHORT], the senior cohort of 1992 [see the flag G12COHORT]). These indicators--as well as the indicators of enrollment or dropout status (F2RWTST for the transcript component, F2F1DOST for the first follow-up student and dropout components, and F2DOSTAT for the second follow-up student and dropout components) are based on results of the student and dropout survey.<sup>3</sup>

Additional indicators of enrollment status (F2RREASL and F2RTROUT) and grade level are provided by the transcript data. However, consistency has not been forced between these sources: transcript data and data from the student and dropout surveys may sometimes disagree. Disagreement may come about because schools were not constrained to use the NELS:88 definition of a dropout for their own records purposes. In addition, transcripts oftentimes contain more recent information. It is possible, for example, for a sample member to have been surveyed as a student in February 1992, but to have dropped out, say in April 1992. Since transcripts were collected in the autumn of 1992, exit status for the transcript survey (as reflected in F2RREASL or F2RTROUT) would be that of a dropout. However, the individual would have completed a student questionnaire and F2DOSTAT (as well as F2RWTST) would classify this sample member as a student.

When merging the student and the transcript files, special note should be made of ineligible seniors (identified as code 04 for the F2STAT and F2RWTST indicators), a group for whom data does not appear on the student file. The addition of school records for these individuals enhances the senior year representativeness of the transcript data, but non-transcript data are not available for this group.

The transcript data files exist only in privileged use form. Therefore, users will find, in addition to the public use sample members, the fall-only members of the tenth- and twelfth-grade cohort. Fall-only cohort members are individuals added by the freshening process who dropped out of school before attaining spring-cohort membership. (For example, an individual who was in school in the fall of 1989 and brought into the NELS:88 sample through the freshening process but who dropped out prior to spring term 1990 would not be a member of the spring-defined 1990 sophomore cohort, and would appear only on the privileged use files.) Panel, sample, and cohort flags are fully described in Appendix G.

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<sup>3</sup> To produce precise population estimates of spring term 1992 cohort dropouts using F2TRSCWT, F2RWTST must be employed.

### 6.1.3 Other Weights

*Only F2TRSCWT has been constructed specifically for use with the transcript data.* However, because the school sample for collection of *student* transcripts was also the sample designated for collection of second follow-up school contextual data such as teacher questionnaires in science and mathematics and school principal data, the overall and subgroup sums for the contextual weight (F2CXTWT) are very close to the sums for F2TRSCWT when analysis is restricted to students. Hence for some purposes it may prove convenient to use the contextual weight when second follow-up student, transcript, school or teacher data are being used in conjunction. It should be noted however that while there is a good match between questionnaire and transcript data, transcripts were obtained for some questionnaire noncompleters and were not obtained for some questionnaire completers; this creates a comparatively small missing data problem when F2CXTWT is used in conjunction with transcript data or when F2TRSCWT is used in conjunction with student questionnaire data. However, analysts should note that when transcript data are used in conjunction with questionnaire and test data for either the 1988 to 1992 or 1990 to 1992 student panels, then they should employ either F2TRP1WT or F2TRP2WT respectively.

It should be noted that *weights have not been constructed for all possible analytic purposes.* When there is an analyzable population of interest for which no specific weight has been produced, substitution of another weight will, to varying degrees, produce biased population estimates.

In general, caution must be exercised if a researcher wishes to conduct a weighted analysis for which a specific weight has not been provided. The analyst must judge how much bias will be introduced by substitution of another weight. Two checks that should be made are 1) examination of the sum of the weights to compare that sum to population totals; and 2) analysis of undercoverage bias, that is, to what extent the disproportionate exclusion by design is not accounted for by the weight one wishes to use. *The specific purpose and required degree of precision of the analysis must be taken into account.* If subgroup estimates are central to the analytic plan, it is necessary to take into account bias at the subgroup level. In instances where more than one possible weight is available, the decision as to which is best to use should be guided by a comparison of the bias inherent in each alternative. Whatever weighting strategy is used, if the amount of bias is non-trivial, potential biases should be examined and reported with the results.

## 6.2 Content and Organization of the Data Files

The transcript component data set consists of student-level and course-level data files. The content and organization of those files is the subject of the sections that follow.

### 6.2.1 Student Data File

The second follow-up transcript component student file contains a record for each of the 17,285 sample members for whom a transcript was collected. The raw data file contains 68 student-level data items abstracted from transcripts, a large number of special flags, transcript-derived and non-transcript composite variables, and the transcript component statistical weight. The record layout for the file appears in Appendix E. The layout shows in detail the organization of the variables within each record on the file. The variables are grouped into similar logical sets as discussed below. For the sake of brevity, each item of data is referred to by its SAS (SPSS-X) variable name, as defined in the control cards provided with the data file.

Four files are provided for the transcript component student file. They are:

1. The raw data file with the following segments arrayed in the indicated order:
  - a. Randomized student ID number (positions 1-7)
  - b. ID number of the school providing the transcript (last attended school) (positions 8-12)
  - c. Transcript component cross-sectional statistical weight (positions 13-22)
  - d. Transcript component
  - d. Student-level transcript data items (positions 23-193)
  - e. Flags and classification composite variables copied from base year, first follow-up, and second follow-up student component data files (positions 194-227)
  - f. Basic demographic composite variables copied from base year, first follow-up, and second follow-up student component data files (positions 228-253, 269-275, and 277-280)
  - g. Composite variables constructed from student-level and course-level transcript data, including transcript-indicated educational outcome and subject area summary composite variables (positions 254-268 and 276-276, and 281-679)
  - h. Transcript panel flags and weights (positions 680-701)
2. SPSS-X control cards for the student file
3. SAS control cards for the student file
4. SAS system file for the student file

### 6.2.2 Course Data File

The second follow-up transcript component course file contains a record for each of the secondary school courses taken by the 17,285 sample members for whom a transcript was collected. A total of 714,647 course records appear in the file. The raw data file contains 17 data items for each course, including identification codes. The record layout for the file appears in Appendix E. The layout shows in detail the organization of the variables within each record on the file. For the sake of brevity, each item of data is referred to by its SAS (SPSS-X) variable name, as defined in the control cards provided with the data file.

Four files are provided for the transcript component course file. They are:

1. The raw data file with the following segments arrayed in the indicated order:
  - a. Randomized student ID number (positions 1-7)
  - b. ID number of the school providing the transcript (last attended school) (positions 8-12)
  - c. Sequentially assigned term and course ID numbers (positions 20-23). These ID numbers, when coupled with the student ID number, create a unique key identifying the course.
  - d. Course-specific variables (e.g., course title, credits earned) (positions 13-19 and 24-117)

2. SPSS-X control cards for the course file
3. SAS control cards for the course file
4. SAS system file for the course file

### 6.2.3 Identification Codes

The first variable on all of the raw data files, `STU_ID`, is a unique seven-digit student identification code. This number remains with the student throughout NELS:88 waves and components. To link student records across two or more waves of the survey (1988, 1990, and 1992) or between survey components (transcript, student, dropout, school, teacher, and parent), analysts should use `STU_ID`. Because of the number of records in the course file, it is recommended that prior to the manipulation of course data the analyst use the flags on the student file to define a set of sample members of interest, and then merge the resulting file with the course file.

The student ID code consists of a five-digit base year school ID followed by a two-digit student code. Though both sets of numbers were randomly assigned to maintain confidentiality, the IDs contain embedded linking, stratum and PSU information.<sup>4</sup> Students added to the first or second follow-ups (the freshened students) were linked to a core sample member. The base year school ID of the linked student was used as the root of the added student's ID. Thus, in all cases, the student ID links the students (and dropouts) to a base year school.

The dropout component first appears in the first follow-up of NELS:88. While their student identification codes were constructed in the same way as described above for all students, by design no school or teacher data were collected for dropouts. School classification variables will be added to dropout records on the final second follow-up student component data files for the last school attended as reported in the second follow-up dropout questionnaire. Classification variables have also been included on the transcript component student file, for the last school for which transcript data are available.

### 6.2.4 Composite Variables

A large number of composite variables constructed from transcript data have also been added to the transcript component student file, in order to facilitate the use of the data in analyses. The majority of these variables sum course credits, in Carnegie units, by subject area for each student. Subject area summary variables may be used in cross-cohort trend analyses contrasting 1992 NELS:88 transcript data to data from the 1982 HS&B and 1987 and 1990 NAEP high school transcript studies. Three taxonomies were used to construct subject area summary variables for the 1992 NELS:88 transcript component: the taxonomy employed in National Center for Education Statistics analyses of data from the 1982 High School and Beyond Transcript Survey; the taxonomy used to create the "stub" variables for the 1987 and 1990 National Assessment of Educational Progress high school transcript studies; and the Classification of Secondary School Courses. Specifications for these three sets of derived variables are included in Appendix G; CSSC code and course lists for each variable appear in Appendix H.

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<sup>4</sup> Analysts who are employing variance estimation software should note that the student ID reflects the NELS:88 sampling plan in the following way: the left-most two digits of the ID represent the stratum identification number for the case; the middle three digits are the primary sampling unit (PSU) for the case; and the last two digits identify the case uniquely within the stratum and PSU.



Additional derived variables added to transcript component student file include:

1. Transcript-indicated educational outcome (F2RTROUT) and high school program (F2RTRPRG)
2. Flags indicating grades for which transcript data are available (F2RTR09 - F2RTR12)
3. Flags indicating whether the sample member earned a certain minimum number of Carnegie units in the New Basics subject areas (HS&B-equivalent, F2RNWB1A - F2RNWB5A; NAEP-equivalent, F2RNWB1B - F2RNWB5B). These flags were constructed using the HS&B and NAEP-equivalent subject area summary variables. Specifications for the flags are provided in Appendix G.

Composite variables are constructed in order to enhance substantive analyses. Since research questions frequently require independent or control variables such as the urbanicity of the school, the socioeconomic status of the family, or the gender of the individual, a large set of classification variables has been carefully constructed and added to the records on the transcript component student file.

Several composite variables on the transcript and student component files provide additional information about whether or not the sample member was an early graduate, a dropout, ineligible or out-of-scope, or freshened into the sample. These variables include F2QFLG, F2DOSTAT, F2RTROUT, and F2RWTST. Because school records may contradict other sources of sample members' enrollment status, the NELS:88 student and transcript component files include F2TRSTYP which identifies inconsistencies among different sources of a sample member's enrollment status. See Appendix H for a complete description of F2TRSTYP.

Complete specifications used to create these composite variables for the second follow-up can be found in Appendix G. In the respective student component data user manuals, see also Appendix H for base year student composites and Appendix I for first follow-up student composites. Perusal of these sections may also suggest to the reader additional ways in which the data may be configured through post-processing at one's own site.

### **6.3 Guide to the Transcript Component Codebooks**

The hardcopy codebooks that have been provided for each wave of NELS:88 fully describe and assist with the interpretation of the variables on each of the data files. The hardcopy codebooks for the transcript component student and course files summarize all key information for each data element, including:

- the variable name and content
- the tape position and format of the variable on the data file
- valid and/or missing values and value labels for the item
- the unweighted frequency counts, percents, and weighted percents for each value

This basic presentation is supplemented with additional commentary, when further explanation is useful.

Figure 6-1 at the end of this chapter is an illustration of the information provided in the codebooks for each data element. Each portion of this example is numbered and explained below.

#### **6.4 Restricted Use Data Files**

NELS:88 restricted use data on magnetic tapes and on CD-ROM are available at no charge on a restricted loan basis to individuals and/or institutions that obtain an approved license agreement from NCES. To request a license agreement, the individual and/or institution must provide the following information:

- The title of the survey to which access is desired.
- A detailed discussion of the statistical research project that necessitates accessing the restricted NCES survey data.
- The name and title of the most senior official having the authority to bind the organization to the provisions of the license agreement.
- The name and title of the principal project officer who will oversee the daily operations.
- The number, name, and title of professional and technical staff who will access the survey data base. Each professional or technical staff member with access to the data is required to sign and have notarized an affidavit of nondisclosure.
- The estimated loan period necessary for accessing the NCES survey data base.
- The desired computer product specifications, such as medium (9-track tape, CD-ROM, PC diskette), code convention (ASCII, EBCDIC, SAS), etc.

To obtain further details and a license agreement form please write to:

Alan W. Moorehead  
Data Security Officer  
Statistical Standards and Methodology Division  
U.S. Department of Education  
Office of Educational Research and Improvement  
National Center for Education Statistics  
555 New Jersey Avenue, N.W.  
Room 408  
Washington D.C. 20208  
ph. (202) 219-1920

**Figure 6-1**  
**An entry in the transcript component restricted use student file codebook**

|      |  |                      |                                 |                      |
|------|--|----------------------|---------------------------------|----------------------|
| (1)  | <u>ITEM F2RSPFLG</u>                                   |                      |                                 |                      |
|      |  |                      | (2) Tape Pos. 39-40             |                      |
|      |  |                      | (3) Format: I2                  |                      |
| (4)  | F2RSPFLG   | (5)                  | SPECIALIZED COURSES OR PROGRAMS |                      |
| (6)  | PARTICIPATION IN SPECIALIZED COURSES OR PROGRAMS       |                      |                                 |                      |
| (7)  | <u>RESPONSE</u>  | (8) <u>CODES</u>     | (9) <u>FREQ</u>                 | (10) <u>PER-CENT</u> |
|      |  | (11) <u>WGTD PCT</u> |                                 |                      |
|      | SPECIAL EDUCATION . . . . .                            | 01                   | 580                             | 3.4%                 |
|      | BILINGUAL EDUCATION . . . . .                          | 02                   | 303                             | 1.8%                 |
|      | GIFTED EDUCATION . . . . .                             | 03                   | 1423                            | 8.2%                 |
|      | SPECIAL EDUCATION AND<br>BILINGUAL EDUCATION . . . . . | 04                   | 8                               | 0.0%                 |
|      | BILINGUAL EDUCATION AND<br>GIFTED EDUCATION . . . . .  | 05                   | 45                              | 0.3%                 |
|      | NONE OF THE ABOVE . . . . .                            | 06                   | 14623                           | 84.6%                |
| (12) | RESERVED CODES:  |                      |                                 |                      |
|      | Missing . . . . .                                      | 98                   | 303                             | 1.8%                 |
|      |  |                      | (MISS)                          |                      |
|      | TOTALS:  |                      | 17285                           | 100.0%               |
|      |  |                      | 100.0%                          | 100.0%               |

**Explanations:**

1. **Item number:** For the transcript component, the item number is identical to the SAS and SPSS-X variable name.
2. **Tape position:** This item gives the starting and ending tape position of each variable.
3. **Variable format:** This item indicates the type of variable, its width, and the number of positions following the implicit decimal point, if any.
4. **SAS and SPSS-X variable name:** Each variable on the data set is identified by a unique SAS and SPSS-X variable name. "F2R" in the variable name indicates a second follow-up transcript component variable. Variable names attempt to describe variable content, e.g., F2RNWB1A for the first High School and Beyond-equivalent New Basics flag. The user should always refer to the variable by its SAS (SPSS-X) variable name in any computing procedures.
5. **SAS (SPSS-X) variable label:** A short variable label appears after the variable name. This label is the same as that which appears on the SAS (SPSS-X) data definition cards included on the tape.
6. **Expanded variable label:** This field provides the full label for the variable.

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**Figure 6-1, continued**  
**An entry in the transcript component restricted use student file codebook**

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7. **Data categories:** This item provides either the original data categories or the recoded or constructed categories (for composite variables and data indicators, such as flags). For display in the codebooks, continuous variables have been recoded to collapse valid values into ranges. This allows the codebook tables to show the frequency counts, unweighted percentages, and adjusted weighted percentages for continuous variables without printing each value. These value labels are not the same as those on the SAS (SPSS-X) data definition cards. Condensed value labels that do not cause truncation problems are provided with the data definition cards.
8. **Data codes:** This item provides the actual numerical codes that appear on the data tape in the tape position specified (except for continuous variables, where the actual values that appear on the tape have been recoded to produce the frequency counts and percentages). Certain codes, discussed below, are reserved to indicate missing data, legitimate skips and so forth.
9. **Frequency counts:** This item shows the unweighted frequency counts for all records that were processed, including records that have missing data codes, legitimate skips, and so forth.
10. **Unweighted percentage frequencies:** This column displays the frequency counts of item F2RSPFLG as percentages. All records that were processed are included.
11. **Weighted percentage frequencies:** This column displays percentages based on category counts weighted up to the relevant population. Cases with reserved code values are excluded from the computation.
12. **Reserved codes:** In this data set certain codes, termed "reserved codes" have been chosen always to stand for certain situations. These reserved codes and their meanings are:

8=missing data      data that should be present for this sample member is missing

9=legitimate skip      because of data coded for a filter item, datum for this item should not be present for the sample member; that is, the datum is legitimately missing.

These reserved codes are identical to those used in the NLS-72 and HS&B surveys. The codes as listed above apply to variables with single-column data fields. For variables with fields greater than one column, the left-most columns are filled with 9s (e.g., 98, 998, 9998).

Finally, additional comments and notes may be included and displayed below the standard codebook information. These comments alert researchers to the potential for non-response bias, a relation to another similar variable or composite, or a recoding of a continuous variable in order to improve the codebook presentation.

## **APPENDICES**

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## **Appendix A**

### **Conducting Cross-Cohort Comparisons Using HS&B, NAEP, and NELS:88 Academic Transcript Data**

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## CONDUCTING CROSS-COHORT COMPARISONS USING HS&B, NAEP, AND NELLS:88 ACADEMIC TRANSCRIPT DATA

*The High School Transcript Studies.* The immense value of school transcripts as objective, reliable measures of crucial aspects of students' educational experiences is widely recognized. With respect to level of detail, accuracy, and completeness, transcript data are vastly superior to student self-reports of exposure to learning situations.<sup>1</sup> When coupled with data on students' family backgrounds and demographic characteristics, school environments, and standardized competence and outcome measures, they permit the specification of complex models of educational processes.<sup>2</sup> Moreover, transcript components of longitudinal studies such as HS&B and NELS:88 permit the measurement of high school program and course effects on post-high school outcomes.

Transcripts also provide indicator data for measuring national education trends. Of particular interest are changes in course taking and trends associated with grading practices and program placement and participation. NELS:88 and other NCES studies supply archival data on these topics. These studies include the National Longitudinal Study of the High School Class of 1972 (NLS-72), the sophomore cohort component of High School and Beyond (HS&B), and records studies of the high school careers of 1987 and 1990 graduating seniors conducted as part of the National Assessment of Educational Progress. Some additional secondary transcript studies have been carried out as well.<sup>3</sup>

Although a separate transcript study was not conducted as part of NLS-72, school records data were collected. School administrators were asked to supply data on each NLS-72 senior's high school grade average, college admission test scores (SAT, ACT), courses taken, and major course of study.

HS&B, the NAEP High School Transcript studies, and NELS:88--unlike NLS-72--are characterized by a formal school records component in which courses have been coded using the successive versions of the Classification of Secondary School Courses (CSSC). These data sets have been designed to serve a number of purposes, including trend comparison. In order to properly compare data across these studies, however, analysts must be sensitive to points of difference that may affect comparisons. In addition to issues of content comparability, there are issues of sample design comparability. Content comparability is addressed in the crosswalk which appears as the final section of this appendix. Design comparability is discussed below, followed by a bibliography of sources of information on the transcript studies.

- 
- <sup>1</sup> See, for example, Fetters, Stowe and Owings (1984) for a comparison of self-report and transcript data, drawn from High School and Beyond.
  - <sup>2</sup> HS&B and NELS:88 transcript data are directly linkable to individual student test scores, questionnaire data, and contextual data sources such as teacher, parent, and school administrator reports, at multiple points in time. NAEP transcripts can be linked to NAEP public use assessment results, as well as to school questionnaire and school course offerings data.
  - <sup>3</sup> Educational Testing Service collected high school transcripts for the Study of Academic Prediction and Growth in 1969. Private school students were not included nor was this a national probability sample of public high school graduates; however, the study is thought to give reasonable public school estimates. The Bureau of Labor Statistics National Longitudinal Survey of Labor Force Experience--Youth Cohort (NLSY), with sponsorship from the National Center for Research in Vocational Education, collected secondary school academic transcripts in three waves from 1980-83 for its sample of youths who were aged 14-21 in 1979; see *NLS Handbook 1992*, p. 138, p.147. Further information on both studies is given in Tuma, Gifford, Horn and Hoachlander (1989).

**Sample Comparability Across NCES High School Transcript Studies.** The overall sample design for HS&B, NAEP, and NELS:88 is quite similar. All are large, nationally representative school-based samples that have employed a multistage, stratified, clustered design. Despite their fundamental similarity, the designs differ somewhat in a number of features. Five differences should be noted because of their potential impact on the matter, the manner, or the possibility of comparative analysis:

-- *school and student oversampling:*

different rare student populations and school types have been disproportionately included in the studies;

-- *eligibility:*

who was included or excluded;

-- *representativeness:*

what cross-sectional and longitudinal populations the sample represents;

-- *sample sizes;*

-- *record completeness.*

**Oversampling.** Rare populations of high policy (or, as in the case of twins, methodological) interest were oversampled in some of the transcript studies. This factor, along with differences in overall sample size, mean that the number of cases available for analysis of rare populations may vary by a good deal across the studies. The 1987 NAEP high school transcript study oversampled students with disabilities. Non-sampled co-twins of HS&B sampled twins were included in the transcript component of the study. HS&B oversampled Hispanics; NELS:88 oversampled Asians and Hispanics;<sup>4</sup> NAEP oversamples schools with high percentages of Hispanics and Blacks. Private school students were oversampled in both HS&B and NELS:88, though the HS&B sample of non-Catholic private schools was comparatively small (31 non-Catholic private schools are included in the HS&B transcript study). Private school oversampling is also a feature of NAEP.

**Eligibility.** Potential undercoverage biases resulting from sample exclusion are summarized in Table 1. "Undercoverage" here refers to systematic undercoverage stemming from deliberate exclusion of certain categories of students from a sample--such as students with physical or mental disabilities or non-English speakers, who might find it difficult or impossible to complete demanding cognitive tests and questionnaires. There are other potential sources of undercoverage as well, such as incomplete sampling frame data (no national listing of schools is, or remains for very long, 100 percent complete and accurate) or omissions and errors in school rosters.<sup>5</sup>

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<sup>4</sup> Oversampling of Hispanics was somewhat differently implemented in HS&B and NELS:88. In HS&B, primarily in order to bolster the representation of Cuban and Puerto Rican Hispanic subgroups, a number of schools were added that had high Hispanic enrollments. In NELS:88, Hispanic (and Asian) students were selected at a higher rate from within the regular base year school sample.

<sup>5</sup> These other sources of undercoverage are thought to have only a very small impact on estimates; exclusion of students with physical, mental or linguistic barriers to assessment or survey participation is thought to be the most serious potential source of undercoverage bias for studies such as HS&B, NELS:88 and NAEP.



**Table 1: Student sample exclusion and transcript undercoverage**

| <u>Study</u>                                     | <u>Undercoverage</u>            | <u>Affected Groups<sup>6</sup></u>                          |
|--|---------------------------------|---|
| HS&B 1982  | unknown                         | language barrier<br>severe physical or<br>mental disability |
| NAEP 1987  | none                            |   |
| NAEP 1990  | none                            |   |
| NELS:88 1992<br>Senior Cohort<br>G8, G10 Cohorts | negligible<br>2.5% <sup>7</sup> | language barrier<br>severe physical or<br>mental disability |

HS&B, NAEP, and NELS:88 have excluded students with severe mental, physical, or linguistic obstacles to completing survey forms. While all three studies have used similar exclusion criteria, specific guidelines differ somewhat across (as well as, over time, within) the studies. In an effort to minimize the number of exclusions, eligibility criteria were modified (in large part, by being made more specific) starting with both the 1990 NAEP and 1990 NELS:88.

Both NAEP and NELS:88 collect data on the characteristics of excluded students so that undercoverage bias can be quantified; detailed exclusion documentation is not available for HS&B. However, given the general similarity of eligibility rules for HS&B, NAEP, and NELS:88, one may presume on the basis of the NAEP and NELS:88 experience at the upper grade levels that HS&B base year exclusion rates were between 3 and 6 percent. Both NAEP and NELS:88 have been more inclusive in their transcript studies than in test or questionnaire administration. In NELS:88, all base year ineligible students who were seniors in the spring term of the 1992 school year were included in the transcript study. In the 1987 NAEP transcript study, the sample included 1) sample selections in the 1986 NAEP assessment, plus 2) students who were sampled for the assessment but deliberately excluded from it, and 3) all students with disabilities attending schools selected for the assessment. Thus categories of students who were disproportionately excluded from the testing sample, such as those with disabilities,

<sup>6</sup> The distribution of these classifications in the school population may be the source of additional subgroup biases. For example, base year ineligibles differ from the eligible sample in terms of race/ethnicity (for example, disproportionate numbers of Hispanics), gender (disproportionate numbers of males), and behavioral characteristics, (for example, a much higher dropout rate).

<sup>7</sup> In the base year, 5.4% of the potential sample was excluded (since some excluded students proved, upon investigation, not to have been 1987-88 eighth graders, the apparent 5.4% rate in fact slightly overstates the proportion excluded). By the time of the second follow-up transcript study in 1992, over half of the excluded students had been reclassified as eligible for NELS:88.

were disproportionately selected (oversampled) for the transcript components, and additional information collected about these students' disabilities. Inclusion of NAEP test-excluded students in the transcript studies also provides representation for language barrier ineligible. The 1990 high school transcript study requested transcripts for both participating and nonparticipating NAEP sample members and excluded students (4.2 percent of seniors were excluded from the 1990 NAEP testing sample for reasons of mental, physical, or linguistic barriers to participation).

While the NELS:88 transcript component provides extended coverage of the population of eligible and ineligible 1992 seniors, there is some sample undercoverage of the eighth- and tenth-grade cohorts, as documented in Chapter III and Appendix N of this manual. Participation in special education or bilingual education is specifically noted in the NELS:88 transcript data (flag F2RSPFLG); English as a Second Language courses have distinct CSSC codes.

A more difficult case is the HS&B transcript study, insofar as undercoverage in HS&B--primarily of students with disabilities, secondarily of students with limited English language proficiency--is not well documented. (For example, unknown numbers of students with disabilities were excluded; others were included, but not identified as disabled in a way comparable to the NAEP procedure.)<sup>8</sup> It may therefore be useful to provide an example to show how the HS&B secondary transcript data can be manipulated to facilitate comparisons with NAEP for this category of students. Hoachlander dealt with the comparability problem in the following way (see Hoachlander, 1991, Appendix A). A fraction of disabled students is included in HS&B; another fraction is excluded, usually those with more severe disabilities. Because the HS&B transcript study contains records for dropouts and repeating students who did not graduate with their classmates and whose transcripts were therefore incomplete, Hoachlander limited comparison to high school graduates. A second condition was set as well--comparison students must have completed between 16 and 32 total Carnegie Units. Hoachlander remarks:

These sample restriction rules also had the advantage of eliminating most of the moderately and severely handicapped graduates from the NAEP sample. When we examined the disabilities of the handicapped students remaining in the NAEP sample after the imposition of these rules, we found most of them to be only mildly learning disabled, mildly emotionally disabled, or mildly retarded. Given the rigor of the HS&B questionnaire, these are the kinds of disabled students who would most likely have been selected to participate yet not identified as handicapped. Altogether, the handicapped students remaining in the NAEP sample after the imposition of the sample restrictions accounted for about 3 percent of the total population of graduates. This approach to making the samples consistent proved to be a simple solution to the problems posed by the inclusion of handicapped students in HS&B without their having been identified as such.

For the 1982-1990 tabulations of credits earned (Legum et al., 1993), analysis was restricted to NAEP transcript sample members who had not participated in special education programs.

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<sup>8</sup> HS&B provided for questionnaire self-identification of handicapped students; in NELS:88, eligible students with disabilities were identified (in the base year, hence for the eighth grade cohort only) by parents, while schools identified handicapped students who were ineligible to participate. In the NAEP High School Transcript Studies, handicapped students were defined as those for whom the school had on file a special education IEP (Individualized Educational Program). HS&B student self-reports of handicap status were not highly stable over time (see Owings and Stocking, 1985). Transcript data on participation in special education programs serves as an additional identifier of handicap status (4.3% of the NELS:88 sample participated in special education programs, according to their transcripts, and 1.6% in bilingual education). For the NELS:88 transcript component, special education courses were coded in conformity with the specifications of the 1987 and 1990 transcript studies, which were more detailed than those of HS&B, though without a seventh-digit code extension (see 4.4.2 in this manual).

**Representative Populations.** There are four basic questions to be asked about the NCES academic transcript studies in terms of their degree of representativeness of various national populations. These questions are:

- 1) Was the school sample nationally representative?
- 2) Is the within-school student sample representativeness of an age or grade cohort within the school?
- 3) Was the student sample nationally representative?
- 4) Of what was it representative?

We shall answer each of these questions in turn.

1) Was the school sample nationally representative? HS&B and the NAEP transcript studies were based on national probability samples of high schools. The *HS&B* school sample is representative of the nation's high schools in 1980. Technically it is not representative of the nation's schools in 1982 since new high schools came into existence and some 1980 schools merged and closed. Given the low rate of such change over a two year period, the 1982 HS&B schools are a close approximation of a national probability sample of schools. It should also be remembered that transcripts are inherently longitudinal—they span the several years of the high school career from 1979 or 1980 to 1982. Hence the HS&B transcript study may best be described as a collection of the high school records of a representative sample of the nation's 1980 sophomores from within a nationally representative sample of 1980 high schools.

The *1987 NAEP transcripts* are based on the nationally representative school sample of the 1986 NAEP. This point of perfect school representativeness falls midway in the transcript record, with the 1986 sample a good approximation to the nation's schools in 1985 or 1987. The *1990 NAEP transcript study* is a nationally representative sample of schools derived from the 1990 NAEP sample. However, while the NAEP sample frame included all schools teaching grade 12 or having 17-year-old students (that is, individuals born in 1972) in the 1989-90 school year, the transcript study was restricted to schools with twelfth grades.

The *NELS:88* high school sample is not nationally representative. It represents the schools to which a national probability sample of eighth graders had dispersed two and four years later.

2) Is the within-school student sample representative of an age or grade cohort within the school? The *HS&B* sample is fully representative of sophomores in the HS&B school in the spring term of the 1979-80 school year. It not fully representative thereafter, because transfers into the school had no chance of selection into the HS&B follow-up sample. (Though transfers into HS&B schools are not represented in the 1982 survey, HS&B maintained a representative student sample overall by following transfers out of the HS&B schools.)

The *1987 high school transcript* sample originated in a within-school representative sample of the school's juniors/17-year-olds (that is, students born between October 1, 1968 and September 30, 1969). However, subsequent transfers into the school were given no chance of selection into the study; this fact qualifies the representative of the within-school sample of the graduating class of 1987.

The 1990 high school transcript sample originated within the 1990 NAEP sample of seniors/17-year-olds, but is further restricted to the grade cohort of seniors who in fact graduated in calendar 1990. As such it provides a representative sample of each high school's 1990 graduates.

NELS:88 in-school samples are not necessarily representative of seniors or graduating seniors within the NELS:88 schools, since, among other reasons, non-NELS:88 eighth grades as well as NELS:88 eighth grades may have fed the school.

3) Was the student sample nationally representative? All four studies provide nationally representative samples of public and private school students. However, there are some differences in the precise populations that are represented, as detailed in (4) below.

4) Of what was it representative? Table 2 summarizes the analysis populations associated with the various transcript samples:

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**Table 2: Analysis populations for transcript studies**

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| <b><u>Study:</u></b> | <b><u>The high school careers of (population):</u></b>   |
|----------------------|--|
| <b>HS&amp;B 1982</b> | the nation's 1980 sophomores   |
| <b>NAEP 1987</b>     | 1985-1986 juniors who remained in their 1985-86 schools and graduated in academic year 1986-1987   |
| <b>NAEP 1990</b>     | graduating seniors in calendar 1990  |
| <b>NELS:88 1992</b>  | <ol style="list-style-type: none"><li>1. seniors in spring term 1992</li><li>2. graduating seniors in the 1991-92 academic year</li><li>3. the 1990 sophomore cohort</li><li>4. the 1988 eighth-grade cohort</li></ol> |

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HS&B is a nationally representative sample of 1980 sophomores, and of the 1980 sophomore cohort two years later (in 1982) when the HS&B transcript survey was conducted for a subsample of the sophomore cohort. Technically, the study imperfectly represents the nation's 1982 graduating seniors, since 1982 seniors who were not sophomores in 1980 are not represented in the sample. However, analysts can make adjustments for unrepresented seniors by modeling the characteristics of high school graduates who take more than the standard four (or three) years to complete.

The 1987 High School Transcript Study represents an augmented sample of participants in the 1986 NAEP who were enrolled in the 11th grade and/or were 17 years old and who successfully completed their graduation requirements prior to fall 1987. While this sample is dominantly 1985-86 juniors, no attempt was made to follow individuals who left the school through transfer or dropping out,

nor were juniors/seniors who transferred into the school after NAEP sampling included. In addition, 1987 graduating seniors who were not 1986 juniors had no chance of selection into the study. This sample therefore only approximates the high school graduating class of 1987.

The *1990 High School Transcript Study* is a representative sample of graduating seniors from the NAEP sample (participants, nonparticipants, and excluded students) in twelfth grade in the 1989-90 school year. As in the 1987 study, students who transferred out, failed to graduate on time, or who received GEDs, were excluded.

The *NELS:88 transcript survey* represents several populations. *First*, it represents the nation's high school seniors in the spring term of 1992. To make comparisons, say to the NAEP 1990 sample, one must select only those NELS:88 senior cohort members who in fact graduated from high school with their class.

*Second*, the NELS:88 transcript survey represents the nation's 1990 sophomores two years later. The sophomore cohort two years later includes both students and dropouts. NELS:88 transcript data can also be used cross-sectionally by generalizing about the sophomore cohort in spring term 1990 using transcript data from the 1989-90 school year.

*Third*, the NELS:88 transcript survey represents the nation's 1988 eighth graders four years later. Again, this population includes dropouts, early graduates, students who graduated in 1992, and students who failed to graduate with their class.

For purposes of intercohort comparison, however, analysis populations of interest are likely to be somewhat more limited. Table 3 indicates principal cross-cohort comparisons employing NELS:88, HS&B, and NAEP (1987 and 1990) high school transcripts.

**Table 3: NELS:88 cross-cohort transcript analysis populations**

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| <u>Comparisons</u>  | <u>Special Notes</u>   |
|---|--|
| Sophomore Cohorts<br>(1980, 1990) Two<br>Years Later                        | <ol style="list-style-type: none"><li>1. Includes dropouts and students.</li><li>2. All 1982 HS&amp;B sample members were 1980 sophomores; for NELS:88, select using G10COHRT flag.</li><li>3. To determine NELS:88 dropouts, use F2DOSTAT.<sup>9</sup><br/>To determine HS&amp;B <i>questionnaire-defined</i> dropouts, use FUSTTYPE. FUSTTYPE=2 includes dropouts receiving no instruction and individuals in non-diploma alternative instruction and is equivalent to F2DOSTAT=3, 4, 5. To remove GED/alternative students from NELS:88 do not invoke F2DOSTAT=3; to remove the GED group from HS&amp;B requires further manipulation of HS&amp;B variables not on the transcript file (see Ingels &amp; Dowd 1994 or dropout component user manual).</li></ol> |
| High School Careers<br>of Graduating Seniors<br>(1982, 1987,<br>1990, 1992) | <ol style="list-style-type: none"><li>1. Compare all or any combination.</li><li>2. 1987 sample is of 1986 juniors who graduated in 1987; 1982 sample is 1980 sophomores who graduated in 1982; for NELS:88, determine graduating seniors through F2RTROUT; for HS&amp;B use RESNLEFT in conjunction with YEARLEFT; for 1987 NAEP, employ the variable EXSTAT. NAEP 1990 files contain graduating seniors only.</li></ol>  |

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<sup>9</sup> For HS&B, FUSTTYPE, and for NELS:88, F2DOSTAT, were imported into the transcript file from the student and dropout questionnaire files. F2DOSTAT characterizes the status of both participants and nonparticipants. Transcript data are missing for some dropout questionnaire completers, and transcript data are available for some dropout survey nonparticipants. In addition, there are some cases of disagreement between transcript-reported outcomes and F2DOSTAT. (Consistency has not been forced between the multiple dropout indicators in the NELS:88 database; for the parallel case of HS&B, see the various dropout indicators contained in TRSTYPE). Finally, 87 individuals appear on the transcript file with an imputed spring term 1992 dropout status (left school, receiving no alternative instruction and have not received equivalency certification); these individuals were survey nonparticipants and were therefore not weighted as dropouts for purposes of a final weight in the student and dropout components, but do have a transcript weight. In order to generate precise spring term 1992 dropout population estimates using F2TRSCWT, it is therefore necessary to employ F2RWTST to identify dropouts. The definitional mapping between F2RWTST and F2DOSTAT is: F2RWTST 3 = F2DOSTAT 3, 4, or 5. For a full accounting in accordance with student survey enrollment dispositions for the transcript file, see the universe variable F2UNIV2D; for transcript-reported dropout status see F2RTROUT or F2RREASL.

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**Sample Sizes.** There are differences in sample sizes across the studies, and marked differences in the distribution of transcript-eligible students across schools. For example, HS&B collected 15,941 transcripts from 1,720 schools.<sup>10</sup> In contrast, the NAEP 1987 study collected more than twice as many transcripts (over 34,000) from a quarter as many schools (433). For the four academic transcript studies, numbers of schools providing data and numbers of transcripts obtained are summarized in Table 4.

**Table 4: Participating school and student Ns for HS&B, NAEP, and NELS:88 high school transcript studies**

|            | STUDENTS | SCHOOLS | AVERAGE N<br>PER SCHOOL |
|------------|----------|---------|-------------------------|
| HS&B:      | 15,941   | 1720    | 9.3                     |
| NAEP 1987: | 34,140   | 433     | 78.8                    |
| NAEP 1990: | 21,531   | 330     | 65.2                    |
| NELS:88:   | 17,285   | 1543    | 11.2                    |

**Completeness of the High School Record.** The longitudinal studies (HS&B, NELS:88) followed a pre-senior cohort, collecting transcripts at the point at which sample members in modal grade progression had just completed their senior year. A fundamental difference between the HS&B and NELS:88 transcript studies and the NAEP high school transcript studies is that in the 1987 and 1990 NAEP records collections, transcripts of students who were still enrolled in school, dropouts, transfers, and individuals who received GEDs were excluded from the study, while in HS&B and NELS:88 they were included.

Owing to the fact that some HS&B and NELS:88 sample members had fallen behind the modal sequence for their cohort, and that others had dropped out of school, school records for these individuals necessarily span less than a full high school career (for NELS:88, senior year transcripts are available for 14,789 of the 17,285 transcript participants). The tendency to take more than four years to complete high school (or to drop out) is not randomly distributed, but rather, is associated with specific sociodemographic characteristics, hence a potential source of bias, particularly for certain kinds of subgroup investigations.<sup>11</sup>

<sup>10</sup> The target sample comprised 18,427 members of the sophomore cohort in 1,899 schools (the HS&B regular sample of about 1,000 schools, plus another 900 schools to which sophomores had transferred since the 1980 base year).

<sup>11</sup> For example, Hayward and Thorne (1990) report that only 68 percent of disabled (compared to 87 percent of nondisabled) students graduate on time.

Another source of incomplete school records in HS&B and NELS:88 arises from the fact that longitudinal cohort members often changed schools between the time they entered high school and the autumn 1992 transcript data collection. While every attempt was made to collect transcripts from all secondary schools an individual had attended, both HS&B and NELS:88 experienced lower cooperation rates from the high schools that were not part of their regular sample, with the result that transcripts for transfer students are more likely to be incomplete than collections based on graduating seniors.

#### **Other Differences of Note.**

Course Offerings File. For HS&B and the 1987 and 1990 NAEP studies, course titles and their CSSC codes for all offerings recorded in the school's course catalogue are available in a separate data file that can be used in conjunction with transcript data. For NELS:88, a course offerings file is in preparation for a subset of the NELS:88 1990-92 schools that are part of the School Effectiveness Study. There will also be a separate transcript file for the NELS:88 School Effectiveness Study. For this component, students were added to a subsample of urban and suburban NELS:88 schools in the 30 largest MSAs, to provide representative and robust within-school student samples, for the study of school effects. A weight will be available for School Effectiveness Study schools.

Definition of a Senior. There is a difference between comparing seniors in a given academic year, and comparing graduates in that year. NLS-72, HS&B in 1980, and NELS:88 in 1992 provide senior cohorts, not all members of which succeeded in meeting graduation requirements. There is also a difference between looking at graduates within an academic year (say 1989-90 or 1991-92) and within a calendar year. Some of these differences may need to be taken into account in comparative analyses. The transcript data sets generally provide information about both the date and the reason for leaving the school so that commonality of unit of analysis--for example, graduates as of a certain time point--can be maintained.

Identification of Seniors and of Graduating Seniors. In HS&B, the 1980 sophomore cohort was not freshened to create a representative 1982 senior cohort; moreover, dropouts and non-seniors are included on the transcript files. However, students were asked on the student questionnaire what grade they were in, and course-taking histories appear in the transcripts. Graduating seniors (12,738 of the 15,941 transcript cases) can be identified by the "reason left school" variable on the transcript file; date of separation from the school is also provided ("month left" and "year left" are provided). NELS:88 defined the senior cohort as all students enrolled in twelfth grade in the spring term of the 1992 school year; a special flag marks members of the senior cohort. Some members of the senior class fail to graduate. As in HS&B, these individuals can usually be identified in the transcript file, which includes a "transcript-indicated outcome" variable (F2RTROUT) that differentiates between dropouts, individuals who are still enrolled, and spring 1992, other 1992, and pre-1992 graduates. NELS:88 mailed transcript requests in mid-August, 1992. Although numbers of late year graduates are usually quite small, given the data collection schedule, graduation information may have been missed for some NELS:88 sample members graduating in the last quarter of calendar 1992. The HS&B transcript study was conducted within a similar time frame and limitations.

Seniors were not, technically speaking, the focus of the 1987 NAEP study, for which the population of interest was students enrolled in 11th grade and/or 17 years old in the 1985-86 school year who had remained in their schools for the 1986-87 school year and had become part of the high school graduating class of 1987. Transcripts were collected in October and November of 1987. Student exit status is provided on the file.



The 1990 NAEP sample was specifically limited to graduating seniors--a senior was defined as anyone graduating between January 1 and December 31, 1990 (data were not collected until 1991). The 1990 transcript files also give month of graduation; only a handful of cases (16) occur in the last quarter of the year--these may be excluded for comparative purposes if the analyst so wishes, although such a small number of cases is likely to have but a trivial impact on results.

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## CROSSWALK FOR 1992 NELS:88, 1987 AND 1990 NAEP, AND 1982 HS&B TRANSCRIPT VARIABLES

The table below lists all 1992 NELS:88 student and course-level transcript variables, including transcript-derived composite variables. Non-transcript composite variables included on the student file and identificatory items (e.g., student ID) are not included. In the right hand columns, the names of comparable variables included on 1990 and 1987 NAEP and 1982 HS&B transcript study files are provided. A shaded cell indicates that a comparable variable was not included on the files for the particular study. Some variables listed are only partially comparable, and analysts should carefully assess the differences in relation to their research question(s). A few 1992 NELS:88 variables superficially resemble variables included in previous transcript studies, but are not comparable to those items; such cases are footnoted.

### STUDENT-LEVEL ITEMS

| 1992 NELS:88<br>VARIABLE NAME | NELS:88 VARIABLE LABEL                            | NAMES OF COMPARABLE NAEP AND HS&B<br>VARIABLES |           |           |
|-------------------------------|---|--|-----------|-----------|
|                               |   | 1990 NAEP                                      | 1987 NAEP | 1982 HS&B |
| F2RAB88 <sup>1</sup>          | NUMBER OF DAYS ABSENT DURING 88-89 SCHOOL YEAR    | ABS09  |           | DAYABYR1  |
| F2RAB89                       | NUMBER OF DAYS ABSENT DURING 89-90 SCHOOL YEAR    | ABS10  |           | DAYABYR2  |
| F2RAB90                       | NUMBER OF DAYS ABSENT DURING 90-91 SCHOOL YEAR    | ABS11  |           | DAYABYR3  |
| F2RAB91                       | NUMBER OF DAYS ABSENT DURING 91-92 SCHOOL YEAR    | ABS12  |           | DAYABYR4  |
| F2RSPFLG                      | PARTICIPATION IN SPECIALIZED COURSES OR PROGRAMS. | HCFLAG <sup>2</sup>                            | HCFLAG    | ENROLLED  |
| F2RRANK                       | CLASS RANK FOR LAST YEAR ATTENDED                 | CLRANK   |           | CLASRANK  |
| F2RCSIZE                      | CLASS SIZE FOR LAST YEAR ATTENDED                 | CLSIZE   |           | CLASSIZE  |
| F2RDTLMO                      | MONTH STUDENT LEFT SCHOOL                         | GRADMO   |           | MONLEFT   |

<sup>1</sup> Note that in the 1992 NELS:88 transcript study, school years are specified for absenteeism. The 1990 NAEP study provides absence information by grade level, while the 1982 HS&B transcript file reports absenteeism by year of high school.

<sup>2</sup> The 1987 and 1990 NAEP variable HCFLAG indicates whether the student was enrolled in a special education program. The 1992 NELS:88 item F2RSPFLG and the equivalent 1982 HS&B item (ENROLLED) indicate enrollment in special, gifted, or bilingual education courses or programs.

| 1992 NELS:88<br>VARIABLE NAME | NELS:88 VARIABLE LABEL   | NAMES OF COMPARABLE NAEP AND HS&B<br>VARIABLES |           |           |
|-------------------------------|--|--|-----------|-----------|
|                               |  | 1990 NAEP                                      | 1987 NAEP | 1982 HS&B |
| F2RDTLYR                      | YEAR STUDENT LEFT SCHOOL   | GRADDDY  |           | YEARLEFT  |
| F2RREASL                      | REASON STUDENT LEFT SCHOOL   | EXSTAT   | EXSTAT    | RESNLEFT  |
| F2RRLVRB                      | VERBATIM OTHER REASON FOR LEAVING SCHOOL                               |  |           |           |
| F2RGPA                        | CUMULATIVE GPA FOR LAST YEAR ATTENDED                                  | GPA  |           | GPA       |
| F2RPSATM                      | PRELIMINARY SCHOLASTIC APTITUDE TEST (MATHEMATICS)                     |  |           | PSATM     |
| F2RPSATV                      | PRELIMINARY SCHOLASTIC APTITUDE TEST (VERBAL)                          |  |           | PSATV     |
| F2RSATM                       | SCHOLASTIC APTITUDE TEST (MATHEMATICS)                                 |  |           | SATM      |
| F2RSATV                       | SCHOLASTIC APTITUDE TEST (VERBAL)                                      |  |           | SATV      |
| F2RACTC <sup>3</sup>          | AMERICAN COLLEGE TEST (COMPOSITE SCORE)                                |  |           |           |
| F2RACTE                       | AMERICAN COLLEGE TEST (ENGLISH SCORE)                                  |  |           |           |
| F2RACTM                       | AMERICAN COLLEGE TEST (MATH SCORE)                                     |  |           |           |
| F2RACTR                       | AMERICAN COLLEGE TEST (READING SCORE)                                  |  |           |           |
| F2RACTS                       | AMERICAN COLLEGE TEST (SCIENCE REASONING SCORE)                        |  |           |           |
| F2RAPBIO <sup>4</sup>         | ADVANCED PLACEMENT TEST SCORE - BIOLOGY                                |  |           | APTEXM10  |
| F2RAPCHE                      | ADVANCED PLACEMENT TEST SCORE - CHEMISTRY                              |  |           | APTEXM11  |
| F2RAPCGP                      | ADVANCED PLACEMENT TEST SCORE - COMPARATIVE<br>GOVERNMENT AND POLITICS |  |           |           |

<sup>3</sup> ACT scores were collected in the 1982 HS&B transcript study. However, modifications to the American College Test in the intervening years render the HS&B items not strictly comparable to the NELS:88 items.

<sup>4</sup> Several additional AP tests have been created since the 1982 HS&B transcript study. One test offered in 1982, in German literature, was not offered in 1992.

| 1992 NELS:88<br>VARIABLE NAME | NELS:88 VARIABLE LABEL  | NAMES OF COMPARABLE NAEP AND HS&B<br>VARIABLES |           |           |
|-------------------------------|---|--|-----------|-----------|
|                               |   | 1990 NAEP                                      | 1987 NAEP | 1982 HS&B |
| F2RAPCSA                      | ADVANCED PLACEMENT TEST SCORE - COMPUTER SCIENCE<br>A                 |  |           |           |
| F2RAPCSB                      | ADVANCED PLACEMENT TEST SCORE - COMPUTER SCIENCE<br>AB                |  |           |           |
| F2RAPLIT                      | ADVANCED PLACEMENT TEST SCORE - ENGLISH<br>LITERATURE AND COMPOSITION |  |           | APTEXAM4  |
| F2RAPLAN                      | ADVANCED PLACEMENT TEST SCORE - ENGLISH LANGUAGE<br>AND COMPOSITION   |  |           | APTEXAM5  |
| F2RAPEUH                      | ADVANCED PLACEMENT TEST SCORE - EUROPEAN HISTORY                      |  |           | APTEXAM7  |
| F2RAPFLA                      | ADVANCED PLACEMENT TEST SCORE - FRENCH LANGUAGE                       |  |           | APTEXM15  |
| F2RAPFLI                      | ADVANCED PLACEMENT TEST SCORE - FRENCH<br>LITERATURE                  |  |           | APTEXM16  |
| F2RAPGER                      | ADVANCED PLACEMENT TEST SCORE - GERMAN LANGUAGE                       |  |           | APTEXM19  |
| F2RAPHAR                      | ADVANCED PLACEMENT TEST SCORE - HISTORY OF ARTS                       |  |           | APTEXM23  |
| F2RAPLCA                      | ADVANCED PLACEMENT TEST SCORE - LATIN/CATULLUS -<br>HORACE            |  |           | APTEXM22  |
| F2RAPLVE                      | ADVANCED PLACEMENT TEST SCORE - LATIN/VIRGIL                          |  |           | APTEXM21  |
| F2RAPMAC                      | ADVANCED PLACEMENT TEST SCORE - MACROECONOMICS                        |  |           |           |
| F2RAPCAB                      | ADVANCED PLACEMENT TEST SCORE - MATHEMATICS -<br>CALCULUS BC          |  |           | APTEXAM9  |
| F2RAPCAA                      | ADVANCED PLACEMENT TEST SCORE - MATHEMATICS -<br>CALCULUS AB          |  |           | APTEXAM8  |
| F2RAPMIC                      | ADVANCED PLACEMENT TEST SCORE - MICROECONOMICS                        |  |           |           |
| F2RAPMLL                      | ADVANCED PLACEMENT TEST SCORE - MUSIC LISTENING<br>AND LITERATURE     |  |           | APTEXM26  |

| 1992 NELS:88<br>VARIABLE NAME | NELS:88 VARIABLE LABEL   | NAMES OF COMPARABLE NAEP AND HS&B<br>VARIABLES |           |           |
|-------------------------------|--|--|-----------|-----------|
|                               |  | 1990 NAEP                                      | 1987 NAEP | 1982 HS&B |
| F2RAPMT                       | ADVANCED PLACEMENT TEST SCORE - MUSIC THEORY                             |  |           | APTEXM27  |
| F2RAPPB                       | ADVANCED PLACEMENT TEST SCORE - PHYSICS B                                |  |           | APTEXM12  |
| F2RAPPC                       | ADVANCED PLACEMENT TEST SCORE - PHYSICS C - E & M                        |  |           | APTEXM14  |
| F2RAPPCM                      | ADVANCED PLACEMENT TEST SCORE - PHYSICS C -<br>MECHANICS                 |  |           | APTEXM13  |
| F2RAPPSY                      | ADVANCED PLACEMENT TEST SCORE - PSYCHOLOGY                               |  |           |           |
| F2RAPSLA                      | ADVANCED PLACEMENT TEST SCORE - SPANISH LANGUAGE                         |  |           | APTEXM17  |
| F2RAPSLI                      | ADVANCED PLACEMENT TEST SCORE - SPANISH<br>LITERATURE                    |  |           | APTEXM18  |
| F2RAPSAG                      | ADVANCED PLACEMENT TEST SCORE - STUDIO ART -<br>GENERAL                  |  |           | APTEXM24  |
| F2RAPSAD                      | ADVANCED PLACEMENT TEST SCORE - STUDIO ART -<br>DRAWING                  |  |           | APTEXM25  |
| F2RAPUSG                      | ADVANCED PLACEMENT TEST SCORE - UNITED STATES<br>GOVERNMENT AND POLITICS |  |           |           |
| F2RAPUSH                      | ADVANCED PLACEMENT TEST SCORE - UNITED STATES<br>HISTORY                 |  |           | APTEXAM6  |
| F2RTR09                       | GRADE 9 DATA AVAILABLE   |  |           |           |
| F2RTR10                       | GRADE 10 DATA AVAILABLE  |  |           |           |
| F2RTR11                       | GRADE 11 DATA AVAILABLE  |  |           |           |
| F2RTR12                       | GRADE 12 DATA AVAILABLE  |  |           |           |
| F2RTR0UT                      | TRANSCRIPT-INDICATED OUTCOME   |  |           |           |
| F2RTRPRG                      | TRANSCRIPT-INDICATED HIGH SCHOOL PROGRAM                                 | ACAD_TRK                                       |           |           |

| 1992 NELS:88<br>VARIABLE NAME | NELS:88 VARIABLE LABEL                               | NAMES OF COMPARABLE NAEP AND HS&B<br>VARIABLES |           |           |
|-------------------------------|--|--|-----------|-----------|
|                               |  | 1990 NAEP                                      | 1987 NAEP | 1982 HS&B |
| F2RNWB1A                      | NEW BASICS - 4E+3SS+3S+3M+.5CS+2FL (HS&B-EQUIVALENT) |  |           |           |
| F2RNWB2A                      | NEW BASICS - 4E+3SS+3S+3M+.5CS (HS&B-EQUIVALENT)     |  |           |           |
| F2RNWB3A                      | NEW BASICS - 4E+3SS+3S+3M+2FL (HS&B-EQUIVALENT)      |  |           |           |
| F2RNWB4A                      | NEW BASICS - 4E+3SS+3S+3M (HS&B-EQUIVALENT)          |  |           |           |
| F2RNWB5A                      | NEW BASICS - 4E+3SS+2S+2M (HS&B-EQUIVALENT)          |  |           |           |
| F2RNWB1B                      | NEW BASICS - 4E+3SS+3S+3M+.5CS+2FL (NAEP-EQUIVALENT) | STUB2001                                       |           |           |
| F2RNWB2B                      | NEW BASICS - 4E+3SS+3S+3M+.5CS (NAEP-EQUIVALENT)     | STUB2002                                       |           |           |
| F2RNWB3B                      | NEW BASICS - 4E+3SS+3S+3M+2FL (NAEP-EQUIVALENT)      | STUB2003                                       |           |           |
| F2RNWB4B                      | NEW BASICS - 4E+3SS+3S+3M (NAEP-EQUIVALENT)          | STUB2004                                       |           |           |
| F2RNWB5B                      | NEW BASICS - 4E+3SS+2S+2M (NAEP-EQUIVALENT)          | STUB2005                                       |           |           |
| F2RHEN_C                      | TOTAL CARNEGIE UNITS IN ENGLISH (HS&B)               |  |           |           |
| F2RHMA_C                      | TOTAL CARNEGIE UNITS IN MATHEMATICS (HS&B)           |  |           |           |
| F2RHSC_C                      | TOTAL CARNEGIE UNITS IN SCIENCE (HS&B)               |  |           |           |
| F2RHSO_C                      | TOTAL CARNEGIE UNITS IN SOCIAL STUDIES (HS&B)        |  |           |           |
| F2RHCO_C                      | TOTAL CARNEGIE UNITS IN COMPUTER SCIENCE (HS&B)      |  |           |           |
| F2RHFO_C                      | TOTAL CARNEGIE UNITS IN FOREIGN LANGUAGES (HS&B)     |  |           |           |
| F2RHENG2                      | AVERAGE GRADE IN ENGLISH (HS&B)                      |  |           |           |
| F2RHMAG2                      | AVERAGE GRADE IN MATHEMATICS (HS&B)                  |  |           |           |
| F2RHSCG2                      | AVERAGE GRADE IN SCIENCE (HS&B)                      |  |           |           |
| F2RH SOG2                     | AVERAGE GRADE IN SOCIAL STUDIES (HS&B)               |  |           |           |



| <i>1992 NELS:88<br/>VARIABLE NAME</i> | <i>NELS:88 VARIABLE LABEL</i>  | <i>NAMES OF COMPARABLE NAEP AND HS&amp;B<br/>VARIABLES</i> |                  |                      |
|---------------------------------------|--|--|------------------|----------------------|
|                                       |  | <i>1990 NAEP</i>   | <i>1987 NAEP</i> | <i>1982 HS&amp;B</i> |
| <i>F2RENG_C</i>                       | <i>TOTAL CARNEGIE UNITS IN ENGLISH (NAEP)</i>                          | <i>STUB0100</i>  |                  |                      |
| <i>F2RFOR_C</i>                       | <i>TOTAL CARNEGIE UNITS IN FOREIGN LANGUAGES (NAEP)</i>                | <i>STUB0600</i>  |                  |                      |
| <i>F2RMAT_C</i>                       | <i>TOTAL CARNEGIE UNITS IN MATHEMATICS (NAEP)</i>                      | <i>STUB0300</i>  |                  |                      |
| <i>F2RAL1_C</i>                       | <i>TOTAL CARNEGIE UNITS IN ALGEBRA I (NAEP)</i>                        | <i>STUB0301</i>  |                  |                      |
| <i>F2RAL2_C</i>                       | <i>TOTAL CARNEGIE UNITS IN ALGEBRA II (NAEP)</i>                       | <i>STUB0302</i>  |                  |                      |
| <i>F2RGEO_C</i>                       | <i>TOTAL CARNEGIE UNITS IN GEOMETRY (NAEP)</i>                         | <i>STUB0303</i>  |                  |                      |
| <i>F2RTRI_C</i>                       | <i>TOTAL CARNEGIE UNITS IN TRIGONOMETRY (NAEP)</i>                     | <i>STUB0304</i>  |                  |                      |
| <i>F2RPRE_C</i>                       | <i>TOTAL CARNEGIE UNITS IN PRE-CALCULUS (NAEP)</i>                     | <i>STUB0305</i>  |                  |                      |
| <i>F2RCAL_C</i>                       | <i>TOTAL CARNEGIE UNITS IN CALCULUS (NAEP)</i>                         | <i>STUB0306</i>  |                  |                      |
| <i>F2ROMA_C</i>                       | <i>TOTAL CARNEGIE UNITS IN OTHER MATHEMATICS COURSES<br/>(NAEP)</i>    |  |                  |                      |
| <i>F2RSCI_C</i>                       | <i>TOTAL CARNEGIE UNITS IN SCIENCE (NAEP)</i>                          | <i>STUB0500</i>  |                  |                      |
| <i>F2REAR_C</i>                       | <i>TOTAL CARNEGIE UNITS IN EARTH SCIENCE (NAEP)</i>                    |  |                  |                      |
| <i>F2RBIO_C</i>                       | <i>TOTAL CARNEGIE UNITS IN BIOLOGY (NAEP)</i>                          | <i>STUB0501</i>  |                  |                      |
| <i>F2RCHE_C</i>                       | <i>TOTAL CARNEGIE UNITS IN CHEMISTRY (NAEP)</i>                        | <i>STUB0503</i>  |                  |                      |
| <i>F2RPHY_C</i>                       | <i>TOTAL CARNEGIE UNITS IN PHYSICS (NAEP)</i>                          | <i>STUB0505</i>  |                  |                      |
| <i>F2ROSC_C</i>                       | <i>TOTAL CARNEGIE UNITS IN OTHER SCIENCE COURSES<br/>(NAEP)</i>        |  |                  |                      |
| <i>F2RSOC_C (NAEP)</i>                | <i>TOTAL CARNEGIE UNITS IN SOCIAL STUDIES (NAEP)</i>                   | <i>STUB0200</i>  |                  |                      |
| <i>F2RHIS_C</i>                       | <i>TOTAL CARNEGIE UNITS IN HISTORY (NAEP)</i>                          | <i>STUB0210</i>  |                  |                      |
| <i>F2ROSO_C</i>                       | <i>TOTAL CARNEGIE UNITS IN OTHER SOCIAL STUDIES<br/>COURSES (NAEP)</i> | <i>STUB0220</i>  |                  |                      |

| 1992 NELS:88<br>VARIABLE NAME | NELS:88 VARIABLE LABEL  | NAMES OF COMPARABLE NAEP AND HS&B<br>VARIABLES |           |           |
|-------------------------------|---|--|-----------|-----------|
|                               |   | 1990 NAEP                                      | 1987 NAEP | 1982 HS&B |
| F2RCOM_C                      | TOTAL CARNEGIE UNITS IN COMPUTER<br>SCIENCE/PROGRAMMING/DATA (NAEP)       | STUB0400                                       |           |           |
| F2RVAG_C                      | TOTAL CARNEGIE UNITS IN AGRICULTURE (NAEP)                                | STUB0802                                       |           |           |
| F2RVBU_C                      | TOTAL CARNEGIE UNITS IN BUSINESS (NAEP)                                   | STUB0803                                       |           |           |
| F2RVGN_C                      | TOTAL CARNEGIE UNITS IN GENERAL INTRODUCTORY<br>VOCATIONAL COURSES (NAEP) | STUB0801                                       |           |           |
| F2RVHE_C                      | TOTAL CARNEGIE UNITS IN HEALTH AND HUMAN<br>RESOURCES (NAEP)              | STUB0805                                       |           |           |
| F2RVHO_C                      | TOTAL CARNEGIE UNITS IN VOCATIONAL HOME ECONOMICS<br>(NAEP)               | STUB0806                                       |           |           |
| F2RVMA_C                      | TOTAL CARNEGIE UNITS IN MARKETING AND DISTRIBUTION<br>(NAEP)              | STUB0804                                       |           |           |
| F2RVTE_C                      | TOTAL CARNEGIE UNITS IN TECHNICAL (NAEP)                                  | STUB0808                                       |           |           |
| F2RVTR_C                      | TOTAL CARNEGIE UNITS IN TRADE AND INDUSTRY (NAEP)                         | STUB0807                                       |           |           |
| F2R01_C -<br>F2R56_C          | CSSC SUBJECT AREA SUMMARY COMPOSITES                                      |  |           |           |
| F2RCRLST                      | COURSE LISTING USED IN CODING   |  |           | NOCAT     |

<sup>5</sup> These variables may appear to be comparable to COURSO1 through COURSS2, included on the 1982 HS&B transcript file. However, the 1992 NELS:88 items consist of counts of Carnegie units in the CSSC subject areas, while the 1982 HS&B items are counts of courses (course records), not units, in the subject areas.

**COURSE-LEVEL ITEMS**

| <b>1992 NELS:88<br/>VARIABLE NAME</b> | <b>NELS:88 VARIABLE LABEL</b>                                     | <b>NAMES OF COMPARABLE NAEP AND HS&amp;B<br/>VARIABLES</b> |                  |                      |
|---------------------------------------|---|--|------------------|----------------------|
|                                       |   | <b>1990 NAEP</b>   | <b>1987 NAEP</b> | <b>1982 HS&amp;B</b> |
| <b>F2RDIFSC</b>                       | <b>COURSE TAKEN AT SCHOOL OTHER THAN LAST ATTENDED<br/>SCHOOL</b> | <b>TRANSFER</b>  |                  |                      |
| <b>F2RYEAR</b>                        | <b>SCHOOL YEAR IN WHICH COURSE WAS TAKEN</b>                      | <b>YEARS PAN</b>   | <b>YEARS PAN</b> | <b>YEAR</b>          |
| <b>F2RGRLEV</b>                       | <b>GRADE LEVEL IN WHICH COURSE WAS TAKEN</b>                      | <b>GRADLEV</b>   | <b>GRADLEV</b>   |                      |
| <b>F2RCRSDP</b>                       | <b>DEPARTMENT OF COURSE</b>                                       |  |                  |                      |
| <b>F2RCRSE</b>                        | <b>COURSE TITLE</b>   | <b>CRSENAME</b>  | <b>CRSENAME</b>  |                      |
| <b>F2RCRSNO</b>                       | <b>SCHOOL-ASSIGNED COURSE NUMBER</b>                              |  |                  |                      |
| <b>F2RT_TYP</b>                       | <b>TERM IN WHICH COURSE WAS TAKEN</b>                             |  |                  |                      |
| <b>F2RCRED</b>                        | <b>SCHOOL-ASSIGNED COURSE CREDITS</b>                             | <b>RAWCRED</b>   | <b>RAWCRED</b>   |                      |
| <b>F2RSCRED</b>                       | <b>STANDARDIZED CREDITS, IN CARNEGIE UNITS</b>                    | <b>CRSECARN</b>  | <b>CRSECARN</b>  | <b>CREDIT</b>        |
| <b>F2RGRADE</b>                       | <b>STANDARDIZED COURSE GRADE</b>                                  | <b>STDGRAD</b>   | <b>STDGRAD</b>   | <b>GRADE</b>         |
| <b>F2RCSSC</b>                        | <b>CSSC CODE</b>  | <b>CRSECSSC</b>  | <b>CRSECSSC</b>  | <b>COURSE</b>        |

<sup>6</sup> In the 1982 HS&B transcript study, 10 separate flags were used to indicate term type. Together, these flags are comparable to F2RT\_TYP.

## **Appendix B**

### **Transcript Survey Data Collection Materials**

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## NELS:88 SCHOOLS

August 12, 1992

Dear Principal:

When making preparations for the student survey last year, your NORC representative discussed with you an important component of the National Education Longitudinal Study of 1988 (NELS:88) Second Follow-Up--the Student Transcript Survey. For this survey we are currently collecting transcripts for all NELS:88 sample members, most of whom were in the twelfth grade during the 1991-92 school year. I am writing to request your help in this final NELS:88 data collection effort.

As you already know, NELS:88 is conducted by the National Opinion Research Center (NORC) at the University of Chicago in behalf of the U.S. Department of Education. The Department of Education's longitudinal studies program is authorized by the General Education Provisions Act. NELS:88 has been endorsed by the American Association of School Administrators, the National Association of School Boards, the National Association of Principals, and the Education Information Advisory Council (EIAC) of the Council of Chief State School Officers.

The purpose of NELS:88 is to provide data that will be used by Congress, researchers, and educators to better understand and ultimately improve education in America. The study will provide valuable information on how student background, home environment, school experiences, and family involvement in education affect educational and career outcomes. The collection of **high school transcripts** for sample members will furnish objective and reliable measures of important aspects of students' educational experiences, including course-taking patterns, curriculum exposure, and educational outcome as measured by final grades. When merged with information provided by students and their parents and teachers since 1988, transcript data will form part of a rich database that can be used to explore complex educational processes.

Let me assure you that, as required by Federal regulations and professional survey ethics, **all information provided by or about NELS:88 sample members is held in complete confidence.** Individual schools and students will not be identifiable, since results will be presented only in statistical form. NORC has painstakingly safeguarded respondent confidentiality throughout its fifty years of existence.

Enclosed you will find all the materials needed to process our request, including:

- A list of the NELS:88 sample members who attended your school and a program identification sheet,
- Instructions for preparing the transcripts package and cover sheet,
- A copy of a disclosure notice to place in each student's file (a copy of 34 CFR 99.31, which authorizes the release of student records to NELS:88, is enclosed for your reference)
- A Reimbursement Request Form (reimbursement of up to \$1.50 per transcript is available; simply complete and submit this form with the transcripts),
- A prepaid envelope in which to return transcripts to NORC.

We would appreciate your assigning a staff member to this task and forwarding this packet to that staff member as soon as possible. The return of transcripts within the next week would also be appreciated, so that we can maintain our data processing schedule. If you or your staff have any questions about this request for transcripts, please call John Taylor at 1-800-578-7309. Mr. Taylor is also available to discuss any special accommodations your school may need to fulfill the request.

Thank you for your continued support of and participation in NELS:88. The student, teacher, and school administrator surveys have been unqualified successes, as the transcript survey undoubtedly will be with the help of schools like yours across the country.

Sincerely,

Steven J. Ingels, Ph.D.  
NELS:88 Project Director

## NON-NELS:88 SCHOOLS

September 25, 1992

Dear PRINCIPAL~:

I am writing to request your help in the final data collection effort for the National Education Longitudinal Study of 1988 (NELS:88) Second Follow-Up: the Student Transcript Survey. According to our records based on student reports, one or more students selected for NELS:88 attended your school sometime between the spring of 1988 and the spring of 1992. We are currently collecting high school transcripts for these students.

NELS:88 is conducted by the National Opinion Research Center (NORC) at the University of Chicago on behalf of the U.S. Department of Education. The Department of Education's longitudinal studies program is authorized by the General Education Provisions Act. The study has been endorsed by the American Association of School Administrators, the National Association of School Boards, the National Association of Principals, and the Education Information Advisory Council (EIAC) of the Council of Chief State School Officers.

NELS:88 began four years ago with a survey of over 25,000 eighth graders randomly selected from public and private schools. Students were surveyed again in 1990 and in the spring of this year as part of the Second Follow-Up survey, when the majority were in the twelfth grade. The purpose of NELS:88 is to collect information that will be used by Congress, researchers, and educators to better understand and ultimately improve education in America. The study will provide valuable information on how student background, home environment, school experiences, and family involvement in education affect educational and career outcomes. An overview of the study is enclosed.

The collection of **high school transcripts** for sample members will furnish objective and reliable measures of important aspects of students' educational experiences, including course taking patterns, curriculum exposure, and educational outcome as measured by final grades. When merged with information provided by students and their parents and teachers since 1988, transcript data will form part of a rich database that can be used by educators, researchers, and policymakers to explore complex educational processes.

The scope of your school's involvement in NELS:88 would be limited to providing transcripts for the handful of study participants enrolled in your school. Let me assure you that, as required by Federal regulations and professional survey ethics, **all information provided by or about NELS:88 sample members is held in complete confidence**. Individual schools and students will not be identifiable, since results will be presented only in statistical form. NORC has painstakingly safeguarded respondent confidentiality throughout its fifty years of existence.

pin~

Enclosed you will find all the materials needed to process our request, including:

- A list of the one or more NELS:88 sample members who attended your school and a program identification sheet,
- Instructions for preparing the transcripts package and cover sheet,
- A copy of a disclosure notice to place in each student's file (a copy of 34 CFR 99.31, which authorizes the release of student records to NELS:88, is enclosed for your reference),
- A Reimbursement Request Form (reimbursement of up to \$1.50 per transcript is available; simply complete and submit this form with the transcripts),
- A prepaid envelope in which to return transcripts to NORC.

We would appreciate your assigning a staff member to this task and forwarding this packet to that staff member as soon as possible. The return of transcripts within the next week would also be appreciated, so that we can maintain our data processing schedule. If you or your staff have any questions about this request for transcripts, please call John Taylor at 1-800-578-7309. Mr. Taylor is also available to discuss any special accommodations your school may need to fulfill the request.

Your school's participation in the transcript survey is vital to the continuing success of NELS:88. Thank you for your cooperation. We look forward to hearing from you.

Sincerely,

Steven J. Ingels, Ph.D.  
NELS:88 Project Director



INSTRUCTIONS FOR PREPARING  
STUDENT TRANSCRIPTS

NORC/4521  
7/92

NELS:88 SECOND FOLLOW-UP

PLEASE RETURN A COPY OF YOUR SCHOOL'S COURSE CATALOG OR OTHER DESCRIPTIVE COURSE LIST (PREFERABLY FROM 1991-92) WITH THE TRANSCRIPTS. THE CATALOG WILL HELP US ANALYZE THE TRANSCRIPTS.

Please follow the instructions below when completing and returning the enclosed Transcript Survey documents.

**1. Review the Student Checklist.** The checklist includes the names and dates of birth (if known) of all students for whom we would like high school transcripts. Most of these students were in the twelfth grade during the 1991-92 school year. Some, however, may be early graduates or out-of-sequence (in the eleventh or an earlier grade), or may have dropped out of school. Students known to be early graduates or dropouts are identified in the **Enrollment Status** column. For dropouts, withdrawal dates are also given, to help you locate student records. Any student who refused us permission to request his/her transcript has been excluded from this list.

If a student on the checklist transferred to another school, please return any transcript for the student that your school has on file. Also record the name, city, and state of the transfer school in the **Comments** column. We will then pursue additional records through the transfer school. Please return transcripts for students who have withdrawn from or dropped out of your school.

Please feel free to make a photocopy of the annotated checklist for your files.

**2. Retrieve and prepare transcripts.** Collect and photocopy transcripts for the students on the checklist. Ideally, these transcripts will include course-taking histories for ninth through twelfth grades. If ninth grade records are unavailable, please submit transcripts for tenth through twelfth grades. Write a check mark (✓) beside the name of each student for whom you are submitting a transcript.

The Department of Education has asked that we collect the following information from student transcripts:

Student-level information

- ☐ number of absences per year or term
- ☐ rank in class and class size
- ☐ date student left school
- ☐ reason student left school (graduated, transferred, etc.)
- ☐ Cumulative GPA
- ☐ standardized test scores for the PSAT, SAT, ACT, and Advanced Placement tests

Course-taking histories for grades 9 (or 10) through 12, including:

- ☐ course title
- ☐ year, grade level, and term course taken
- ☐ number of credits earned
- ☐ grade assigned

**Please attempt to retrieve any information not routinely included on transcripts at your school from other sources, such as guidance records, and write the information on each student's transcript. If any of this information is unavailable, note this on the Transcripts Cover Sheet (see step 4 below).**

**NOTE:** If your school uses any codes or flags on transcripts to identify terms, special education courses, etc., please include a key with the transcripts so that we can translate the codes during data processing.

**3. Complete the Student Program Identification Sheet.** For each student for whom you are providing a transcript, indicate whether he/she has participated in special education, bilingual education, or gifted courses or programs by entering a check in the appropriate column(s).

**NOTE:** By "bilingual education" we do not mean foreign language courses taken by native speakers of English (French I, Spanish I, etc.).

**4. Complete the Transcripts Cover Sheet.** Complete the cover sheet and enclose it with the transcripts. Your responses to the questions on this sheet will help us analyze the transcripts.

**5. Insert disclosure notices in each student's school file.** These notices explain the purpose of the release of student records to NELS:88 and should be filed with each student's records at your school.

**6. Return transcripts, cover sheet, identification sheet, and annotated checklist to NORC.** A business reply envelope is enclosed for the return of transcripts and other survey documents. Use of this envelope will ensure that the transcript packet is routed properly once received at NORC.

**Reimbursement of transcript preparation expenses:** If you would like to be reimbursed for transcript preparation (for photocopying and other related expenses), complete the enclosed voucher and return it with the transcripts. We are prepared to pay up to \$1.50 per transcript.

**Please return all Transcript Survey documents as soon as possible.**

**If you have any questions about preparing transcripts or about the survey, please call John Taylor at 1-800-578-7309.**

**Thank you for your assistance.**

TRANSCRIPTS COVER SHEET  
NELS:88 SECOND FOLLOW-UP

NORC/4521  
7/92

SCHOOL STATE:  
PIN:  
NAME:

PREPARER'S NAME: \_\_\_\_\_

PREPARER'S TELEPHONE NUMBER: \_\_\_\_\_ DATE PREPARED: \_\_\_\_\_

Please answer the following questions about the transcripts being provided. Your answers will help us analyze the transcripts.

1. Please specify below your school's grade scale (the percentage equivalent of each letter grade). (If your school uses different grade scales for different difficulty levels of courses or tracks (honors, general, special education, etc.), please specify the scale associated with each. If your school has only one scale, record the information in the first column.)

| LEVEL _____            | LEVEL _____            | LEVEL _____            | LEVEL _____            |
|------------------------|------------------------|------------------------|------------------------|
| A = _____ % to _____ % | A = _____ % to _____ % | A = _____ % to _____ % | A = _____ % to _____ % |
| B = _____ % to _____ % | B = _____ % to _____ % | B = _____ % to _____ % | B = _____ % to _____ % |
| C = _____ % to _____ % | C = _____ % to _____ % | C = _____ % to _____ % | C = _____ % to _____ % |
| D = _____ % to _____ % | D = _____ % to _____ % | D = _____ % to _____ % | D = _____ % to _____ % |
| F = _____ % to _____ % | F = _____ % to _____ % | F = _____ % to _____ % | F = _____ % to _____ % |

2. Is any of the information below unavailable at your school, and consequently not included on the transcripts enclosed? Check off each variable that is unavailable. (Please attempt to retrieve any information not routinely included on transcripts at your school from other sources, such as guidance records, and write the information on each student's transcript.)

**Student-level information**

- \_\_\_\_\_ number of absences per year or term
- \_\_\_\_\_ rank in class and class size
- \_\_\_\_\_ date student left school
- \_\_\_\_\_ reason student left school (graduated, transferred, etc.)
- \_\_\_\_\_ GPA
- \_\_\_\_\_ standardized test scores for the PSAT, SAT, ACT, and Advanced Placement tests

**Course-taking histories for grades 9 (or 10) through 12, including:**

- \_\_\_\_\_ course title
- \_\_\_\_\_ grade level, year, and term course taken
- \_\_\_\_\_ number of credits earned
- \_\_\_\_\_ grade assigned

3. Please feel free to record below any information about the transcripts enclosed that you believe would be helpful in processing them.

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Thank you for your help. We appreciate your cooperation.





**DISCLOSURE NOTICE  
NATIONAL EDUCATION LONGITUDINAL STUDY OF 1988  
SECOND FOLLOW-UP  
STUDENT TRANSCRIPT SURVEY**

---

(STUDENT NAME)

---

(DATE)

Transcripts for this student for the period of his/her enrollment here have been provided to the National Opinion Research Center (NORC), agent for the National Center for Education Statistics (NCES) of the U.S. Department of Education. This disclosure statement fulfills the requirements of 34 CFR 99.31 pursuant to the Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. 1232g).

The Student Transcript Survey is part of the National Education Longitudinal Study of 1988 (NELS:88) sponsored by NCES. This student is a member of the NELS:88 sample, and data from these records will be combined with others into statistical summaries and tables. No individually identifiable information will be released in any form.

## **Appendix C**

### **Printouts of the Transcript Data Entry Screens**

*NOTE: Screens have been condensed to more than one per page.*

Questionnaire Number =

#54--ENTER CADER ID \_\_\_\_

Id=1143 Prev=0 Back=+ Cancel= Suspend=\* Jump= Edit=; Show=?  
[Ret]=[Ret]

---

#55--ENTER STUDENT ID

Student name: STUDENT NAME

Enter student ID: \_\_\_\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]



#6-NUMBER OF DAYS ABSENT

Student name: STUDENT NAME  
Student ID: STUDENT ID

Number of days absent during 88-89 school year: \_\_\_\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

---

#6-NUMBER OF DAYS ABSENT

Student name: STUDENT NAME  
Student ID: STUDENT ID

Number of days absent during 89-90 school year: \_\_\_\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

#6-NUMBER OF DAYS ABSENT

Student name: STUDENT NAME  
Student ID: STUDENT ID

Number of days absent during 90-91 school year: \_\_\_\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

---

#6-NUMBER OF DAYS ABSENT

Student name: STUDENT NAME  
Student ID: STUDENT ID

Number of days absent during 91-92 school year: \_\_\_\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

#7-PARTICIPATION IN SPE

Student name: STUDENT NAME  
Student ID: STUDENT ID

Participation in Specialized Programs.

- 1 Special Education
- 2 Bilingual Education
- 3 Gifted Education
- 4 Special and Bilingual Education
- 5 Bilingual Education and Gifted Education
- 6 None of the above

[F4] search

Single Response Code = \_\_\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

#9-RANK

Student name: STUDENT NAME  
Student ID: STUDENT ID

Rank in class: \_\_\_\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

---

#11-CLASS SIZE

Student name: STUDENT NAME  
Student ID: STUDENT ID

Class size: \_\_\_\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

#13-MONTH

Student name: STUDENT NAME

Student ID: STUDENT ID

Date student left school: \_\_\_ / \_\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

#16-REASON FOR LEAVING

Student name: STUDENT NAME

Student ID: STUDENT ID

Reason for leaving school:

- 01 Standard Diploma
- 02 Honors Diploma
- 03 Diploma with special education adjustments
- 04 Certificate of attendance
- 05 Still Enrolled
- 06 Dropped out
- 07 Transferred
- 08 Aged out
- 09 Died
- 10 Health reason (including pregnancy)
- 11 Received GED
- 12 Other

[F4] search

Single Response Code = \_\_\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

#17-OTHER

Enter other reason for leaving.

Id=1156 Prev=1158 Back=+ Cancel= Suspend=\* Jump= Edit=; Show=?  
[Ret]=[Ret]

---

#19-GPA

Student name: STUDENT NAME

Student ID: STUDENT ID

Enter GPA (NNN.NN): \_\_\_\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

#21--PSAT SCORE

Student name: STUDENT NAME

Student ID: STUDENT ID

PSAT Math score: \_\_\_\_\_

PSAT Verbal score: \_\_\_\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

---

#23--SAT SCORE

Student name: STUDENT NAME

Student ID: STUDENT ID

SAT Math score: \_\_\_\_\_

SAT Verbal score: \_\_\_\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]



#25-ACT SCORE

Student name: STUDENT NAME

Student ID: STUDENT ID

ACT Composite score: \_\_\_\_\_

ACT English score: \_\_\_\_\_

ACT Math score: \_\_\_\_\_

ACT Reading score: \_\_\_\_\_

ACT Science Reasoning score: \_\_\_\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

#30-AP TESTS

Select the first five AP tests that were taken starting from the top.

- |                                  |   |                                    |
|----------------------------------|---|------------------------------------|
| 01, Math - Calculus AB           | 13, English Language and Composition    | 23, Latin/Catullus - Horace        |
| 02, Math - Calculus BC           | 14, U.S. History                        | 24, Spanish Language               |
| 03, Physics B                    | 15, U.S. Government and Politics        | 25, Spanish Literature             |
| 04, Physics C - Mechanics        | 16, Comparative Government and Politics | 26, History of arts                |
| 05, Physics C - E & M            | 17, Psychology                          | 27, Music Listening and Literature |
| 06, Chemistry                    | 18, European History                    | 28, Music Theory                   |
| 07, Biology                      | 19, French Language                     | 29, Studio Art - Drawing           |
| 08, Computer Science A           | 20, French Literature                   | 30, Studio Art - General           |
| 09, Computer Science AB          | 21, German Language                     |                                    |
| 10, Microeconomics               | 22, Latin/Virgil                        |                                    |
| 11, Macroeconomics               |   |                                    |
| 12, English Lit. and Composition |   |                                    |

[F4] search

Multiple Response Code/s = \_\_\_\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=? [Ret]=[Ret]

#32 - AP SCORE

Student name: STUDENT NAME

Student ID: STUDENT ID

AP Mathematics - Calculus AB score: \_\_\_\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

#33-ACHIEVEMENT TESTS

Select the first five tests that were taken starting from the top.

|         |  |        |               |
|---------|--|--------|---------------|
| 01, M1  | Mathematics level 1                                | 12, FR | French        |
| 02, M2  | Mathematics level 2                                | 13, GM | German        |
| 03, M2C | Mathematics level 2c                               | 14, LT | Latin         |
| 04, PH  | Physics  | 15, SP | Spanish       |
| 05, CH  | Chemistry  | 16, MH | Modern Hebrew |
| 06, BY  | Biology  | 17, IT | Italian       |
| 07, EN  | English Composition -<br>Multiple Choice           |        |               |
| 08, ES  | English Composition -<br>Multiple Choice and Essay |        |               |
| 09, LR  | Literature   |        |               |
| 10, AH  | American History and Social<br>Studies             |        |               |
| 11, EH  | European History and World<br>Cultures             |        |               |

[F4] search

Multiple Response Code/s = \_\_\_\_\_

Id=1156 Prev=1158 Back=+ Cancel= Suspend=\* Jump= Edit=; Show=? [Ret]=[Ret]

#35-ACHIEVEMENT SCORE

Student name: STUDENT NAME

Student ID: STUDENT ID

M1 Mathematics level 1 score: \_\_\_\_\_

Id=1156 Prev=1158 Back=+ Cancel= Suspend=\* Jump= Edit=; Show=? [Ret]=[Ret]



#39-YEAR

School PIN: SCHOOL PIN

Student name: STUDENT NAME

Student ID: STUDENT ID

Term: first

Year of term: 19\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

---

#40-GRADE LEVEL

School PIN: SCHOOL PIN

Student name: STUDENT NAME

Student ID: STUDENT ID

Term year: SCHOOL YEAR

Grade level: \_\_\_\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

#42-COURSE DEPARTMENT

School PIN: SCHOOL PIN

Student name: STUDENT NAME

Student ID: STUDENT ID

Term year: SCHOOL YEAR

Course Name: \_\_\_\_\_

Department: \_\_\_\_\_

Course number: \_\_\_\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

---

#45-TERM TYPE

School PIN: SCHOOL PIN

Student name: STUDENT NAME

Student ID: STUDENT ID

Term year: SCHOOL YEAR

Course Name: TITLE OF COURSE

Term type:

YEAR SEM1 SEM2 TRI1 TRI2 TRI3 QUA1 QUA2 QUA3 QUA4 MISS

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]



#46-CREDITS EARNED

School PIN: SCHOOL PIN  
Student name: STUDENT NAME  
Student ID: STUDENT ID  
Term & year : TERM, SCHOOL YEAR  
Course Name: TITLE OF COURSE  
Credits earned (NN.NN): \_\_\_\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

#48--GRADE ASSIGNED

School PIN: SCHOOL PIN

Student name: STUDENT NAME

Student ID: STUDENT ID

Term & year: TERM, SCHOOL YEAR

Course Name: TITLE OF COURSE

Grade assigned:

|    |    |    |                |
|----|----|----|----------------|
| 01 | A+ | 11 | D              |
| 02 | A  | 12 | D-             |
| 03 | A- | 13 | F              |
| 04 | B+ | 14 | PASS           |
| 05 | B  | 15 | UNSATISFACTORY |
| 06 | B- | 16 | WITHDREW       |
| 07 | C+ | 17 | INCOMPLETE     |
| 08 | C  | 18 | NON-GRADED     |
| 09 | C- | 19 | BLANK          |
| 10 | D+ |    |                |

[F4] search

Single Response Code = \_\_\_\_\_

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

#50-MORE COURSES?

School PIN: SCHOOL PIN

Student name: STUDENT NAME

Student ID: STUDENT ID

Term & year: TERM, SCHOOL YEAR

Course name: TITLE OF COURSE

Are there more courses for this year-grade?

01 Yes

21 No

[F4] search

Single Response Code = 1 to continue coding courses in year-grade

21 to continue to Screen 52 to code terms in other year-grades or to exit the student

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

#52—MORE TERMS?

School PIN: SCHOOL PIN

Student ID: STUDENT ID

Term & year: TERM, SCHOOL YEAR

Are there any more year-grades to enter for this student?

01 Yes

21 No

[F4] search

Single Response Code = 1 to code courses taken during the next  
year-grade

21 to continue to Screen 56 and exit the  
student

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

#56-ARE YOU SURE?

School PIN: SCHOOL PIN

Student name: STUDENT NAME

Student ID: STUDENT ID

Term & year: TERM, SCHOOL YEAR

ARE YOU SURE YOU ARE FINISHED WITH THIS STUDENT?

NO

YES

[F4] search

Id=1000 Prev=0 Back=+ Cancel=! Suspend=\* Jump=Z Edit=; Show=?  
[Ret]=[Ret]

## **Appendix D**

### **Grade Conversion Scales**

### LETTER GRADE CONVERSION SCALE

The following scale was used to convert letter grades to standardized grade codes.

|    |    |    |                |
|----|----|----|----------------|
| 01 | A+ | 11 | D              |
| 02 | A  | 12 | D-             |
| 03 | A- | 13 | F              |
| 04 | B+ | 14 | PASS           |
| 05 | B  | 15 | UNSATISFACTORY |
| 06 | B- | 16 | WITHDREW       |
| 07 | C+ | 17 | INCOMPLETE     |
| 08 | C  | 18 | NON-GRADED     |
| 09 | C- | 19 | BLANK          |

### PERCENTAGE GRADE CONVERSION SCALE

To convert percentages to a grade code, clerks first determined the school's minimum passing grade. This information was reported on the Transcripts Cover Sheet. Based on the minimum passing grade, clerks selected one of the following three scales to convert percentages to grade codes.

When clerks could not determine the school's minimum passing grade, they used the first scale (minimum passing grade of 60 percent).

#### CONVERSION CHART

| CODE | IF FAILURE IS<br>BELOW 60 | IF FAILURE IS<br>BELOW 65 | IF FAILURE IS<br>BELOW 70 |
|------|---------------------------|---------------------------|---------------------------|
| 1    | 98 - 100                  | 98 - 100                  | 99 - 100                  |
| 2    | 93 - 97                   | 95 - 97                   | 96 - 98                   |
| 3    | 90 - 92                   | 92 - 94                   | 94 - 95                   |
| 4    | 87 - 89                   | 89 - 91                   | 92 - 93                   |
| 5    | 83 - 86                   | 86 - 88                   | 88 - 91                   |
| 6    | 80 - 82                   | 83 - 85                   | 86 - 87                   |
| 7    | 77 - 79                   | 80 - 82                   | 84 - 85                   |
| 8    | 73 - 76                   | 77 - 79                   | 80 - 83                   |
| 9    | 70 - 72                   | 74 - 76                   | 78 - 79                   |
| 10   | 67 - 69                   | 71 - 73                   | 76 - 77                   |
| 11   | 63 - 66                   | 68 - 70                   | 72 - 75                   |
| 12   | 60 - 62                   | 65 - 67                   | 70 - 71                   |
| 13   | BELOW 60                  | BELOW 65                  | BELOW 70                  |



## **Appendix E**

### **Record Layouts for the Transcript Data Files**

## NELS:88 Second Follow-Up Restricted Use Transcript Data Files Record Layouts (Magnetic Tape Version)

The original EBCDIC files delivered on magnetic tape have the following structure (where LRECL = logical record layout and BLKSIZE = blocking factor):

|  |                              |
|--|------------------------------|
| Student-level raw data (F2TRNST.RAW):              | LRECL = 701, BLKSIZE = 27339 |
| Course-level raw data (F2TRNCRS.RAW):              | LRECL = 117, BLKSIZE = 27963 |
| Student- and course-level<br>SAS and SPSS-X cards: | LRECL = 80, BLKSIZE = 27920  |

### STUDENT FILE

| VARIABLE<br>NAME | POSITION |     |
|------------------|----------|-----|
| STU_ID           | 1-7      |     |
| F2SCH_ID         | 8-12     |     |
| F2TRSCWT         | 13-22    | (4) |
| F2RAB88          | 23-26    | (1) |
| F2RAB89          | 27-30    | (1) |
| F2RAB90          | 31-34    | (1) |
| F2RAB91          | 35-38    | (1) |
| F2RSPFLG         | 39-40    |     |
| F2RRANK          | 41-44    |     |
| F2RCSIZE         | 45-48    |     |
| F2RDTLMO         | 49-50    |     |
| F2RDTLYR         | 51-52    |     |
| F2RREASL         | 53-54    |     |
| F2RRLVRB         | 55-74    | (A) |
| F2RGPA           | 75-79    | (2) |
| F2RPSATM         | 80-81    |     |
| F2RPSATV         | 82-83    |     |
| F2RSATM          | 84-86    |     |
| F2RSATV          | 87-89    |     |
| F2RACTC          | 90-91    |     |
| F2RACTE          | 92-93    |     |
| F2RACTM          | 94-95    |     |
| F2RACTR          | 96-97    |     |
| F2RACTS          | 98-99    |     |
| F2RAPBIO         | 100-101  |     |
| F2RAPCHE         | 102-103  |     |
| F2RAPCGP         | 104-105  |     |
| F2RAPCSA         | 106-107  |     |
| F2RAPCSB         | 108-109  |     |
| F2RAPLIT         | 110-111  |     |
| F2RAPLAN         | 112-113  |     |
| F2RAPEUH         | 114-115  |     |

## STUDENT FILE

| VARIABLE<br>NAME | POSITION |
|------------------|----------|
| F2RAPFLA         | 116-117  |
| F2RAPFLI         | 118-119  |
| F2RAPGER         | 120-121  |
| F2RAPHAR         | 122-123  |
| F2RAPLCA         | 124-125  |
| F2RAPLVE         | 126-127  |
| F2RAPMAC         | 128-129  |
| F2RAPCAB         | 130-131  |
| F2RAPCAA         | 132-133  |
| F2RAPMIC         | 134-135  |
| F2RAPMLL         | 136-137  |
| F2RAPMT          | 138-139  |
| F2RAPPB          | 140-141  |
| F2RAPPC          | 142-143  |
| F2RAPPCM         | 144-145  |
| F2RAPPSY         | 146-147  |
| F2RAPSLA         | 148-149  |
| F2RAPSLI         | 150-151  |
| F2RAPSAG         | 152-153  |
| F2RAPSAD         | 154-155  |
| F2RAPUSG         | 156-157  |
| F2RAPUSH         | 158-159  |
| F2RACHM1         | 160-161  |
| F2RACHM2         | 162-163  |
| F2RACH2C         | 164-165  |
| F2RACHPH         | 166-167  |
| F2RACHCH         | 168-169  |
| F2RACHBY         | 170-171  |
| F2RACHEN         | 172-173  |
| F2RACHES         | 174-175  |
| F2RACHLR         | 176-177  |
| F2RACHAH         | 178-179  |
| F2RACHEH         | 180-181  |
| F2RACHFR         | 182-183  |
| F2RACHGM         | 184-185  |
| F2RACHLT         | 186-187  |
| F2RACHSP         | 188-189  |
| F2RACHMH         | 190-191  |
| F2RACHIT         | 192-193  |
| F2UNIV1          | 194-197  |
| F2UNIV2A         | 198-198  |
| F2UNIV2B         | 199-199  |
| F2UNIV2C         | 200-201  |
| F2UNIV2D         | 202-203  |

**STUDENT FILE**

| VARIABLE<br>NAME | POSITION |     |
|------------------|----------|-----|
| F2RWTST          | 204-204  |     |
| F2BYQFLG         | 205-205  |     |
| F2F1QFLG         | 206-206  |     |
| F2QFLG           | 207-207  |     |
| F2NSSFLG         | 208-208  |     |
| F2BYTXFL         | 209-209  |     |
| F2F1TXFL         | 210-210  |     |
| F2TXFLG          | 211-211  |     |
| F2BYF1PN         | 212-212  |     |
| F2F1PNFL         | 213-213  |     |
| F2PNLFLG         | 214-214  |     |
| F2CXTFLG         | 215-215  |     |
| G8COHORT         | 216-216  |     |
| G10COHRT         | 217-217  |     |
| G12COHRT         | 218-218  |     |
| F2F1STAT         | 219-220  |     |
| F2STAT           | 221-222  |     |
| F2F1DOST         | 223-224  |     |
| F2DOSTAT         | 225-225  |     |
| F2TRSTYP         | 226-227  |     |
| F2SEX            | 228-228  |     |
| F2RACE1          | 229-229  |     |
| F2BYSES          | 230-234  | (3) |
| F2F1SES          | 235-239  | (3) |
| F2SES1           | 240-244  | (3) |
| F2BYSESQ         | 245-245  |     |
| F2F1SESQ         | 246-246  |     |
| F2SES1Q          | 247-247  |     |
| F2BIRTHM         | 248-249  |     |
| F2BIRTHY         | 250-251  |     |
| F2HSPROG         | 252-253  |     |
| F2BY2XCO         | 254-257  | (2) |
| F2F12XCO         | 258-261  | (2) |
| F22XCOMP         | 262-265  | (2) |
| F2BY2XQU         | 266-266  |     |
| F2F12XQU         | 267-267  |     |
| F22XQURT         | 268-268  |     |
| G8CTRL2          | 269-269  |     |
| G10CTRL2         | 270-271  |     |
| TRNCTRL2         | 272-273  |     |
| G8URBN3          | 274-274  |     |
| G10URBN3         | 275-275  |     |
| TRNURBN3         | 276-276  |     |
| G8REGON          | 277-278  |     |

## STUDENT FILE

| VARIABLE<br>NAME | POSITION |     |
|------------------|----------|-----|
| G10REGON         | 279-280  |     |
| TRNREGON         | 281-282  |     |
| TRNSTATE         | 283-284  | (A) |
| F2RCRLST         | 285-285  |     |
| F2RTR09          | 286-286  |     |
| F2RTR10          | 287-287  |     |
| F2RTR11          | 288-288  |     |
| F2RTR12          | 289-289  |     |
| F2RTROUT         | 290-291  |     |
| F2RTRPRG         | 292-293  |     |
| F2RNWB1A         | 294-294  |     |
| F2RNWB2A         | 295-295  |     |
| F2RNWB3A         | 296-296  |     |
| F2RNWB4A         | 297-297  |     |
| F2RNWB5A         | 298-298  |     |
| F2RNWB1B         | 299-299  |     |
| F2RNWB2B         | 300-300  |     |
| F2RNWB3B         | 301-301  |     |
| F2RNWB4B         | 302-302  |     |
| F2RNWB5B         | 303-303  |     |
| F2RHEN_C         | 304-307  | (2) |
| F2RHMA_C         | 308-311  | (2) |
| F2RHSC_C         | 312-315  | (2) |
| F2RHSC_C         | 316-319  | (2) |
| F2RHCO_C         | 320-323  | (2) |
| F2RHFO_C         | 324-327  | (2) |
| F2RHENG2         | 328-331  | (2) |
| F2RHMAG2         | 332-335  | (2) |
| F2RHSCG2         | 336-339  | (2) |
| F2RHCOG2         | 340-343  | (2) |
| F2RHCOG2         | 344-347  | (2) |
| F2RHFOG2         | 348-351  | (2) |
| F2RENG_C         | 352-355  | (2) |
| F2RFOR_C         | 356-359  | (2) |
| F2RMAT_C         | 360-363  | (2) |
| F2RAL1_C         | 364-367  | (2) |
| F2RAL2_C         | 368-371  | (2) |
| F2RGEO_C         | 372-375  | (2) |
| F2RTRI_C         | 376-379  | (2) |
| F2RPRE_C         | 380-383  | (2) |
| F2RCAL_C         | 384-387  | (2) |
| F2ROMA_C         | 388-391  | (2) |
| F2RSCI_C         | 392-395  | (2) |
| F2REAR_C         | 396-399  | (2) |

**STUDENT FILE**

| <b>VARIABLE<br/>NAME</b> | <b>POSITION</b> |     |
|--------------------------|-----------------|-----|
| F2RBIO_C                 | 400-403         | (2) |
| F2RCHE_C                 | 404-407         | (2) |
| F2RPHY_C                 | 408-411         | (2) |
| F2ROSC_C                 | 412-415         | (2) |
| F2RSOC_C                 | 416-419         | (2) |
| F2RHIS_C                 | 420-423         | (2) |
| F2ROSO_C                 | 424-427         | (2) |
| F2RCOM_C                 | 428-431         | (2) |
| F2RVAG_C                 | 432-435         | (2) |
| F2RVBU_C                 | 436-439         | (2) |
| F2RVGN_C                 | 440-443         | (2) |
| F2RVHE_C                 | 444-447         | (2) |
| F2RVHO_C                 | 448-451         | (2) |
| F2RVMA_C                 | 452-455         | (2) |
| F2RVTE_C                 | 456-459         | (2) |
| F2RVTR_C                 | 460-463         | (2) |
| F2R01_C                  | 464-467         | (2) |
| F2R02_C                  | 468-471         | (2) |
| F2R03_C                  | 472-475         | (2) |
| F2R04_C                  | 476-479         | (2) |
| F2R05_C                  | 480-483         | (2) |
| F2R06_C                  | 484-487         | (2) |
| F2R07_C                  | 488-491         | (2) |
| F2R08_C                  | 492-495         | (2) |
| F2R09_C                  | 496-499         | (2) |
| F2R10_C                  | 500-503         | (2) |
| F2R11_C                  | 504-507         | (2) |
| F2R12_C                  | 508-511         | (2) |
| F2R13_C                  | 512-515         | (2) |
| F2R14_C                  | 516-519         | (2) |
| F2R15_C                  | 520-523         | (2) |
| F2R16_C                  | 524-527         | (2) |
| F2R17_C                  | 528-531         | (2) |
| F2R18_C                  | 532-535         | (2) |
| F2R19_C                  | 536-539         | (2) |
| F2R20_C                  | 540-543         | (2) |
| F2R21_C                  | 544-547         | (2) |
| F2R22_C                  | 548-551         | (2) |
| F2R23_C                  | 552-555         | (2) |
| F2R24_C                  | 556-559         | (2) |
| F2R25_C                  | 560-563         | (2) |
| F2R26_C                  | 564-567         | (2) |
| F2R27_C                  | 568-571         | (2) |
| F2R28_C                  | 572-575         | (2) |

## STUDENT FILE

| VARIABLE<br>NAME | POSITION |     |
|------------------|----------|-----|
| F2R29_C          | 576-579  | (2) |
| F2R30_C          | 580-583  | (2) |
| F2R31_C          | 584-587  | (2) |
| F2R32_C          | 588-591  | (2) |
| F2R33_C          | 592-595  | (2) |
| F2R34_C          | 596-599  | (2) |
| F2R35_C          | 600-603  | (2) |
| F2R36_C          | 604-607  | (2) |
| F2R37_C          | 608-611  | (2) |
| F2R38_C          | 612-615  | (2) |
| F2R39_C          | 616-619  | (2) |
| F2R40_C          | 620-623  | (2) |
| F2R41_C          | 624-627  | (2) |
| F2R42_C          | 628-631  | (2) |
| F2R43_C          | 632-635  | (2) |
| F2R44_C          | 636-639  | (2) |
| F2R45_C          | 640-643  | (2) |
| F2R46_C          | 644-647  | (2) |
| F2R47_C          | 648-651  | (2) |
| F2R48_C          | 652-655  | (2) |
| F2R49_C          | 656-659  | (2) |
| F2R50_C          | 660-663  | (2) |
| F2R51_C          | 664-667  | (2) |
| F2R54_C          | 668-671  | (2) |
| F2R55_C          | 672-675  | (2) |
| F2R56_C          | 676-679  | (2) |
| F2TRP1FL         | 680-680  |     |
| F2TRP2FL         | 681-681  |     |
| F2TRP1WT         | 682-691  | (4) |
| F2TRP2WT         | 692-701  | (4) |

**STUDENT FILE**

| <b>VARIABLE<br/>NAME</b> | <b>POSITION</b> |     |
|--------------------------|-----------------|-----|
| STU_ID                   | 1-7             |     |
| F2SCH_ID                 | 8-12            |     |
| F2RDIFSC                 | 13-14           |     |
| F2RTRMSC                 | 15-19           |     |
| F2RTRMID                 | 20-21           |     |
| F2RCRSID                 | 22-23           |     |
| F2RYEAR                  | 24-25           |     |
| F2RGRLEV                 | 26-27           |     |
| F2RCRSDP                 | 28-47           | (A) |
| F2RCRSE                  | 48-92           | (A) |
| F2RCRSNO                 | 93-99           | (A) |
| F2RT_TYP                 | 100-101         |     |
| F2RCRED                  | 102-105         | (2) |
| F2RSCRED                 | 106-109         | (2) |
| F2RGRADE                 | 110-111         |     |
| F2RCSSC                  | 112-117         |     |



## **Appendix F**

### **Guidelines for Using SAS with the NELS:88 Transcript Data**

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## Guidelines for using SAS with NELS:88 Second Follow-Up Transcript Data

The files provided for the restricted use tape include SAS cards and SAS system files for the NELS:88 second follow-up. The student-level SAS system file includes:

- 1) Student-level transcript data
- 2) Flags, weights, and composites

The course-level SAS system file includes solely course-level transcript data.

The sections that follow pertain primarily to mainframe applications. In the points below, methods to contain difficulties that may be encountered when using large data files with SAS are discussed.

1. Use the '(KEEP=...)' and '(DROP=...)' options in the 'SET' statement and/or in the 'DATA' statement when creating working data files so that unwanted variables are not included in the files. The '(KEEP=...)' option does not reorder the variables in the new dataset.

The files are large and the SAS cards associated with all of the variables within a file require a great deal of memory. Eliminating unwanted variables and the cards associated with them will reduce the amount of memory necessary to run jobs.

2. Some of the label statements given in the SAS card files may need to be eliminated because of SAS system limitations present at many computer installations.
3. The large number of VALUE statements in the PROC FORMAT section of the SAS cards require that a special DD statement be placed just after the // EXEC SAS statement to increase the capacity of the format library during a SAS run:

```
//LIBRARY DD SPACE=(TRK,(25,25,60))
```

Since this may not be possible at some computer installations, it may be necessary to delete some VALUE statements.

4. When working with large files, it may be necessary to override the default work space with the following DD statement:

```
//WORK DD UNIT=SYSCR,SPACE=(CYL,(40,40))
```

Place the //WORK DD statement just after the // EXEC SAS statement (or after the //LIBRARY DD statement, if that is included as well).

5. The formats given in the PROC FORMAT step here are not permanently associated with each variable. Whenever they are needed for a procedure, it is necessary to include them in this PROC FORMAT step before the procedure(s) that will use them. The following example will help to illustrate this point.

Suppose you were interested in assessing the association between the reason the student left school and the student's socio-economic quartile. To do this you might construct a two-way crosstab.

In the following example PROC FORMAT is used first to make a temporary library of formats (sets of value labels). Then PROC FREQ is used to access the second follow-up student-level SAS system file and to create a two-way crosstab. The FORMAT statement in PROC FREQ links each variable in the crosstab to the appropriate set of value labels stored in the temporary format library.

```
// EXEC SAS
//LIBRARY DD SPACE=(TRK,(25,25,60))
//WORK DD UNIT=SYSCR,SPACE=(TRK,(1000,1000))
//IN1 DD DSN=ACT.PRIV.F2TRN.SASLIB,DISP=SHR
//SYSIN DD *
```

```
OPTIONS DQUOTE;
```

```
PROC FORMAT;
VALUE REASL
```

```
01 = "STANDARD DIPLOMA"
02 = "HONORS DIPLOMA"
03 = "DIPLOMA/SPEC ED"
04 = "CERT OF ATTEND"
05 = "STILL ENROLLED"
06 = "DROP OUT"
07 = "TRANSFERRED"
08 = "AGED OUT"
09 = "DIED"
10 = "HEALTH REASON"
11 = "RECEIVED GED"
12 = "OTHER"
98 = "MISSING"
```

```
;
VALUE SESQ
```

```
1 = "QUARTILE 1"
2 = "QUARTILE 2"
3 = "QUARTILE 3"
4 = "QUARTILE 4"
8 = "MISSING"
```

```
;
PROC FREQ DATA=IN1.F2TRNST;
FORMAT
F2RREASL REASL.
```

F2SES1Q      SESQ.

;

TABLES F2RREASL \* F2SES1Q;  
TITLE "TRANSCRIPT REPORTED EDUCATIONAL OUTCOME BY SOCIO-  
ECONOMIC QUARTILE";

At the end of each SAS card file, there is a frequency procedure which contains FORMAT statements for every variable for which there is a format. These FORMAT statements can be used in any SAS procedure. However, if there are a large number of format links, they must be divided into several format statements to work. (Using about 90 format links in the format statement proved successful on the University of Chicago mainframe.)

6. Whenever variables are needed from more than one student-level file (i.e., transcript component student- and course-level data files or transcript files and student questionnaire files), the files may be merged by STU\_ID using SAS MERGE statements. A simple one line MERGE statement will put variables from separate files together in a single record for analysis.
7. For very large files, the user may encounter problems when sorting. Various options may be added to the //EXEC SAS card to circumvent these problems. A suggested option is given below (consult the SAS manual for descriptions of these options):

```
// EXEC SAS,OPTIONS='NODYNALLOC',REGION=1280K,SORT=30
```

8. It is suggested that the user include the LENGTH statement when creating new variables, in order to save space and computer memory.
9. For many tabulations, PROC TABULATE produces the most readable output. The SAS user may use the format statements (provided) for classification variables to produce the row values of tabulated tables.
10. Output from SAS can be downloaded to personal computers for production of final reports. NCES has available a program for taking into account the sample design when computing standard errors. The program, known as CTAB, is a Taylor series-based routine that uses an ASCII file to compute standard errors for cross-classifications. The program also produces labeled tabular output suitable for use in publications. CTAB is available for use on microcomputers, and can be obtained through NCES.
11. Use the NCES- and NORC-defined composite and classification variables whenever possible to simplify programming. These classification variables were carefully constructed, frequently from sources of data external to transcripts or the student questionnaire.
12. SAS and SPSS-X system files can now be converted at many computer installations. Contact your own facility to obtain the information necessary to create an SPSS-X file from SAS and vice versa.
13. There is a peculiarity with version 6.06 of SAS. The symbol "%" will not be printed in a variable label if the label is the first character to be printed on the page.

## **Appendix G**

### **NELS:88 Transcript Data Weights, Flags, and Composite Variables**

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## Weights

Cross-sectional analysis of second follow-up transcript data requires that the F2TRSCWT weight variable be applied. This variable is included on the transcript component student file. Panel analyses with either the 1988 to 1992 or 1990 to 1992 sample members require the use of the transcript panel weights, F2TRP1WT and F2TRP2WT. Other longitudinal analyses and analyses using the transcript file with multiple sources of student data may require use of the F1QWT or F2QWT questionnaire weights, the F2CXTWT contextual sample weight, or the F2F1PNWT or F2PNLWT panel weights. These weights are included not on transcript files, but on the appropriate first or second follow-up privileged use student component data file. Suggestions for selecting weights for use with transcript data appear in section 6.1 of this manual. A detailed discussion of second follow-up weighting procedures appears in Chapter III.

## Panel, Sample, and Cohort Flags

The following indicators, included on the transcript component student file and the student component data file, are to be used in conjunction with the NELS:88 sample weights. The stem of the variable name for the flag and for its corresponding statistical weight on student component data files are the same.

**F2RWTST** Indicates the sample member's second follow-up weighting enrollment status, real or imputed, used in calculating second follow-up weights, including F2TRSCWT. This variables must be used in conjunction with F2TRSCWT to identify the proper weighting status of each sample member in the transcript study.

- 1 = The sample member was eligible for the second follow-up survey and was enrolled in school in the twelfth grade in 1992.
- 2 = The sample member was eligible for the second follow-up and was enrolled in school, but not in the twelfth grade in 1992.
- 3 = The sample member was eligible for the second follow-up and was a dropout or alternative completer in 1992.
- 4 = The sample member was ineligible for the second follow-up or was out-of-scope for the second follow-up.

**F2BYF1PN** Indicates whether or not sample member on second follow-up file is part of the base year/first follow-up panel sample (1988 to 1990 longitudinal panel).

- 0 = Sample member is NOT a member of the BY to F1 panel (did not complete a BY student questionnaire AND a F1 student or dropout questionnaire).
- 1 = Sample member is a member of the BY to F1 panel (completed a BY student questionnaire AND a F1 student or dropout questionnaire).

**F2F1PNFL** Indicates whether or not sample member on second follow-up file is a member of the first follow-up/second follow-up panel sample (1990 to 1992 longitudinal Panel).

0 = Sample member is NOT a member of the first follow-up/second follow-up panel (did not complete BOTH a F1 questionnaire AND a F2 questionnaire).

1 = Sample member is a member of the F1 to F2 panel, but NOT a member of the sophomore panel (was NOT enrolled in the tenth grade in the spring of 1990, BUT completed a F1 student or dropout questionnaire and F2 student or dropout questionnaire).

2 = Sample member is a member of the F1 to F2 panel, AND a member of the sophomore panel (was enrolled in the tenth grade in the spring of 1990 and completed a F1 student questionnaire AND a F2 student or dropout questionnaire).

**F2PNLFLG** Indicates whether or not sample member on second follow-up file is a member of the base year/first follow-up/second follow-up panel sample (participated in all three waves of NELS:88: 1988, 1990, and 1992).

0 = Sample member is NOT a member of the BY-F1-F2 panel sample (did not complete a questionnaire in all three rounds of NELS:88).

1 = Sample member is a member of the BY-F1-F2 panel sample (completed a base year student questionnaire AND a F1 student or dropout questionnaire AND a F2 student or dropout questionnaire).

**F2CXTFGL** Indicates whether or not sample member is member of the contextual components sample.

0 = Sample member is NOT a member of the contextual components sample.

1 = Sample member is a member of the contextual components sample AND completed a second follow-up student questionnaire.

2 = Sample member is a member of the contextual components sample BUT did NOT complete a second follow-up student questionnaire.

The following flags identify everyone on the tape regardless of participation in the dropout or student survey.

**G8COHORT** Indicates whether or not sample member is a member of the 8th-grade cohort (whether or not s/he was enrolled in the 8th grade during the 1987-88 school year)

0 = Sample member is NOT a member of the 8th-grade cohort (was not enrolled in 8th grade in the spring of 1988, i.e., first follow-up and second follow-up freshened sample members).

- 1 = Sample member is a "survey" eligible member of the 8th-grade cohort (was enrolled in school in the 8th grade in the spring of 1988 and eligible to complete a NELS:88 base year student questionnaire).
- 3 = Sample member is a "survey" ineligible member of the 8th-grade cohort (was enrolled in 8th grade in the spring of 1988 but was excluded from the study owing to a mental or physical disability or language barrier to participation).

**G10COHRT** Indicates whether or not sample member is a member of the 10th-grade cohort (whether or not s/he was enrolled in the 10th grade during the 1989-90 school year)

- 0 = Sample member is NOT a member of the 10th-grade cohort (was not enrolled in the 10th grade in the spring of 1990, i.e., second follow-up freshened sample members, dropouts, sample members who are out of the modal grade sequence, deceased sample members, and other than first follow-up freshened out-of-USA sample members).
- 1 = Sample member is a member of the spring-defined 10th-grade cohort (was enrolled in school in the 10th grade in the spring of 1990 and eligible to complete a NELS:88 first follow-up student questionnaire).
- 2 = Sample member is a member of the fall-defined ONLY 10th-grade cohort (first follow-up freshened student who was enrolled in school in the 10th grade in the fall of 1989, but dropped out by spring of 1990). **These cases do NOT appear on the public use data files.**
- 3 = Sample member is a "survey" ineligible member of the 10th-grade cohort (was enrolled in 10th grade in the spring of 1990 but was excluded from the study owing to a mental or physical disability or language barrier to participation OR was a first follow-up freshened student who moved out of the USA by spring of 1990).

**G12COHRT** Indicates whether or not sample member is a member of the 12th-grade cohort (whether or not s/he was enrolled in the 12th grade during the 1991-92 school year)

- 0 = Sample member is NOT a member of the 12th-grade cohort (was not enrolled in the 12th grade in the spring of 1992, i.e., dropouts, sample members who are out of the modal grade sequence, deceased sample members, unlocatables, and other than second follow-up freshened out-of-country sample members).



- 1 = Sample member is a member of the spring-defined 12th-grade cohort (was enrolled in school in the 12th grade in the spring of 1992 and eligible to complete a NELS:88 second follow-up student questionnaire).
- 2 = Sample member is a member of the fall-defined ONLY 12th-grade cohort (second follow-up freshened student who was enrolled in school in the 12th grade in the fall of 1991, but dropped out by spring of 1992). **These cases do NOT appear on the public use data files.**
- 3 = Sample member is a "survey" ineligible member of the 12th-grade cohort (was enrolled in 12th grade in the spring of 1992 but was excluded from the study owing to a mental or physical disability or language barrier to participation OR was a second follow-up freshened student who moved out of the USA by the spring of 1992).

**F2TRP1FL** Indicates whether or not sample member on second follow-up file is a member of the base year/first follow-up/second follow-up panel sample (participated in all three waves of NELS:88: 1988, 1990, and 1992) for whom transcript data are also available.

- 0 = Sample member is either not in the 1988 to 1992 panel or a transcript was not collected.
- 1 = Sample member is in the 1988 to 1992 panel and a transcript was collected.

**F2TRP2FL** Indicates whether or not sample member on second follow-up file is a member of the first follow-up to second follow-up panel sample (participated in first and second follow-up waves of NELS:88: 1990 and 1992) for whom transcript data are also available.

- 0 = Sample member is either not in the 1990 to 1992 panel or a transcript was not collected.
- 1 = Sample member is in the 1990 to 1992 panel, a transcript was collected, but the sample member was not in the tenth grade in 1990.
- 2 = Sample member is in the 1990 to 1992 panel, a transcript was collected, and the sample member was in the tenth grade in 1990.

### Flags Constructed from Transcript Data

The following four flags may be used to identify sample members for whom data for a particular grade level are present in the course file. By using all four flags, the analyst can identify those sample members for whom complete high school course-taking histories are available.

- F2RTR09** Indicates whether ninth-grade transcript data are available.
- 0 = No ninth-grade course records appear in the course file.
  - 1 = At least one ninth-grade course record appears in the course file.
- F2RTR10** Indicates whether tenth-grade transcript data are available.
- 0 = No tenth-grade course records appear in the course file.
  - 1 = At least one tenth-grade course record appears in the course file.
- F2RTR11** Indicates whether eleventh-grade transcript data are available.
- 0 = No eleventh-grade course records appear in the course file.
  - 1 = At least one eleventh-grade course record appears in the course file.
- F2RTR12** Indicates whether twelfth-grade transcript data are available.
- 0 = No twelfth-grade course records appear in the course file.
  - 1 = At least one twelfth-grade course record appears in the course file.

### Flags from Non-Transcript Data Sources

The following flags indicate the completion or not of specified documents. A value of 1 or 2 specifies that the document was completed, 0 that it was not.

- F2BYQFLG** Indicates whether or not sample member completed a base year student questionnaire.
- 0 = Sample member did not complete a BY student questionnaire.
  - 1 = Sample member completed a BY student questionnaire.
- F2F1QFLG** Indicates whether or not sample member completed a first follow-up student or dropout questionnaire.
- 0 = Sample member did not complete a F1 questionnaire.
  - 1 = Sample member completed a F1 student questionnaire.
  - 2 = Sample member completed a F1 dropout questionnaire.
- F2QFLG** Indicates whether or not sample member completed a second follow-up student or dropout questionnaire.
- 0 = Sample member did not complete a F2 questionnaire.
  - 1 = Sample member completed a F2 student questionnaire.
  - 2 = Sample member completed a F2 dropout questionnaire.

This variable can also serve as a **participation flag**. If the value of F2QFLG is greater than 0, then the sample member is a second follow-up participant. If the value of F2QFLG is 0, then the sample member is a second follow-up non-participant.

**F2BYTXFL** Indicates whether or not sample member completed a base year cognitive test.

- 0 = Sample member did NOT complete a base year cognitive test.
- 1 = Sample member completed a base year cognitive test.

**F2F1TXFL** Indicates whether or not sample member completed a first follow-up cognitive test.

- 0 = Sample member did NOT complete a first follow-up cognitive test.
- 1 = Sample member completed a first follow-up cognitive test.

**F2TXFLG** Indicates whether or not sample member completed a second follow-up cognitive test.

- 0 = Sample member did NOT complete a second follow-up cognitive test.
- 1 = Sample member completed a second follow-up cognitive test.

**F2NSSFLG** Indicates whether or not sample member completed a second follow-up New Student Supplement (is new F2 freshened student or did not complete a BY student questionnaire or a F1 NSS).

- 0 = Sample member did NOT complete a second follow-up New Student Supplement.
- 1 = Sample member completed a second follow-up New Student Supplement (if s/he is a second follow-up freshened student or did not complete either a base year student questionnaire or first follow-up NSS).

**F2F1STAT** Indicates final status in the first follow-up.

- 00 = Sample member participated.
- 01 = Other reasons, non-respondent.
- 02 = Sample member unlocatable.
- 03 = Sample member or parent refusal.
- 04 = Sample member is ineligible for survey owing to language barrier, or mental or physical disability.
- 05 = Sample member is out of USA in this round.
- 98 = Missing (second follow-up freshened student, etc.)

**F2STAT** Indicates final status in the second follow-up.

- 00 = Sample member participated.
- 01 = Other reasons, non-respondent.
- 02 = Sample member unlocatable.
- 03 = Sample member or parent refusal.
- 04 = Sample member is ineligible for survey owing to language barrier, or mental or physical disability.
- 05 = Sample member is out of USA in this round.
- 06 = Sample member is deceased.

**F2FIDOST** Indicates enrollment status, either dropout or student, as of the first follow-up ONLY. Also permits identification of dropouts according to the NELS:88 first follow-up definition of a dropout (i.e., dropouts only: use values 4 and 5).

- 00 = student (sample member was not a school dropout or a stopout in the first follow-up)
- 01 = enrollment status was not determined (includes out-of-country, deceased, and enrollment status unknown cases)
- 02 = stopout (sample member dropped out of school at one time in first follow-up, but subsequently returned to school)
- 03 = homestudy student
- 04 = dropout--school confirmed (sample member was reported by the school to be a dropout but status was not also confirmed by sample member and/or family).
- 05 = dropout--doubled confirmed (sample member dropped out of school--confirmed by sample member and/or family).
- 06 = Not applicable--F2 freshened student

**F2DOSTAT** Indicates enrollment status, either dropout or student, as of the second follow-up ONLY. Also permits identification of dropouts according to either the NELS:88 first follow-up definition of a dropout (i.e., dropouts only: use values 4 and 5) and the HS&B/NELS:88 second follow-up definition of a dropout (i.e., dropouts plus alternative completers: use values 3, 4, and 5).

- 0 = student (sample member was not a school dropout or a stopout in the second follow-up)
- 1 = enrollment status was not determined (includes out-of-country, deceased, and enrollment status unknown cases)
- 2 = stopout (sample member dropped out of school at one time in second follow-up, but subsequently returned to school)

- 3 = alternative completer (enrolled in or completed an alternative non-diploma program [e.g., GED test preparation classes, or passed GED test or received other alternative certification])
- 4 = dropout--school confirmed (sample member was reported by the school to be a dropout but status was not also confirmed by sample member and/or family).
- 5 = dropout--doubled confirmed (sample member dropped out of school--confirmed by sample member and/or family).

## Classificatory Composite Variables

A number of composite variables have been included on the transcript component student file. Some variables, such as sample member socioeconomic status and cognitive test scores and quartiles, have been copied from the student component data files; inclusion of these variables on the transcript file permits the analyst to conduct analyses without merging the transcript data files with the student component files. Other variables, including the subject area summary composite variables, aggregate course data by sample member and CSSC code, providing measures of course-taking in specific subject areas. These variables are addressed in a subsequent section.

**Socioeconomic Status.** The second follow-up files contain three versions of a continuous variable, "F2SES-", that indicates the sample member's socioeconomic status. F2SES1 was derived from the BY parent questionnaire data, the BY student questionnaire data, or the first follow-up or second follow-up New Student Supplement data. F2SES1 appears on all second follow-up student component files (tape and CD-ROM) and on the transcript component student file. Another pair of socioeconomic status indicators, F2SES2 and F2SES3, appear on the final second follow-up parent component files, but not on the transcript component file, and are constructed with second follow-up parent questionnaire data. F2SES3 incorporates the 1989 revision<sup>1</sup> of the Duncan Socioeconomic Index (SEI),<sup>2</sup> whereas F2SES1 and F2SES2 utilize the version that was used in NLS-72, HS&B, and the base year and first follow-up of NELS:88. (Note that one value in the scale was transposed in earlier composites and has been corrected in the present version of F2SES1).

**F2SES1** Continuous variable indicating sample member's socioeconomic status. F2SES1 was constructed using base year parent questionnaire data, when available. The following parent data were used: father's education level, mother's education level, father's occupation, mother's occupation, and family income (data coming from BYP30, BYP31, BYP34B, BYP37B and BYP80). Education-level data were recoded according to the definition of BYPARED (with the exception of category "7", which was recoded as missing for F2SES1 calculations). Occupational data were recoded using the Duncan SEI, as used in NLS-72, HS&B, and earlier NELS:88 socioeconomic status variables as

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<sup>1</sup> Nakao, K. and Treas, J., *The 1989 Socioeconomic Index of Occupations: Construction from the 1989 Occupational Prestige Scores*; General Social Survey Methodological Report No. 74, Chicago: NORC, 1992.

<sup>2</sup> Duncan, O.D., "A Socioeconomic Index for All Occupations," in *Occupations and Social Status*, A.J. Reiss et al., eds.; New York: Free Press, 1961.

indicated below. Parent data were used to construct F2SES1 if at least one component was not missing.

If all parent data components were missing, the following base year student questionnaire items were used to calculate F2SES1 for base year respondents: father's educational level (BYS34A), mother's educational level (BYS34B), father's occupation (BYS7B), mother's occupation (BYS4B) and presence of household items (BYS35A-P). For base year non-respondents and first or second follow-up freshened students, the equivalent New Student Supplement items were used (F1N20A or F2N8A, F1N20B or F2N8B, F1N7B or F2N7, F1N5B or F2N5 and F1N21A-P or F2N12A-P respectively). The first four components from the base year student/NSS data are the same as the components from the base year parent data (i.e., educational-level data, BY34A/F1N20A/F2N8A and BY34B/F1N20B/F2N8B, similarly recoded; occupational data, BY4B/F1N7B/F2N7 and BY7B/F1N5B/F2N5 of student data, also recoded). The fifth component for F2SES1 from the student data was derived by summing the non-missing household items listed in BY35A-P or in F1N21A-P/F2N12A-P (after recoding "Not Have Item" from "2" to "0"), calculating a simple mean of these items, and then standardizing this mean. If eight or more BY35A-P or F1N21A-P/F2N12A-P were nonmissing, this component was computed; otherwise it was set to missing.

Each nonmissing component (after any necessary recoding) was standardized to a mean of 0 and a standard deviation of 1. Nonmissing standardized components were averaged yielding the F2SES1 composite.

| <u>Response code</u> | <u>Duncan's SEI</u> | <u>Label</u>              |
|----------------------|---------------------|---------------------------|
| 01                   | 56.58               | Clerical                  |
| 02                   | 27.41               | Craftsperson              |
| 03                   | 28.00               | Farmer                    |
| 04                   |                     | Homemaker/Housewife       |
| 05                   | 7.33                | Laborer                   |
| 06                   | 67.73               | Manager/Administrator     |
| 07                   |                     | Military                  |
| 08                   | 19.18               | Operative                 |
| 09                   | 70.21               | Professional (accountant) |
| 10                   | 70.21               | Professional (MD, lawyer) |
| 11                   | 49.70               | Proprietor/Owner          |
| 12                   | 38.00               | Protective service        |
| 13                   | 54.42               | Sales                     |
| 14                   | 70.21               | School teacher            |
| 15                   | 15.90               | Service                   |
| 16                   | 61.40               | Technical                 |
| 17                   |                     | Never worked              |
| 18                   |                     | Other                     |
| 19                   |                     | Missing                   |

Finally, minor errors in the construction of this variable and released on first follow-up files as "F1SES" have been corrected in this release. Changes apply to the quartile F2SES1Q (below) as well.

**F2SES1Q** Indicates the quartile into which F2SES1 falls. It is constructed by recoding F2SES1 into quartiles based on the weighted (with F2QWT) marginal distribution.

- 1 = Quartile 1 Low
- 2 = Quartile 2
- 3 = Quartile 3
- 4 = Quartile 4 High
- 8 = Missing

Base year (F2BYSES1 and F2BYSESQ) and corrected first follow-up (F2F1SES1 and F2F1SESQ) versions of these variables have also been included on the transcript component student file.

**F2SEX** Most complete indicator of sample member's gender. For the BYI sample and for BY dropouts, F1SEX was created with first follow-up New Student Supplement data (in F1N2) or with information on NORC's survey management systems. For all samples, F2SEX is based on the first follow-up (F1SEX) composite and is augmented by second follow-up New Student Supplement information (in F2N2) if appropriate or, if still missing, imputation from student first names.

- 1 = Male
- 2 = Female

**F2RACE1** Indicates student's "best known" race. For the BYI sample and BY dropouts, F1RACE was created with data from the first follow-up New Student Supplement (in F1N8A) or from information in NORC's survey management systems. For all samples, F2RACE1 is based on F1RACE and is supplemented when appropriate with second follow-up New Student Supplement data (in F2N17). If F2RACE1 was still missing, available information from NORC's survey management systems was used to fill in missing values.

- 1 = Asian, Pacific Islander
- 2 = Hispanic
- 3 = Black, not Hispanic
- 4 = White, not Hispanic
- 5 = American Indian, Alaskan native
- 8 = Missing

**F2HSPROG** Indicates the sample member's high school program, as reported by the respondent. The source is the second follow-up student questionnaire item 12A (F2S12A) or the second follow-up dropout questionnaire item 20 (F2D20).

- 00 = Never attended high school
- 01 = General high school program
- 02 = Academic/College prep program
- 03 = Vocational/Technical program
- 04 = Other specialized high school program
- 05 = Special education program
- 06 = Alternative/Dropout prevention program
- 07 = Don't know
- 08 = Missing

**School-Level Composites.** School-level composites are based on the school, rather than the sample member. Composites with the prefix "TRN" reference the last school attended by the sample member according to transcript data. It is useful to recall that, although the modal grade for the cohort is grade 12 in the second follow-up, not all sample members were seniors in the spring of 1992.

**G8CTRL2** Classifies the sample members first follow-up school type into public, Catholic, private NAIS, and other private-not NAIS, as obtained from Quality Education Data (QED) and membership lists provided by the National Association of Independent Schools. This variable appears only on restricted-use files.

- 01 = Public school
- 02 = Catholic school
- 03 = NAIS school
- 04 = Other private school - not NAIS or Catholic
- 98 = Missing (first and second follow-up freshened students)

**G10CTRL2** Classifies the sample members first follow-up school type into public, Catholic, private NAIS, and other private-not NAIS, as obtained from Quality Education Data (QED) and membership lists provided by the National Association of Independent Schools. This variable appears only on restricted-use files.

- 01 = Public school
- 02 = Catholic school
- 03 = NAIS school
- 04 = Other private school - not NAIS or Catholic
- 05 = Non-traditional
- 06 = Not enrolled
- 98 = Missing (includes out-of-country, deceased, and enrollment status unknown cases)

**TRNCTRL2** Classifies the last school attended by the sample member--according to transcript data--by school type (public, Catholic, private NAIS, and other private-not NAIS) as obtained from Quality Education Data (QED) and membership lists provided by the National Association of Independent Schools. This variable appears only on restricted-use files.

- 01 = Public school
- 02 = Catholic school
- 03 = NAIS school
- 04 = Other private school - not NAIS or Catholic
- 98 = Missing

**G8URBN3** Trichotomizes the urbanicity of the area in which the sample member's base year school is located. This metropolitan status is defined by QED for public school districts, for Catholic dioceses, or in some cases for the county in which the school is located. QED bases the classifications on the Federal Information Processing Standards as used by the U.S. Census.

- 1 = Urban--central city



- 2 = Suburban--area surrounding a central city within a county constituting the MSA
- 3 = Rural--outside MSA
- 8 = Missing (first and second follow-up freshened students)

**G10URBN3** Trichotomizes the urbanicity of the area in which the sample member's first follow-up school is located. This metropolitan status is defined by QED for public school districts, for Catholic dioceses, or in some cases for the county in which the school is located. QED bases the classifications on the Federal Information Processing Standards as used by the U.S. Census.

- 1 = Urban--central city
- 2 = Suburban--area surrounding a central city within a county constituting the MSA
- 3 = Rural--outside MSA
- 4 = Not enrolled in any school or not enrolled in a traditional diploma-granting school (dropouts and alternative completers)
- 8 = Missing (includes second follow-up freshened students, out-of-country, deceased, and enrollment status unknown cases)

**TRNURBN3** Trichotomizes the urbanicity of the area in which the last school attended by the sample member--according to transcript data--is located. This metropolitan status is defined by QED for public school districts, for Catholic dioceses, or in some cases for the county in which the school is located. QED bases the classifications on the Federal Information Processing Standards as used by the U.S. Census.

- 1 = Urban--central city
- 2 = Suburban--area surrounding a central city within a county constituting the MSA
- 3 = Rural--outside MSA
- 8 = Missing

**G8REGION** Indicates in which of the four US Census regions the sample member's base year school is located, created by collapsing the categories of the school state.

- 01 = Northeast--New England and Middle Atlantic states
- 02 = Midwest--East North Central and West North Central states
- 03 = South--South Atlantic, East South Central and West South Central states
- 04 = West--Mountain and Pacific states

**G10REGION** Indicates in which of the four US Census regions the sample member's first follow-up school is located, created by collapsing the categories of the school state.

- 01 = Northeast--New England and Middle Atlantic states
- 02 = Midwest--East North Central and West North Central states
- 03 = South--South Atlantic, East South Central and West South Central states
- 04 = West--Mountain and Pacific states
- 05 = Not enrolled in any school or not enrolled in a traditional diploma-granting school (dropouts and alternative completers)

98 = Missing (includes out-of-country, deceased, and enrollment status unknown cases)

**TRNREGION** Indicates in which of the four US Census regions the school last attended by the sample member--according to transcript data--is located, created by collapsing the categories of the school state.

01 = Northeast--New England and Middle Atlantic states  
02 = Midwest--East North Central and West North Central states  
03 = South--South Atlantic, East South Central and West South Central states  
04 = West--Mountain and Pacific states  
98 = Missing

**TRNSTATE** Indicates the state of the last school attended by the sample member according to transcript data. The values for this variable are the standard two-column Postal Office state abbreviations. This variable appears only on restricted-use files.

**Universe Variables.** These five variables have been constructed to show the status of each sample member in every wave of NELS:88.

**F2UNIV1** Indicates simultaneously the base year, first follow-up and second follow-up situation of every student sample member ever in the study. This variable has 107 valid values that account for every pattern encountered in NELS:88. Note however that not all cases are delivered on the files in every component, so there will be gaps in the range of codes displayed in the codebook and on different files. Value labels in the codebooks begin with BY status, followed by F1 and then F2 status. SAS and SPSS-X value labels follow the same sequence but are, of necessity, much shorter. The following abbreviations were developed for the SAS and SPSS-X cards:

BY = Base year  
F1 = First follow-up  
F2 = Second follow-up  
I = Ineligible for questionnaire administration (mental/physical disability, language barrier)  
A = In-school, in-grade  
B = In-school, out-of-grade  
DO = Dropout  
E = Eligible for questionnaire administration  
FR = Freshened  
NA = Not Applicable (not yet "freshened" into the sample)  
X = Out-of-scope (deceased, out-of-USA)  
? = Status unknown

**F2UNIV2A** Indicates how the student sample member entered the sample.

1 = Base year eligible  
2 = Base year ineligible for questionnaire administration (mental/physical disability, language barrier)  
3 = F1 freshened

4 = F2 freshened

**F2UNIV2B** Indicates base year status of sample member.

0 = Freshened in first or second follow-up, not yet in study  
1 = In school, in grade  
4 = Ineligible for BY questionnaire administration  
(mental/physical disability, language barrier)

**F2UNIV2C** Indicates first follow-up status of sample member.

0 = Freshened in second follow-up, not yet in study  
1 = In school, in grade  
2 = In school, out of grade  
3 = Dropout  
4 = Ineligible for F1 questionnaire administration (mental/physical disability,  
language barrier)  
5 = Out of scope (deceased, out of USA in this round)  
6 = Status unknown in this round

**F2UNIV2D** Indicates second follow-up status of sample member.

1 = In school, in grade  
2 = In school, out of grade  
3 = Dropout  
4 = Ineligible for F2 questionnaire administration (mental/physical disability,  
language barrier)  
5 = Out of scope (deceased, out of USA in this round)  
6 = Status unknown in this round

## Cognitive Test Results

In each survey wave, the cognitive test battery consisted of multiple choice tests in four subject areas: reading comprehension, mathematics, science, and history/citizenship/geography. The following revised base year, first follow-up, and second follow-up cognitive test variables are included on the transcript component student file. (See the second follow-up student component data file user's manual for detailed information on test forms and scoring.)

**F2BY2XCO** Revised base year standardized test composite (reading, math)  
**F2BY2XQU** Revised base year standardized test quartile (1=low)  
**F2F12XCO** Revised first follow-up standardized test composite (reading, math)  
**F2F12XQU** Revised first follow-up standardized test quartile (1=low)  
**F22XCOMP** Revised second follow-up standardized test composite (reading, math)  
**F22XQURT** Revised second follow-up standardized test quartile (1=low)

## Transcript Composite Variables

The following composite variables were constructed from student and course level transcript data and have been included on the transcript component student file to facilitate analyses.

**F2RTROUT** Indicates the sample member's educational outcome, as reported by the school on the sample member's transcript. This variable was constructed from F2RREASL, F2RDTLMO, and F2RDTLYR. Because precise graduation date data are sometimes missing, there are more "status unknown" cases in F2RTROUT than in F2RREASL.

- 01 = Spring 1992 graduate (graduated between April 1 and June 30, 1992)
- 02 = Other 1992 graduate
- 03 = Pre-1992 graduate
- 04 = Diploma with special education adjustments
- 05 = Certificate of attendance
- 06 = Still enrolled in school
- 07 = Dropped out
- 08 = Transferred
- 09 = Aged out
- 10 = Died
- 11 = Left for health-related reason
- 12 = Received GED
- 13 = Other
- 14 = Status cannot be determined

**F2TRSTYP** When the same or very similar information is collected from multiple sources, apparent or real contradictions can arise. With the NELS:88 second follow-up, apparent contradictions arise between transcript and survey data because of the lack of a common anchor in time for asking about enrollment status. Schools were surveyed at any time from the beginning to the end of the 1991-92 school year spring term, but transcripts were collected in the subsequent (1992-93) school year.

For example, a student may have been out of school for twenty or more consecutive days as of survey day but may have returned to school prior to the end of the spring term. Survey records (as reflected in F2DOSTAT) would characterize the sample member as a dropout, but school records (as reflected in F2RTROUT) might characterize this individual as a student. Or, a sample member may have been surveyed as a student (say in January or February) but have subsequently dropped out (say in March or April). Survey records would classify this individual as a student, but the transcript would indicate a dropout. A further source of apparent contradictions between survey and records data is difference in definition of a dropout. Survey records classify individuals with twenty or more consecutive unexcused absences as dropouts, but schools were not constrained to the same definition. While contradictions between survey and transcript reports of enrollment status are typically only apparent, genuinely contradictory reports sometimes arise as well.

A special dropout status enrollment indicator, F2TRSTYP, has been created to serve several purposes. First, F2TRSTYP alerts data users to inconsistencies between survey and school records sources. In addition, it comprehensively categorizes the contradictions that arise. This permits users to see which contradictions are merely apparent, and which are real, and to develop sensible strategies for

dealing with the latter.<sup>3</sup> **F2TRSTYP** appears only on the student and transcript component data files.

Four enrollment status indices were used in the construction of F2TRSTYP, one transcript-derived enrollment status indicator, F2RTROUT<sup>4</sup>, and three survey-derived enrollment status indicators, F2DOSTAT<sup>5</sup>, F2RWTST<sup>6</sup>, and F2QFLG<sup>7</sup>. Two additional transcript variables, F2RDTLMO (month student left school) and F2RDTLYR (year student left school), were also employed to assess whether the classification of "dropout" on the transcript variable, F2RTROUT, pertained to sample members whose records indicate they dropped out before or during the spring of 1992 or after the spring of 1992. Cases with a value of "dropout" on F2RTROUT *and* a date of after June 1992 on F2RDTLMO and F2RDTLYR, were recoded to the F2TRSTYP category "T-S" which indicates that, according to transcript records, sample members were students. This additional cleaning was done to preserve the study's status definition of a dropout, that is, a sample member who was not enrolled in school in the spring term of the 1991-1992 school year.<sup>8</sup>

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<sup>3</sup> While the purpose of F2TRSTYP is to illuminate any inconsistencies between different sources of the enrollment status of sample members, more than 95 percent of the cases on the second follow-up student files do have identical enrollment status across all sources.

<sup>4</sup> There are actually two transcript derived enrollment indicators, F2RTROUT and F2REASL. F2RTROUT indicates sample members' education outcome, as reported by the school on the sample members' transcript. F2REASL indicates the reason sample members left school, if at all, as reported by the school on the sample members' transcripts. F2RTROUT was constructed from F2REASL. The two indicators differ in terms of the information they provide about the timing of students' graduation from high school. F2REASL indicates only that students graduated from high school while F2RTROUT provides information on whether they are a "spring 1992 graduate" or an "other 1992 graduate" or are a "pre-1992 graduate". Since this difference does not influence the form inconsistencies might take or the resolution of them, for simplicity of construction, only one transcript-derived indicator, F2RTROUT, was used in the construction of F2TRSTYP.

<sup>5</sup> F2DOSTAT indicates sample member enrollment status, either student or dropout, as of the second follow-up only, according to school officials' or parents' reports, in the case of non-participating sample members, or based on the type of questionnaire sample members completed (either dropout or student), in the case of participating sample members.

<sup>6</sup> F2RWTST indicates, for sample members of unknown enrollment status per the student or dropout survey, the enrollment classification probabilistically assigned to them (i.e., imputed). For sample members of known status based on survey information, F2RWTST reflects their known classification. For purposes of deriving final adjusted student questionnaire and panel weights, enrollment status was imputed for non-survey participating sample members of unknown status. This imputation scheme employed with the student survey and used in adjusting student questionnaire and panel weights was carried over to the transcript component and used in the construction of transcript weights.

<sup>7</sup> F2QFLG indicates whether sample members completed a second follow-up questionnaire and the type of questionnaire they completed (0 = did not complete a second follow-up questionnaire; 1 = completed a second follow-up student questionnaire; 2 = completed a second follow-up dropout questionnaire).

<sup>8</sup> Of course, NELS:88 supports multiple cohort status dropout definitions. In particular, information provided by the study permits researchers to view individuals who have left regular high school diploma programs but are making efforts to prepare for the GED examination or other alternative certification, to be classified as students, to be classified as dropouts, or to be separately categorized. When survey and school records enrollment indicators are compared, however, dropouts may most readily be defined as individuals who have left high school diploma programs, without regard to whether they are receiving an alternative form of instruction. This is the case because the transcript study only sought records data

Comparison among the different sources of enrollment status and other transcript variables rendered a variable with 32 categories. The 32 categories reflect all the different combinations of contradictions that exist between transcript-derived enrollment status indicators and student-derived enrollment status indicators. The 32 categories of F2TRSTYP are listed below.

Each value label for F2TRSTYP is composed of four terms which correspond to the four sources of enrollment status information on which F2TRSTYP reports. The first term of the category value labels represents enrollment status according to the transcript variable F2RTROUT. The second term of the category labels reflects enrollment status according to the survey variable F2DOSTAT. The third and fourth terms of the category labels indicate enrollment status as of the survey-derived variables F2RWTST and F2QFLG, respectively. The abbreviations for the four terms are:

T = the sample member's status as indicated by F2RTROUT  
S = the sample member's status as indicated by F2DOSTAT  
W = the sample member's status as indicated by F2RWTST  
Q = the sample member's status as indicated by F2QFLG

Each of the four terms of F2TRSTYP is followed by a second abbreviation for the enrollment status which the source reports for that sample member:

s = student  
d = dropout  
p = stopout  
t = transfer  
? = unknown  
sq = student questionnaire completer  
dq = dropout questionnaire completer  
nq = did not complete a questionnaire

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from regular high schools, and not from alternative programs, and because high schools in most cases did not know whether dropouts from the school were receiving alternative forms of instruction.

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Table G-1 F2TRSTYP values and meanings

| Values | Value Labels     | Sources of enrollment status information  |           |          |              |
|--------|------------------|---|-----------|----------|--------------|
|        |                  | F2RTROUT:                                 | F2DOSTAT: | F2RWTST: | F2QFLG:      |
| 01     | T-s S-s W-s Q-sq | Student                                   | Student   | Student  | Student quex |
| 02     | T-s S-p W-s Q-sq | Student                                   | Stopout   | Student  | Student quex |
| 03     | T-s S-s W-s Q-nq | Student                                   | Student   | Student  | None         |
| 04     | T-s S-p W-s Q-nq | Student                                   | Stopout   | Student  | None         |
| 05     | T-s S-? W-d Q-nq | Student                                   | Unknown   | Dropout  | None         |
| 06     | T-s S-d W-d Q-sq | Student                                   | Dropout   | Dropout  | Student quex |
| 07     | T-s S-d W-d Q-dq | Student                                   | Dropout   | Dropout  | Dropout quex |
| 08     | T-s S-d W-d Q-nq | Student                                   | Dropout   | Dropout  | None         |
| 09     | T-d S-d W-d Q-sq | Dropout                                   | Dropout   | Dropout  | Student quex |
| 10     | T-d S-d W-d Q-dq | Dropout                                   | Dropout   | Dropout  | Dropout quex |
| 11     | T-d S-d W-d Q-nq | Dropout                                   | Dropout   | Dropout  | None         |
| 12     | T-d S-? W-d Q-nq | Dropout                                   | Unknown   | Dropout  | None         |
| 13     | T-d S-s W-s Q-sq | Dropout                                   | Student   | Student  | Student quex |
| 14     | T-d S-p W-s Q-sq | Dropout                                   | Stopout   | Student  | Student quex |
| 15     | T-d S-s W-s Q-nq | Dropout                                   | Student   | Student  | None         |
| 16     | T-d S-p W-s Q-nq | Dropout                                   | Stopout   | Student  | None         |
| 17     | T-t S-s W-s Q-sq | Transfer                                  | Student   | Student  | Student quex |
| 18     | T-t S-p W-s Q-sq | Transfer                                  | Stopout   | Student  | Student quex |
| 19     | T-t S-s W-s Q-nq | Transfer                                  | Student   | Student  | None         |
| 20     | T-t S-p W-s Q-nq | Transfer                                  | Stopout   | Student  | None         |
| 21     | T-t S-? W-d Q-nq | Transfer                                  | Unknown   | Dropout  | None         |
| 22     | T-t S-d W-d Q-sq | Transfer                                  | Dropout   | Dropout  | Student quex |
| 23     | T-t S-d W-d Q-dq | Transfer                                  | Dropout   | Dropout  | Dropout quex |
| 24     | T-t S-d W-d Q-nq | Transfer                                  | Dropout   | Dropout  | None         |
| 25     | T-? S-s W-s Q-sq | Unknown                                   | Student   | Student  | Student quex |
| 26     | T-? S-p W-s Q-sq | Unknown                                   | Stopout   | Student  | Student quex |
| 27     | T-? S-s W-s Q-nq | Unknown                                   | Student   | Student  | None         |
| 28     | T-? S-p W-s Q-nq | Unknown                                   | Stopout   | Student  | None         |
| 29     | T-? S-? W-d Q-nq | Unknown                                   | Unknown   | Dropout  | None         |
| 30     | T-? S-d W-d Q-sq | Unknown                                   | Dropout   | Dropout  | Student quex |
| 31     | T-? S-d W-d Q-dq | Unknown                                   | Dropout   | Dropout  | Dropout quex |
| 32     | T-? S-d W-d Q-nq | Unknown                                   | Dropout   | Dropout  | None         |
| 33     | NA-NOT IN TRAN   | (Not applicable--not in transcript study) |           |          |              |

Note: On the 7/94 release of the transcript data and in the public and restricted use versions of the second follow-up student data, the labels for values 9 and 10 of F2TRSTYP were reversed and have been corrected in this display of the variable. Value 9 should read: F2RTROUT-drop, F2DOSTAT-drop, F2RWTST-drop, and F2QFLG-stu. Value 10 should read: F2RTROUT-drop, F2DOSTAT-drop, F2RWTST-drop, and F2QFLG-drop.

Using F2TRSTYP, researchers may resolve inconsistencies by reviewing enrollment status reports in light of additional questionnaire and transcript information. While F2TRSTYP gives analysts the information needed to interpret and make their own determinations of how to classify sample members' 1992 spring term enrollment status, in cases of genuine contradiction, some general assumptions about what constitutes the "best source" of data may be defensible. For example, an extremely high degree of credence should be given to cases in which F2DOSTAT indicates that the individual was a dropout and the individual completed a dropout questionnaire. For such cases, dropout status had normally been double-confirmed (the school report was verified by the sample member's family or by the sample member), and, at the time of questionnaire administration, the individual had been available to survey staff who could verify that the dropout questionnaire was the appropriate instrument to administer. On the other hand, status reports from survey data for individuals who were not successfully interviewed may be less certain. Transcript data are generally reliable, although schools did not, for their own records purposes, always use a definition that was consistent with the NELS:88 dropout definition. Finally, the F2RWTST variable is not a very reliable guide to the enrollment status of individual cases. It provides an imputed value for cases with an unknown status. Such imputation is valuable in the aggregate, for improving estimates of dropout rates or for adjusting questionnaire weights, but does not provide definitive status information at the individual level. Further information relevant to 1992 enrollment status has been collected in the NELS:88 third follow-up (1994), and will be available in 1995.

**F2RTRPRG** Indicates the sample member's high school program, as determined from transcript course-taking data. This composite variable is constructed from the NAEP-equivalent subject area summary composite variables.

01 = Rigorous academic track  
F2RENG\_C GE 04.00 and F2RSOC\_C GE 03.00 and F2RSCI\_C GE 03.00 and  
F2RMAT\_C GE 03.00 and F2RCOM\_C GE 00.50 and F2RFOR\_C GE 02.00

02 = Academic track  
(F2RENG\_C + F2RSOC\_C + F2RSCI\_C + F2RMAT\_C) GE 12.00

03 = Vocational track  
F2RVAG\_C GE 03.00 or F2RVBU\_C GE 03.00 or F2RVGN\_C GE 03.00 or  
F2RVHE\_C GE 03.00 or F2RVHO\_C GE 03.00 or F2RVMA\_C GE 03.00 or  
F2RVTE\_C GE 03.00 or F2RVTR\_C GE 03.00

04 = Rigorous academic and vocational  
Criteria for values 01 and 03 met.

05 = Academic and vocational  
Criteria for values 02 and 03, but not 01, met.

06 = None of the above

**Subject Area Summary Composite Variables.** Three groups of composite variables aggregating Carnegie units by sample member and subject area have been constructed from course data and have been included on the transcript component student file. Lists of the CSSC course codes aggregated to create each summary composite variable appear in Appendix H. The first group of variables are comparable to composite variables constructed for analyses conducted for the National Center for Education Statistics



using data from the 1982 High School and Beyond Transcript Study. HS&B-equivalent variables were constructed only for the New Basics subject areas.

|          |  |
|----------|--|
| F2RHEN_C | Total Carnegie units in ENGLISH                                      |
| F2RHMA_C | Total Carnegie units in MATHEMATICS                                  |
| F2RHSC_C | Total Carnegie units in SCIENCE                                      |
| F2RHSO_C | Total Carnegie units in SOCIAL STUDIES                               |
| F2RHCO_C | Total Carnegie units in COMPUTER SCIENCE/PROGRAMMING/DATA PROCESSING |
| F2RHFO_C | Total Carnegie units in FOREIGN LANGUAGES                            |

The average grade for courses in each New Basics subject area was also calculated.

|          |   |
|----------|---|
| F2RHENG2 | Average grade in ENGLISH                                      |
| F2RHMA2  | Average grade in MATHEMATICS                                  |
| F2RHSC2  | Average grade in SCIENCE                                      |
| F2RHSG2  | Average grade in SOCIAL STUDIES                               |
| F2RHCO2  | Average grade in COMPUTER SCIENCE/PROGRAMMING/DATA PROCESSING |
| F2RHFO2  | Average grade in FOREIGN LANGUAGES                            |

The second group of variables are equivalent to a subset of the "stubs" created for the 1987 and 1990 NAEP High School Transcript Studies. NAEP-equivalent variables were constructed for the New Basics subject areas, vocational subject areas, and several lower-order course categories, such as Algebra II and Earth Science.

|          |  |
|----------|--|
| F2RENG_C | Total Carnegie units in ENGLISH                                      |
| F2RFOR_C | Total Carnegie units in FOREIGN LANGUAGES                            |
| F2RMAT_C | Total Carnegie units in MATHEMATICS                                  |
| F2RAL1_C | Total Carnegie units in ALGEBRA I                                    |
| F2RAL2_C | Total Carnegie units in ALGEBRA II                                   |
| F2RGeo_C | Total Carnegie units in GEOMETRY                                     |
| F2RTRI_C | Total Carnegie units in TRIGONOMETRY                                 |
| F2RPRE_C | Total Carnegie units in PRE-CALCULUS                                 |
| F2RCAL_C | Total Carnegie units in CALCULUS                                     |
| F2ROMA_C | Total Carnegie units in OTHER MATHEMATICS COURSES                    |
| F2RSCI_C | Total Carnegie units in SCIENCE                                      |
| F2REAR_C | Total Carnegie units in EARTH SCIENCE                                |
| F2RBIO_C | Total Carnegie units in BIOLOGY                                      |
| F2RCHE_C | Total Carnegie units in CHEMISTRY                                    |
| F2RPHY_C | Total Carnegie units in PHYSICS                                      |
| F2ROSC_C | Total Carnegie units in OTHER SCIENCE COURSES                        |
| F2RSOC_C | Total Carnegie units in SOCIAL STUDIES                               |
| F2RHIS_C | Total Carnegie units in HISTORY                                      |
| F2ROSO_C | Total Carnegie units in OTHER SOCIAL STUDIES COURSES                 |
| F2RCOM_C | Total Carnegie units in COMPUTER SCIENCE/PROGRAMMING/DATA PROCESSING |
| F2RVAG_C | Total Carnegie units in AGRICULTURE                                  |
| F2RVBU_C | Total Carnegie units in BUSINESS                                     |

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|          |   |
|----------|---|
| F2RVGN_C | Total Carnegie units in GENERAL INTRODUCTORY VOCATIONAL COURSES |
| F2RVHE_C | Total Carnegie units in HEALTH AND HUMAN RESOURCES              |
| F2RVHO_C | Total Carnegie units in VOCATIONAL HOME ECONOMICS               |
| F2RVMA_C | Total Carnegie units in MARKETING AND DISTRIBUTION              |
| F2RVTE_C | Total Carnegie units in TECHNICAL                               |
| F2RVTR_C | Total Carnegie units in TRADE AND INDUSTRY                      |

The taxonomy used to create the HS&B New Basics summary composite variables is more conservative than the NAEP taxonomy. In general, remedial or basic courses (e.g., 270601 Basic Math 1) and seventh- and eighth-grade courses were excluded from the course lists for the HS&B-equivalent composite variables. These courses were included in the lists for the NAEP-equivalent variables. Special education courses were excluded from lists for both groups of variables.

The final group of subject area summary composite variables is the most inclusive of the three. Variables in this group aggregate Carnegie units not according to lists of specific CSSC course codes but by CSSC subject area, corresponding to the first two digits of the CSSC code.

|         |  |
|---------|--|
| F2R01_C | Total Carnegie units in AGRIBUSINESS AND AGRICULTURAL PRODUCTION         |
| F2R02_C | Total Carnegie units in AGRICULTURAL SCIENCES                            |
| F2R03_C | Total Carnegie units in RENEWABLE NATURAL RESOURCES                      |
| F2R04_C | Total Carnegie units in ARCHITECTURE AND ENVIRONMENTAL DESIGN            |
| F2R05_C | Total Carnegie units in AREA AND ETHNIC STUDIES                          |
| F2R06_C | Total Carnegie units in BUSINESS AND MANAGEMENT                          |
| F2R07_C | Total Carnegie units in BUSINESS AND OFFICE                              |
| F2R08_C | Total Carnegie units in MARKETING AND DISTRIBUTION                       |
| F2R09_C | Total Carnegie units in COMMUNICATIONS                                   |
| F2R10_C | Total Carnegie units in COMMUNICATION TECHNOLOGIES                       |
| F2R11_C | Total Carnegie units in COMPUTER AND INFORMATION SCIENCES                |
| F2R12_C | Total Carnegie units in CONSUMER, PERSONAL, AND MISCELLANEOUS SERVICES   |
| F2R13_C | Total Carnegie units in EDUCATION  |
| F2R14_C | Total Carnegie units in ENGINEERING                                      |
| F2R15_C | Total Carnegie units in ENGINEERING AND ENGINEERING-RELATED TECHNOLOGIES |
| F2R16_C | Total Carnegie units in FOREIGN LANGUAGES                                |
| F2R17_C | Total Carnegie units in ALLIED HEALTH                                    |
| F2R18_C | Total Carnegie units in HEALTH SCIENCES                                  |
| F2R19_C | Total Carnegie units in HOME ECONOMICS                                   |
| F2R20_C | Total Carnegie units in VOCATIONAL HOME ECONOMICS                        |
| F2R21_C | Total Carnegie units in INDUSTRIAL ARTS                                  |
| F2R22_C | Total Carnegie units in LAW  |
| F2R23_C | Total Carnegie units in LETTERS  |
| F2R24_C | Total Carnegie units in LIBERAL/GENERAL STUDIES                          |
| F2R25_C | Total Carnegie units in LIBRARY AND ARCHIVAL SCIENCES                    |
| F2R26_C | Total Carnegie units in LIFE SCIENCES                                    |
| F2R27_C | Total Carnegie units in MATHEMATICS                                      |
| F2R28_C | Total Carnegie units in MILITARY SCIENCES                                |

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|         |  |
|---------|--|
| F2R29_C | Total Carnegie units in MILITARY TECHNOLOGIES                        |
| F2R30_C | Total Carnegie units in MULTI/INTERDISCIPLINARY STUDIES              |
| F2R31_C | Total Carnegie units in PARKS AND RECREATION                         |
| F2R32_C | Total Carnegie units in BASIC SKILLS                                 |
| F2R33_C | Total Carnegie units in CITIZENSHIP/CIVIC ACTIVITIES                 |
| F2R34_C | Total Carnegie units in HEALTH-RELATED ACTIVITIES                    |
| F2R35_C | Total Carnegie units in INTERPERSONAL SKILLS                         |
| F2R36_C | Total Carnegie units in LEISURE AND RECREATIONAL ACTIVITIES          |
| F2R37_C | Total Carnegie units in PERSONAL AWARENESS                           |
| F2R38_C | Total Carnegie units in PHILOSOPHY AND RELIGION                      |
| F2R39_C | Total Carnegie units in THEOLOGY                                     |
| F2R40_C | Total Carnegie units in PHYSICAL SCIENCES                            |
| F2R41_C | Total Carnegie units in SCIENCES TECHNOLOGY                          |
| F2R42_C | Total Carnegie units in PSYCHOLOGY                                   |
| F2R43_C | Total Carnegie units in PROTECTIVE SERVICES                          |
| F2R44_C | Total Carnegie units in PUBLIC AFFAIRS                               |
| F2R45_C | Total Carnegie units in SOCIAL SCIENCES                              |
| F2R46_C | Total Carnegie units in CONSTRUCTION TRADES                          |
| F2R47_C | Total Carnegie units in MECHANICS AND REPAIRERS                      |
| F2R48_C | Total Carnegie units in PRECISION PRODUCTION                         |
| F2R49_C | Total Carnegie units in TRANSPORTATION AND MATERIAL MOVING           |
| F2R50_C | Total Carnegie units in VISUAL AND PERFORMING ARTS                   |
| F2R51_C | Total Carnegie units in EXECUTIVE INTERNSHIPS                        |
| F2R54_C | Total Carnegie units in ACADEMIC LIFE SKILLS/FUNCTIONAL CURRICULUM   |
| F2R55_C | Total Carnegie units in VOCATIONAL LIFE SKILLS/FUNCTIONAL CURRICULUM |
| F2R56_C | Total Carnegie units in SUBJECT AREA SERVICES                        |

**New Basics Flags.** The HS&B- and NAEP-equivalent New Basics subject area summary composite variables were used to construct two sets of flags indicating whether the sample member earned a certain minimum number of Carnegie units in the New Basics subject areas. The New Basics composite provides a rough measure of cumulative course taking in the core curriculum, but some caveats should be entered. Summing course work gives little indication of its kind, quality, or level. To give an example from the NAEP-equivalent version of the new basics, one student may have amassed three years of credits in remedial math; another may have three years of math also, but may have completed work in calculus. An English as a Second Language (ESL) student may take three years of English in a given year (for example, ESL writing, ESL reading, and ESL oral skills); such a student is likely to have taken many more than four years of English in high school, but may never have completed advanced literature and composition courses. Not all high schools follow the typical 9-12 grade span structure; a substantial minority of high schools have a 10-12 span. Such schools, however, were nevertheless usually able to provide ninth grade coursetaking reports, so that composites such as the New Basics measures should show but inconsequentially small underreporting biases in their results for students in high schools that begin with the tenth grade.

### HS&B-Equivalent New Basics Flags

**F2RNWB1A** Indicates whether the sample member earned at least four Carnegie units in English, three units in each of social studies, science, and math, two units in foreign language, and half of a unit in computer science.

0 = Failed threshold

1 = Met threshold  
F2RHEN\_C GE 04.00 and F2RHSO\_C GE 03.00 and  
F2RHSC\_C GE 03.00 and F2RHMA\_C GE 03.00 and  
F2RHCO\_C GE 00.50 and F2RHFO\_C GE 02.00

**F2RNWB2A** Indicates whether the sample member earned at least four Carnegie units in English, three units in each of social studies, science, and math, and half of a unit in computer science.

0 = Failed threshold

1 = Met threshold  
F2RHEN\_C GE 04.00 and F2RHSO\_C GE 03.00 and  
F2RHSC\_C GE 03.00 and F2RHMA\_C GE 03.00 and  
F2RHCO\_C GE 00.50

**F2RNWB3A** Indicates whether the sample member earned at least four Carnegie units in English, three units in each of social studies, science, and math, and two units in foreign language.

0 = Failed threshold

1 = Met threshold  
F2RHEN\_C GE 04.00 and F2RHSO\_C GE 03.00 and  
F2RHSC\_C GE 03.00 and F2RHMA\_C GE 03.00 and  
F2RHFO\_C GE 02.00

**F2RNWB4A** Indicates whether the sample member earned at least four Carnegie units in English and three units in each of social studies, science, and math.

0 = Failed threshold

1 = Met threshold  
F2RHEN\_C GE 04.00 and F2RHSO\_C GE 03.00 and  
F2RHSC\_C GE 03.00 and F2RHMA\_C GE 03.00

**F2RNWB5A** Indicates whether the sample member earned at least four Carnegie units in English, three units in social studies, two units in science, two units in math.

0 = Failed threshold

1 = Met threshold  
F2RHEN\_C GE 04.00 and F2RHSO\_C GE 03.00 and  
F2RHSC\_C GE 02.00 and F2RHMA\_C GE 02.00

**NAEP-Equivalent New Basics Flags**

**F2RNWB1B** Indicates whether the sample member earned at least four Carnegie units in English, three units in each of social studies, science, and math, two units in foreign language, and half of a unit in computer science.

0 = Failed threshold

1 = Met threshold  
F2RENG\_C GE 04.00 and F2RSOC\_C GE  
03.00 and F2RSCI\_C GE 03.00 and  
F2RMAT\_C GE 03.00 and F2RCOM\_C GE  
00.50 and F2RFOR\_C GE 02.00

**F2RNWB2B** Indicates whether the sample member earned at least four Carnegie units in English, three units in each of social studies, science, and math, and half of a unit in computer science.

0 = Failed threshold

1 = Met threshold  
F2RENG\_C GE 04.00 and F2RSOC\_C GE 03.00 and  
F2RSCI\_C GE 03.00 and F2RMAT\_C GE 03.00 and  
F2RCOM\_C GE 00.50

**F2RNWB3B** Indicates whether the sample member earned at least four Carnegie units in English, three units in each of social studies, science, and math, and two units in foreign language.

0 = Failed threshold

1 = Met threshold  
F2RENG\_C GE 04.00 and F2RSOC\_C GE 03.00 and  
F2RSCI\_C GE 03.00 and F2RMAT\_C GE 03.00 and  
F2RFOR\_C GE 02.00

**F2RNWB4B** Indicates whether the sample member earned at least four Carnegie units in English and three units in each of social studies, science, and math.

0 = Failed threshold

1 = Met threshold  
F2RENG\_C GE 04.00 and F2RSOC\_C GE 03.00 and  
F2RSCI\_C GE 03.00 and F2RMAT\_C GE 03.00

**F2RNWB5B** Indicates whether the sample member earned at least four Carnegie units in English, three units in social studies, two units in science, two units in math.

0 = Failed threshold

1 = Met threshold  
F2RENG\_C GE 04.00 and F2RSOC\_C GE 03.00 and  
F2RSCI\_C GE 02.00 and F2RMAT\_C GE 02.00

## **Appendix H**

### **Course Content Lists for HS&B and NAEP-Equivalent Subject Area Summary Composite Variables**

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**Lists for NAEP-equivalent variables begin on page H-18.**

## **HS&B-Equivalent Subject Area Summary Composite Variables**

### **F2RHEN\_C Total Carnegie Units in English**

| <b>CSSC CODE</b> | <b>TITLE</b>                            |
|------------------|---|
| 070411           | Business English 1                      |
| 070412           | Business English 2                      |
| 070413           | Business English 3                      |
| 070414           | Business English 4                      |
| 090400           | Journalism (Mass Communications), Other |
| 090411           | Journalism 1                            |
| 090412           | Journalism 2                            |
| 090413           | Journalism 3                            |
| 090421           | Journalism Investigations               |
| 090431           | Literary Magazine                       |
| 230100           | English, Other General                  |
| 230106           | English 1, Below Grade Level            |
| 230107           | English 1                               |
| 230108           | English 1, Honors                       |
| 230109           | English 2, Below Grade Level            |
| 230110           | English 2                               |
| 230111           | English 2, Honors                       |
| 230112           | English 3, Below Grade Level            |
| 230113           | English 3                               |
| 230114           | English 3, Honors                       |
| 230115           | English 4, Below Grade Level            |
| 230116           | English 4                               |
| 230117           | English 4, Honors                       |
| 230118           | World Literature                        |
| 230119           | Renaissance Literature                  |
| 230120           | Romanticism                             |
| 230121           | Realism                                 |
| 230122           | Literature, Contemporary                |
| 230123           | Irish Literature                        |
| 230124           | Russian Literature                      |
| 230125           | Bible as Literature                     |
| 230126           | Mythology and Fable                     |
| 230127           | Drama, Introduction                     |
| 230128           | World Drama                             |
| 230129           | Plays, Modern Survey                    |
| 230130           | Novels                                  |
| 230131           | Short Story                             |
| 230132           | Mysteries                               |
| 230133           | Poetry                                  |



|        |   |
|--------|---|
| 230134 | Rock Poetry                                     |
| 230135 | Humor   |
| 230136 | Biography                                       |
| 230137 | Non Fiction                                     |
| 230138 | Science Fiction                                 |
| 230139 | Themes in Literature                            |
| 230140 | Literature of Human Values                      |
| 230141 | Ethnic Literature                               |
| 230142 | Women in Literature                             |
| 230143 | Sports through Literature                       |
| 230144 | Occult Literature                               |
| 230145 | Protest Literature                              |
| 230146 | Youth and Literature                            |
| 230147 | Heroes  |
| 230148 | Utopias   |
| 230149 | Death   |
| 230150 | Nobel Prize Authors                             |
| 230151 | Seminar on an Author                            |
| 230152 | English, Real Life Problem Solving              |
| 230153 | Reading, Independent Study                      |
| 230154 | Research Technique                              |
| 230155 | Children's Literature & Fantasy                 |
| 230200 | Classics, Other                                 |
| 230211 | Mythological Literature, Greek and Roman        |
| 230300 | Comparative Literature, Other                   |
| 230311 | Comparative Literature                          |
| 230321 | Latin American Authors/Literature               |
| 230400 | Composition, Other                              |
| 230401 | Composition, Expository                         |
| 230402 | Writing Laboratory                              |
| 230403 | Writing About Literature                        |
| 230404 | Vocabulary                                      |
| 230405 | Spelling  |
| 230408 | Grammar 9                                       |
| 230409 | Grammar 10                                      |
| 230410 | Grammar 11                                      |
| 230411 | Grammar 12                                      |
| 230412 | Etymology                                       |
| 230500 | Creative Writing, Other                         |
| 230511 | Creative Writing 10                             |
| 230512 | Creative Writing 11                             |
| 230513 | Creative Writing 12                             |
| 230521 | Creative Writing, Independent Study             |
| 230600 | Linguistics (includes Phonetics, Semantics, and |
| 230611 | Linguistics                                     |
| 230700 | Literature, American, Other                     |
| 230711 | American Literature                             |
| 230721 | Black Literature                                |
| 230731 | American Dream in Literature                    |

|        |                                       |
|--------|---------------------------------------|
| 230741 | Folklore, American                    |
| 230751 | Indian Literature                     |
| 230761 | State Writers                         |
| 230771 | Western Literature                    |
| 230781 | Mexican American Literature           |
| 230800 | Literature, English, Other            |
| 230811 | British Literature Survey             |
| 230821 | Shakespeare                           |
| 230831 | Modern British Writers                |
| 230841 | Victorian Literature                  |
| 230851 | Satire, Modern British                |
| 230861 | Arthurian Legend                      |
| 230871 | Medieval Literature                   |
| 230900 | Rhetoric, Other                       |
| 231000 | Speech, Debate, and Forensics, Other  |
| 231011 | Public Speaking                       |
| 231021 | Speech 1                              |
| 231022 | Speech 2                              |
| 231023 | Speech 3                              |
| 231031 | Debate Practicum Contract             |
| 231100 | Technical and Business Writing, Other |
| 231111 | Technical English                     |
| 231215 | Speed Reading                         |
| 231216 | Advanced Reading & Study Skills       |
| 239900 | Letters, Other                        |

**F2RHMA\_C Total Carnegie Units in Mathematics**

| CSSC CODE | TITLE                           |
|-----------|---------------------------------|
| 010151    | Agricultural Mathematics        |
| 070171    | Business Mathematics 1          |
| 070172    | Business Mathematics 2          |
| 070221    | Financial Mathematics           |
| 110121    | Computer Mathematics 1          |
| 110122    | Computer Mathematics 2          |
| 170651    | Nurse's Mathematics             |
| 270100    | Mathematics, Other General      |
| 270106    | Mathematics 1, General          |
| 270107    | Mathematics 2, General          |
| 270108    | Science Mathematics             |
| 270109    | Mathematics in the Arts         |
| 270110    | Mathematics, Vocational         |
| 270111    | Technical Mathematics           |
| 270114    | Consumer Mathematics            |
| 270200    | Actuarial Sciences, Other       |
| 270300    | Applied Mathematics, Other      |
| 270400    | Pure Mathematics, Other         |
| 270401    | Pre-Algebra                     |
| 270402    | Algebra 1, Part 1               |
| 270403    | Algebra 1, Part 2               |
| 270404    | Algebra 1                       |
| 270405    | Algebra 2                       |
| 270406    | Geometry, Plane                 |
| 270407    | Geometry, Solid                 |
| 270408    | Geometry, Plane and Solid       |
| 270409    | Geometry, Informal              |
| 270410    | Algebra 3                       |
| 270411    | Trigonometry                    |
| 270412    | Analytic Geometry               |
| 270413    | Trigonometry and Solid Geometry |
| 270414    | Algebra and Trigonometry        |
| 270415    | Algebra and Analytic Geometry   |
| 270416    | Analysis, Introductory          |
| 270417    | Linear Algebra                  |
| 270418    | Calculus and Analytic Geometry  |
| 270419    | Calculus                        |
| 270420    | Calculus, Advanced Placement    |
| 270421    | Mathematics 1, Unified          |
| 270422    | Mathematics 2, Unified          |
| 270423    | Mathematics 3, Unified          |
| 270424    | Mathematics, Independent Study  |
| 270500    | Statistics, Other               |

|        |                            |
|--------|----------------------------|
| 270511 | Statistics                 |
| 270521 | Probability                |
| 270531 | Probability and Statistics |
| 279900 | Mathematics, Other         |

**F2RHSC\_C Total Carnegie Units in Science**

| CSSC CODE | TITLE   |
|-----------|---|
| 260100    | Biology, Other General                                |
| 260121    | Biology, Basic 1                                      |
| 260122    | Biology, Basic 2                                      |
| 260131    | Biology, General 1                                    |
| 260132    | Biology, General 2                                    |
| 260141    | Biology, Honors 1                                     |
| 260142    | Biology, Advanced                                     |
| 260151    | Field Biology   |
| 260161    | Genetics  |
| 260171    | Biopsychology   |
| 260181    | Biology Seminar                                       |
| 260200    | Biochemistry and Biophysics, Other                    |
| 260211    | Biochemistry  |
| 260300    | Botany, Other   |
| 260311    | Botany  |
| 260411    | Cell Biology  |
| 260500    | Microbiology, Other                                   |
| 260511    | Microbiology  |
| 260600    | Miscellaneous Specialized Areas, Life Sciences, Other |
| 260611    | Ecology   |
| 260621    | Marine Biology  |
| 260622    | Marine Biology, Advanced                              |
| 260631    | Anatomy   |
| 260700    | Zoology, Other  |
| 260711    | Zoology   |
| 260721    | Zoology, Vertebrate                                   |
| 260731    | Zoology, Invertebrate                                 |
| 260741    | Animal Behavior                                       |
| 260751    | Physiology, Human                                     |
| 260752    | Physiology, Advanced                                  |
| 260761    | Pathology   |
| 260771    | Comparative Embryology                                |
| 269900    | Life Sciences, Other                                  |
| 300100    | Biological and Physical Sciences, Other               |
| 300111    | Science, Unified                                      |
| 300112    | College Pre-Science Skills                            |
| 300121    | Science Study, Independent                            |
| 300131    | Outdoor Education                                     |
| 400100    | Physical Sciences, Other General                      |
| 400121    | Physical Science                                      |
| 400131    | Chemistry and Physics Laboratory Techniques           |
| 400141    | Physical Science, Applied                             |
| 400200    | Astronomy, Other                                      |
| 400211    | Astronomy   |
| 400300    | Astrophysics, Other                                   |

|        |   |
|--------|---|
| 400400 | Atmospheric Sciences and Meteorology, Other |
| 400411 | Meteorology                                 |
| 400500 | Chemistry, Other                            |
| 400511 | Chemistry, Introductory                     |
| 400521 | Chemistry 1                                 |
| 400522 | Chemistry 2                                 |
| 400531 | Organic Chemistry                           |
| 400541 | Physical Chemistry                          |
| 400551 | Consumer Chemistry                          |
| 400561 | Chemistry, Independent Study                |
| 400600 | Geological Sciences, Other                  |
| 400611 | Earth Science                               |
| 400621 | Earth Science, College Preparatory          |
| 400631 | Geology                                     |
| 400632 | Geology - Field Studies                     |
| 400641 | Mineralogy                                  |
| 400700 | Miscellaneous Physical Sciences, Other      |
| 400711 | Oceanography                                |
| 400800 | Physics, Other                              |
| 400811 | Physics, General                            |
| 400821 | Physics 1                                   |
| 400822 | Physics 2                                   |
| 400831 | Physics 2 without Calculus                  |
| 400841 | Electricity and Electronics Science         |
| 400851 | Acoustics                                   |
| 400900 | Planetary Science, Other                    |
| 400911 | Rocketry and Space Science                  |
| 401011 | Aerospace Science                           |
| 409900 | Physical Sciences, Other                    |

**F2RHSO\_C Total Carnegie Units in Social Studies**

| CSSC CODE | TITLE   |
|-----------|---|
| 050100    | Area Studies, Other                               |
| 050101    | Area Studies                                      |
| 050102    | American Studies, Basic                           |
| 050103    | American Studies, General                         |
| 050104    | America's People and Problems                     |
| 050105    | American Studies, Honors                          |
| 050106    | New England Studies                               |
| 050107    | Old South   |
| 050108    | American West                                     |
| 050109    | Southwest United States                           |
| 050110    | Anglo America                                     |
| 050111    | North America and Current Events                  |
| 050112    | North and South America                           |
| 050113    | Latin America                                     |
| 050114    | World Studies 1                                   |
| 050115    | World Studies 2                                   |
| 050116    | World Studies, Honors                             |
| 050117    | Comparative World Cultures                        |
| 050118    | European Culture Studies, Basic                   |
| 050119    | European Culture Studies, General                 |
| 050120    | European Culture Studies, Honors                  |
| 050121    | Developing Nations                                |
| 050122    | African Area Studies                              |
| 050123    | Africa and South America                          |
| 050124    | Asian and African Cultural Studies, Basic         |
| 050125    | Asian and African Cultural Studies, General       |
| 050126    | Asian and African Cultural Studies, Honors        |
| 050127    | Asian Studies                                     |
| 050128    | History of China                                  |
| 050129    | Asia, Africa and Mideast                          |
| 050130    | Africa and Middle East                            |
| 050131    | Middle Eastern Studies                            |
| 050132    | Middle East, War for Survival                     |
| 050133    | U S S R   |
| 050134    | Soviet Union and China                            |
| 050135    | Soviet Union and Afro American Developing Nations |
| 050136    | History of Russia                                 |
| 050137    | Neglected World                                   |
| 050138    | Global Education                                  |
| 050139    | Pacific Rim Nations                               |
| 050140    | Canadian Area Studies                             |
| 050200    | Ethnic Studies, Other                             |
| 050211    | Minorities in America                             |
| 050221    | Ethnic and Family Heritage                        |
| 050231    | Afro American Studies                             |

|        |   |
|--------|---|
| 050241 | Economics of Afro Americans                     |
| 050251 | Indians of North America                        |
| 050261 | Jewish Historical Significance                  |
| 050271 | Mexican American Heritage                       |
| 050281 | Hawaiian  |
| 050291 | Hawaiian Culture Studies, Modern                |
| 059900 | Area and Ethnic Studies, Other                  |
| 300400 | Humanities and Social Sciences, Other           |
| 300411 | Humanities                                      |
| 300421 | Humanities, European                            |
| 300431 | Humanities, American                            |
| 300441 | Humanities, African                             |
| 300451 | Humanities, Near East and Far East              |
| 300500 | Peace Studies, Other                            |
| 300700 | Women's Studies, Other                          |
| 300711 | Women's Studies                                 |
| 300721 | Women's Studies in Literature                   |
| 420100 | Psychology, Other General                       |
| 420111 | Psychology                                      |
| 420112 | Psychology, Advanced                            |
| 420113 | Abnormal Psychology                             |
| 420200 | Clinical Psychology, Other                      |
| 420300 | Cognitive Psychology, Other                     |
| 420311 | Psychology of Learning                          |
| 420321 | Educational Psychology                          |
| 420400 | Community Psychology, Other                     |
| 420500 | Comparative Psychology, Other                   |
| 420600 | Counseling Psychology, Other                    |
| 420700 | Developmental Psychology, Other                 |
| 420711 | Child Psychology                                |
| 420721 | Adolescent Psychology                           |
| 420731 | Adjustment Psychology                           |
| 420800 | Experimental Psychology, Other                  |
| 420900 | Industrial and Organizational Psychology, Other |
| 421000 | Personality Psychology, Other                   |
| 421011 | Historical Personalities and Ideas              |
| 421021 | Humanistic Psychology                           |
| 421100 | Physiological Psychology, Other                 |
| 421200 | Psycholinguistics, Other                        |
| 421300 | Psychometrics, Other                            |
| 421400 | Psychopharmacology, Other                       |
| 421411 | Psychopharmacology                              |
| 421500 | Quantitative Psychology, Other                  |
| 421600 | Social Psychology, Other                        |
| 421611 | Social Psychology                               |
| 429900 | Psychology, Other                               |
| 440100 | Public Affairs, Other General                   |
| 440200 | Community Services, Other                       |
| 440300 | International Public Service, Other             |



|        |  |
|--------|--|
| 440400 | Public Administration, Other                 |
| 440500 | Public Policy Studies, Other                 |
| 440600 | Public Works, Other                          |
| 440700 | Social Work, Other                           |
| 440711 | Human Services                               |
| 449900 | Public Affairs, Other                        |
| 450100 | Social Sciences, Other General               |
| 450111 | Social Science, Introduction                 |
| 450121 | Social Science, Advanced Theory and Research |
| 450131 | Social Science Seminar                       |
| 450141 | Social Studies, Independent Study            |
| 450200 | Anthropology, Other                          |
| 450211 | Anthropology                                 |
| 450221 | Comparative Cultural Patterns                |
| 450231 | Anthropology, Myth and Magic                 |
| 450241 | Cultural Anthropology, Research              |
| 450300 | Archaeology, Other                           |
| 450311 | Archaeology                                  |
| 450400 | Criminology, Other                           |
| 450500 | Demography, Other                            |
| 450511 | Population Education                         |
| 450600 | Economics, Other                             |
| 450601 | Economics, Theory                            |
| 450602 | Economics and Economic Problems              |
| 450603 | Consumer Economics                           |
| 450606 | Investment Economics                         |
| 450607 | Television and Economics                     |
| 450608 | Energy Education                             |
| 450609 | American Labor History                       |
| 450610 | Economics, Analysis and Criticism            |
| 450611 | Economics, College                           |
| 450612 | International Economics                      |
| 450700 | Geography, Other                             |
| 450702 | Geography, United States                     |
| 450703 | Geography, North American                    |
| 450704 | World Geography                              |
| 450705 | Geography, Western Hemisphere and Africa     |
| 450706 | Geography, Eastern Hemisphere                |
| 450707 | Physical Geography                           |
| 450708 | Economic and Political Geography             |
| 450709 | Human and Cultural Geography                 |
| 450710 | Field Geography, Honors                      |
| 450800 | History, Other                               |
| 450807 | United States History, State and Local       |
| 450808 | United States History, Advanced Placement    |
| 450809 | American History, Basic                      |
| 450810 | American History                             |
| 450811 | United States History 1                      |
| 450812 | United States History 2                      |

450813 United States History, Honors  
450814 American History, Advanced Placement  
450815 Westward Movement  
450816 Twentieth Century America  
450817 Twenties and Thirties  
450818 America Since 1945  
450819 Nineteen Sixties  
450820 Nineteen Seventies  
450821 Reform in American History  
450822 American Inquiries  
450823 Historic Events, United States  
450824 American Wars, Causes and Effects  
450825 Civil War  
450826 Civil War, Reconstruction and Industrialism  
450827 War and Modern Consciousness  
450828 World War II  
450829 United States Military History 1  
450830 United States Military History 2  
450831 United States History, Field Study  
450832 North American History  
450833 Mexican History  
450834 South American History  
450835 World History  
450836 World History, College  
450837 World History, Modern  
450838 World Civilization, Twentieth Century  
450839 World Civilization, Twentieth Century, Honors  
450840 Western Civilization 9  
450841 Western Civilization 9, Honors  
450842 Western Civilization, History  
450843 Early Western Civilization  
450844 Western Civilization, Advanced Placement  
450845 Ancient and Classical World  
450846 Ancient Greek History  
450847 Rome and Her Empire  
450848 Ancient History and Middle Ages  
450849 English History  
450850 English History, Honors  
450851 French Revolution, Honors  
450852 Modern Europe  
450853 European History, Mid-Nineteenth Through  
450854 European History, Twentieth Century  
450855 European History, Advanced Readings  
450856 European History, Modern, Advanced Placement  
450857 Third World History  
450858 African History  
450859 Africa, Middle East and Latin America  
450860 Latin American History  
450861 Middle East History

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|        |  |
|--------|--|
| 450862 | Israel, History                                |
| 450863 | Eastern Civilization                           |
| 450864 | Far East, History                              |
| 450865 | Asian History, Modern                          |
| 450866 | Pacific Lands, History                         |
| 450867 | Russian History                                |
| 450868 | World Leaders, Past and Present                |
| 450869 | Historical Research                            |
| 450900 | International Relations, Other                 |
| 450911 | International Relations                        |
| 450921 | International Relations, Honors                |
| 450931 | International Law                              |
| 450941 | Model Security Council, Local                  |
| 450951 | Model United Nations, Local                    |
| 450952 | Model United Nations, National                 |
| 451000 | Political Science and Government, Other        |
| 451001 | Civics   |
| 451002 | State and Local Government                     |
| 451003 | Government, Basic                              |
| 451004 | American Government                            |
| 451005 | Presidency                                     |
| 451006 | Framework of the Constitution                  |
| 451007 | Individual vs State                            |
| 451008 | National State and Local Elections             |
| 451009 | Elections, Politics and Morality, Honors       |
| 451010 | Contemporary World Affairs                     |
| 451011 | American Foreign Policy                        |
| 451012 | Decision Making in a Crisis                    |
| 451013 | American Heritage, Honors                      |
| 451014 | Contemporary American Political Issues         |
| 451015 | Contemporary American Political Issues, Honors |
| 451016 | American Government and Economics, Basic       |
| 451017 | American Government and Economics              |
| 451018 | American Government and Economics, Honors      |
| 451019 | Comparative Political Systems, Basic           |
| 451020 | Comparative World Governments                  |
| 451021 | Americanism vs Communism                       |
| 451022 | Americanism vs Communism, Honors               |
| 451023 | Communism and Its Growth                       |
| 451024 | Civics, Honors                                 |
| 451025 | Writings Influencing Government                |
| 451026 | Government Internship                          |
| 451027 | Model Senate                                   |
| 451028 | Political Leadership                           |
| 451029 | Political Science                              |
| 451030 | Political Science, Advanced Placement          |
| 451031 | Political Science and Government -             |
| 451032 | Political Turmoil                              |
| 451033 | Contemporary Issues, Basic Skills              |

|        |  |
|--------|--|
| 451100 | Sociology, Other                       |
| 451111 | American Social Problems, Introduction |
| 451121 | Sociology, General                     |
| 451131 | Sociology, Issues                      |
| 451132 | The Poor in America                    |
| 451141 | Mobility in Society                    |
| 451151 | Violence In America                    |
| 451161 | Death and Dying                        |
| 451171 | Sociology, Honors                      |
| 451181 | Sociology, Research                    |
| 451200 | Urban Studies, Other                   |
| 451211 | Urban Problems                         |
| 451221 | Urban Ecology                          |
| 451231 | Technology and Urbanization            |
| 459900 | Social Sciences, Other                 |

**F2RHCO\_C Total Carnegie Units in Computer Science/Programming/Data Processing**

| CSSC CODE | TITLE  |
|-----------|--|
| 010161    | Agricultural Microprocessing                         |
| 070300    | Business Data Processing and Related Programs, Other |
| 070311    | Computers In Business                                |
| 070321    | Business Data Processing 1                           |
| 070322    | Business Data Processing 2                           |
| 070331    | Business Computer Programming 1                      |
| 070332    | Business Computer Programming 2                      |
| 110100    | Computer and Information Sciences, Other General     |
| 110111    | Computer Appreciation                                |
| 110121    | Computer Mathematics 1                               |
| 110122    | Computer Mathematics 2                               |
| 110131    | Computer Applications                                |
| 110132    | Computer Applications, Independent Study             |
| 110141    | Computer Science, Advanced Placement                 |
| 110151    | Artificial Intelligence                              |
| 110200    | Computer Programming, Other                          |
| 110211    | Computer Programming 1                               |
| 110212    | Computer Programming 2                               |
| 110213    | Computer Programming 3                               |
| 110221    | FORTRAN, Introduction                                |
| 110231    | PASCAL, Introduction                                 |
| 110232    | Advanced PASCAL                                      |
| 110241    | BASIC, Introduction                                  |
| 110242    | Advanced BASIC                                       |
| 110251    | COBOL, Introduction                                  |
| 110252    | Advanced COBOL                                       |
| 110261    | LOGO, Introduction                                   |
| 110271    | RPG Programming, Introduction                        |
| 110300    | Data Processing, Other                               |
| 110311    | Data Processing, Introduction                        |
| 110312    | Data Processing, Intermediate                        |
| 110313    | Data Processing, Advanced                            |
| 110321    | Computer Programming - Cooperative Education         |
| 110400    | Information Sciences and Systems, Other              |
| 110500    | Systems Analysis, Other                              |
| 119900    | Computer and Information Sciences, Other             |

**F2RHFO\_C Total Carnegie Units in Foreign Languages**

| CSSC   | TITLE                                       |
|--------|---|
| 160100 | Foreign Languages, Multiple Emphasis, Other |
| 160111 | Foreign Language, Exploratory               |
| 160200 | African (Non-Semitic) Languages, Other      |
| 160211 | Swahili 1                                   |
| 160212 | Swahili 2                                   |
| 160221 | Amharic 1 (Ethiopian)                       |
| 160222 | Amharic 2 (Ethiopian)                       |
| 160300 | Asiatic Languages, Other                    |
| 160311 | Cantonese 1                                 |
| 160312 | Cantonese 2                                 |
| 160313 | Cantonese 3                                 |
| 160314 | Cantonese 4                                 |
| 160321 | Mandarin 1                                  |
| 160322 | Mandarin 2                                  |
| 160323 | Mandarin 3                                  |
| 160324 | Mandarin 4                                  |
| 160325 | Mandarin 5                                  |
| 160331 | Japanese 1                                  |
| 160332 | Japanese 2                                  |
| 160333 | Japanese 3                                  |
| 160334 | Japanese 4                                  |
| 160335 | Japanese 5                                  |
| 160336 | Foreign Language Contract, Japanese         |
| 160341 | Hawaiian 1                                  |
| 160342 | Hawaiian 2                                  |
| 160343 | Hawaiian 3                                  |
| 160344 | Hawaiian 4                                  |
| 160345 | Hawaiian Language and Culture               |
| 160351 | Korean 1                                    |
| 160352 | Korean 2                                    |
| 160353 | Korean 3                                    |
| 160354 | Korean 4                                    |
| 160355 | Korean 5                                    |
| 160400 | Balto-Slavic Languages, Other               |
| 160411 | Ukrainian 1                                 |
| 160421 | Russian 1                                   |
| 160422 | Russian 2                                   |
| 160423 | Russian 3                                   |
| 160424 | Russian 4                                   |
| 160425 | Russian 5                                   |
| 160426 | Russian 6                                   |
| 160427 | Foreign Language Contract, Russian          |
| 160431 | Czech 1                                     |
| 160432 | Czech 2                                     |
| 160433 | Czech 3                                     |

|        |                                   |
|--------|-----------------------------------|
| 160441 | Polish 1                          |
| 160442 | Polish 2                          |
| 160443 | Polish 3                          |
| 160444 | Polish 4                          |
| 160451 | Finnish 1                         |
| 160452 | Finnish 2                         |
| 160453 | Finnish 3                         |
| 160454 | Finnish 4                         |
| 160500 | Germanic Languages, Other         |
| 160501 | Dutch 1                           |
| 160502 | Dutch 2                           |
| 160503 | Dutch 3                           |
| 160511 | German 7                          |
| 160512 | German 8                          |
| 160513 | German 1                          |
| 160514 | German 2                          |
| 160515 | German 3                          |
| 160516 | German 4                          |
| 160517 | German, Advanced Placement        |
| 160518 | German Field-Based Experience     |
| 160519 | Foreign Language Contract, German |
| 160521 | Norwegian 1                       |
| 160522 | Norwegian 2                       |
| 160531 | Swedish 1                         |
| 160532 | Swedish 2                         |
| 160533 | Swedish 3                         |
| 160541 | Yiddish 1                         |
| 160542 | Yiddish 2                         |
| 160543 | Yiddish 3                         |
| 160600 | Greek, Other                      |
| 160611 | Modern Greek for Survival         |
| 160621 | Modern Greek                      |
| 160622 | Modern Greek 2                    |
| 160623 | Modern Greek 3                    |
| 160624 | Modern Greek 4                    |
| 160631 | Classical Greek 1                 |
| 160632 | Classical Greek 2                 |
| 160633 | Classical Greek 3                 |
| 160634 | Classical Greek 4                 |
| 160700 | Indic Languages, Other            |
| 160800 | Iranian Languages, Other          |
| 160900 | Italic Languages, Other           |
| 160901 | French 7                          |
| 160902 | French 8                          |
| 160903 | French 1                          |
| 160904 | French 2                          |
| 160905 | French 3                          |
| 160906 | French 4                          |
| 160907 | French, Advanced Placement        |

|        |                                    |
|--------|------------------------------------|
| 160908 | French Field-Based Experience      |
| 160909 | Foreign Language Contract, French  |
| 160910 | French, Conversational             |
| 160911 | Italian 7                          |
| 160912 | Italian 8                          |
| 160913 | Italian 1                          |
| 160914 | Italian 2                          |
| 160915 | Italian 3                          |
| 160916 | Italian 4                          |
| 160917 | Italian, Advanced Placement        |
| 160918 | Italian Field-Based Experience     |
| 160919 | Foreign Language Contract, Italian |
| 160920 | Latin 1                            |
| 160921 | Latin 2                            |
| 160922 | Latin 3                            |
| 160923 | Latin 4                            |
| 160924 | Latin, Advanced Placement          |
| 160925 | Foreign Language Contract, Latin   |
| 160926 | Portuguese 1                       |
| 160927 | Portuguese 2                       |
| 160928 | Portuguese 3                       |
| 160929 | Portuguese 4                       |
| 160930 | Portuguese 5                       |
| 160931 | Spanish 7                          |
| 160932 | Spanish 8                          |
| 160933 | Spanish 1                          |
| 160934 | Spanish 2                          |
| 160935 | Spanish 3                          |
| 160936 | Spanish 4                          |
| 160937 | Spanish, Advanced Placement        |
| 160938 | Spanish Field-Based Experience     |
| 160939 | Foreign Language Contract, Spanish |
| 160941 | Spanish for Travelers              |
| 160942 | Spanish, Commercial                |
| 161000 | Native American Languages, Other   |
| 161100 | Semitic Languages, Other           |
| 161111 | Hebrew 1                           |
| 161112 | Hebrew 2                           |
| 161113 | Hebrew 3                           |
| 161114 | Hebrew 4                           |
| 161115 | Arabic 1                           |
| 161116 | Arabic 2                           |
| 161117 | Arabic 3                           |
| 161118 | Arabic 4                           |
| 161119 | Foreign Language Contract - Arabic |
| 161211 | Turkish 1                          |
| 161212 | Turkish 2                          |
| 169900 | Foreign Languages, Other           |



## NAEP-Equivalent Subject Area Summary Composite Variables

### F2RENG\_C Total Carnegie Units in English

| CSSC CODE | TITLE                                    |
|-----------|--|
| 090100    | Communications, Other General            |
| 090111    | Mass Media                               |
| 090121    | Intercultural Communications             |
| 090300    | Communications Research, Other           |
| 090400    | Journalism (Mass Communications), Other  |
| 090421    | Journalism Investigations                |
| 090721    | Television and Taste                     |
| 099900    | Communications, Other                    |
| 160121    | English as a Second Language 1           |
| 160122    | English as a Second Language 2           |
| 160123    | English as a Second Language 3           |
| 160124    | English as a Second Language, Skills Lab |
| 160125    | Transitional English                     |
| 230100    | English, Other General                   |
| 230101    | English 7                                |
| 230102    | English 7, Honors                        |
| 230103    | English 8, Below Grade Level             |
| 230104    | English 8                                |
| 230105    | English 8, Honors                        |
| 230106    | English 1, Below Grade Level             |
| 230107    | English 1                                |
| 230108    | English 1, Honors                        |
| 230109    | English 2, Below Grade Level             |
| 230110    | English 2                                |
| 230111    | English 2, Honors                        |
| 230112    | English 3, Below Grade Level             |
| 230113    | English 3                                |
| 230114    | English 3, Honors                        |
| 230115    | English 4, Below Grade Level             |
| 230116    | English 4                                |
| 230117    | English 4, Honors                        |
| 230118    | World Literature                         |
| 230119    | Renaissance Literature                   |
| 230120    | Romanticism                              |
| 230121    | Realism                                  |
| 230122    | Literature, Contemporary                 |
| 230123    | Irish Literature                         |
| 230124    | Russian Literature                       |
| 230125    | Bible as Literature                      |
| 230126    | Mythology and Fable                      |
| 230127    | Drama, Introduction                      |
| 230128    | World Drama                              |
| 230129    | Plays, Modern Survey                     |

|        |  |
|--------|--|
| 230130 | Novels                                   |
| 230131 | Short Story                              |
| 230132 | Mysteries                                |
| 230133 | Poetry                                   |
| 230134 | Rock Poetry                              |
| 230135 | Humor                                    |
| 230136 | Biography                                |
| 230137 | Non Fiction                              |
| 230138 | Science Fiction                          |
| 230139 | Themes in Literature                     |
| 230140 | Literature of Human Values               |
| 230141 | Ethnic Literature                        |
| 230142 | Women in Literature                      |
| 230143 | Sports through Literature                |
| 230144 | Occult Literature                        |
| 230145 | Protest Literature                       |
| 230146 | Youth and Literature                     |
| 230147 | Heroes                                   |
| 230148 | Utopias                                  |
| 230149 | Death                                    |
| 230150 | Nobel Prize Authors                      |
| 230151 | Seminar on an Author                     |
| 230152 | English, Real Life Problem Solving       |
| 230153 | Reading, Independent Study               |
| 230154 | Research Technique                       |
| 230155 | Children's Literature & Fantasy          |
| 230161 | English Skills 1 for Visually Impaired   |
| 230162 | English Skills 2 for Visually Impaired   |
| 230163 | English Skills 3 for Visually Impaired   |
| 230164 | English Skills 4 for Visually Impaired   |
| 230200 | Classics, Other                          |
| 230211 | Mythological Literature, Greek and Roman |
| 230300 | Comparative Literature, Other            |
| 230311 | Comparative Literature                   |
| 230321 | Latin American Authors/Literature        |
| 230400 | Composition, Other                       |
| 230401 | Composition, Expository                  |
| 230402 | Writing Laboratory                       |
| 230403 | Writing About Literature                 |
| 230404 | Vocabulary                               |
| 230405 | Spelling                                 |
| 230406 | Grammar 7                                |
| 230407 | Grammar 8                                |
| 230408 | Grammar 9                                |
| 230409 | Grammar 10                               |
| 230410 | Grammar 11                               |
| 230411 | Grammar 12                               |
| 230412 | Etymology                                |
| 230413 | Handwriting                              |

|        |   |
|--------|---|
| 230414 | Interpersonal Communication                     |
| 230415 | Word Study - Remedial                           |
| 230500 | Creative Writing, Other                         |
| 230511 | Creative Writing 10                             |
| 230512 | Creative Writing 11                             |
| 230513 | Creative Writing 12                             |
| 230521 | Creative Writing, Independent Study             |
| 230600 | Linguistics (includes Phonetics, Semantics, and |
| 230611 | Linguistics                                     |
| 230700 | Literature, American, Other                     |
| 230711 | American Literature                             |
| 230721 | Black Literature                                |
| 230731 | American Dream in Literature                    |
| 230741 | Folklore, American                              |
| 230751 | Indian Literature                               |
| 230761 | State Writers                                   |
| 230771 | Western Literature                              |
| 230781 | Mexican American Literature                     |
| 230800 | Literature, English, Other                      |
| 230811 | British Literature Survey                       |
| 230821 | Shakespeare                                     |
| 230831 | Modern British Writers                          |
| 230841 | Victorian Literature                            |
| 230851 | Satire, Modern British                          |
| 230861 | Arthurian Legend                                |
| 230871 | Medieval Literature                             |
| 230900 | Rhetoric, Other                                 |
| 231000 | Speech, Debate, and Forensics, Other            |
| 231011 | Public Speaking                                 |
| 231021 | Speech 1  |
| 231022 | Speech 2  |
| 231023 | Speech 3  |
| 231031 | Debate Practicum Contract                       |
| 231100 | Technical and Business Writing, Other           |
| 231111 | Technical English                               |
| 231211 | Reading Development 1                           |
| 231212 | Reading Development 2                           |
| 231213 | Reading Development 3                           |
| 231214 | Reading Development 4                           |
| 231215 | Speed Reading                                   |
| 231216 | Advanced Reading & Study Skills                 |
| 231311 | Functional English 1                            |
| 231312 | Functional English 2                            |
| 231313 | Functional English 3                            |
| 231314 | Functional English 4                            |
| 239900 | Letters, Other                                  |

**F2RMAT\_C Total Carnegie Units in Math**

| CSSC CODE | TITLE                           |
|-----------|---------------------------------|
| 270100    | Mathematics, Other General      |
| 270101    | Mathematics 7                   |
| 270102    | Mathematics 7, Accelerated      |
| 270103    | Mathematics 8                   |
| 270104    | Mathematics 8, Accelerated      |
| 270105    | Unused Code                     |
| 270106    | Mathematics 1, General          |
| 270107    | Mathematics 2, General          |
| 270108    | Science Mathematics             |
| 270109    | Mathematics in the Arts         |
| 270110    | Mathematics, Vocational         |
| 270111    | Technical Mathematics           |
| 270112    | Mathematics Review              |
| 270114    | Consumer Mathematics            |
| 270200    | Actuarial Sciences, Other       |
| 270300    | Applied Mathematics, Other      |
| 270400    | Pure Mathematics, Other         |
| 270401    | Pre-Algebra                     |
| 270402    | Algebra 1, Part 1               |
| 270403    | Algebra 1, Part 2               |
| 270404    | Algebra 1                       |
| 270405    | Algebra 2                       |
| 270406    | Geometry, Plane                 |
| 270407    | Geometry, Solid                 |
| 270408    | Geometry, Plane and Solid       |
| 270409    | Geometry, Informal              |
| 270410    | Algebra 3                       |
| 270411    | Trigonometry                    |
| 270412    | Analytic Geometry               |
| 270413    | Trigonometry and Solid Geometry |
| 270414    | Algebra and Trigonometry        |
| 270415    | Algebra and Analytic Geometry   |
| 270416    | Analysis, Introductory          |
| 270417    | Linear Algebra                  |
| 270418    | Calculus and Analytic Geometry  |
| 270419    | Calculus                        |
| 270420    | Calculus, Advanced Placement    |
| 270421    | Mathematics 1, Unified          |
| 270422    | Mathematics 2, Unified          |
| 270423    | Mathematics 3, Unified          |
| 270424    | Mathematics, Independent Study  |
| 270500    | Statistics, Other               |
| 270511    | Statistics                      |
| 270521    | Probability                     |
| 270531    | Probability and Statistics      |

|        |                    |
|--------|--------------------|
| 270601 | Basic Math 1       |
| 270602 | Basic Math 2       |
| 270603 | Basic Math 3       |
| 270604 | Basic Math 4       |
| 279900 | Mathematics, Other |

**F2RAL1\_C Total Carnegie Units in Algebra I**

CSSC CODE TITLE

|        |                        |
|--------|------------------------|
| 270401 | Pre-Algebra            |
| 270402 | Algebra 1, Part 1      |
| 270403 | Algebra 1, Part 2      |
| 270404 | Algebra 1              |
| 270421 | Mathematics 1, Unified |

**F2RAL2\_C Total Carnegie Units in Algebra II**

CSSC CODE TITLE

|        |                |
|--------|----------------|
| 270405 | Algebra 2      |
| 270410 | Algebra 3      |
| 270417 | Linear Algebra |

**F2RGeo\_C Total Carnegie Units in Geometry**

CSSC CODE TITLE

|        |                               |
|--------|-------------------------------|
| 270406 | Geometry, Plane               |
| 270407 | Geometry, Solid               |
| 270408 | Geometry, Plane and Solid     |
| 270409 | Geometry, Informal            |
| 270412 | Analytic Geometry             |
| 270415 | Algebra and Analytic Geometry |
| 270422 | Mathematics 2, Unified        |

**F2RTRI\_C Total Carnegie Units in Trigonometry**

CSSC CODE TITLE

|        |                                 |
|--------|---------------------------------|
| 270411 | Trigonometry                    |
| 270413 | Trigonometry and Solid Geometry |
| 270414 | Algebra and Trigonometry        |

**F2RPRE\_C Total Carnegie Units in Precalculus**

CSSC CODE TITLE

270416 Analysis, Introductory

**F2RCAL\_C Total Carnegie Units in Calculus**

CSSC CODE TITLE

270418 Calculus and Analytic Geometry

270419 Calculus

270420 Calculus, Advanced Placement

**F2ROMA1\_C Total Carnegie Units in Other Math Courses**

This variable was constructed by subtracting **F2RAL1\_C**, **F2RAL2\_C**, **F2RGEO\_C**, **F2RTRI\_C**, **F2RPRE\_C**, and **F2RCAL\_C** from **F2RMAT\_C**.

**F2RFOR\_C Total Carnegie Units in Foreign Languages**

| CSSC CODE | TITLE                                       |
|-----------|---|
| 090811    | Sign Language 1                             |
| 090812    | Sign Language 2                             |
| 090821    | Braille Communications                      |
| 160100    | Foreign Languages, Multiple Emphasis, Other |
| 160111    | Foreign Language, Exploratory               |
| 160200    | African (Non-Semitic) Languages, Other      |
| 160211    | Swahili 1                                   |
| 160212    | Swahili 2                                   |
| 160221    | Amharic 1 (Ethiopian)                       |
| 160222    | Amharic 2 (Ethiopian)                       |
| 160300    | Asiatic Languages, Other                    |
| 160311    | Cantonese 1                                 |
| 160312    | Cantonese 2                                 |
| 160313    | Cantonese 3                                 |
| 160314    | Cantonese 4                                 |
| 160321    | Mandarin 1                                  |
| 160322    | Mandarin 2                                  |
| 160323    | Mandarin 3                                  |
| 160324    | Mandarin 4                                  |
| 160325    | Mandarin 5                                  |
| 160331    | Japanese 1                                  |
| 160332    | Japanese 2                                  |
| 160333    | Japanese 3                                  |
| 160334    | Japanese 4                                  |
| 160335    | Japanese 5                                  |
| 160336    | Foreign Language Contract, Japanese         |
| 160341    | Hawaiian 1                                  |
| 160342    | Hawaiian 2                                  |
| 160343    | Hawaiian 3                                  |
| 160344    | Hawaiian 4                                  |
| 160345    | Hawaiian Language and Culture               |
| 160351    | Korean 1                                    |
| 160352    | Korean 2                                    |
| 160353    | Korean 3                                    |
| 160354    | Korean 4                                    |
| 160355    | Korean 5                                    |
| 160400    | Balto-Slavic Languages, Other               |
| 160411    | Ukrainian 1                                 |
| 160421    | Russian 1                                   |
| 160422    | Russian 2                                   |
| 160423    | Russian 3                                   |
| 160424    | Russian 4                                   |
| 160425    | Russian 5                                   |
| 160426    | Russian 6                                   |
| 160427    | Foreign Language Contract, Russian          |

|        |                                   |
|--------|-----------------------------------|
| 160431 | Czech 1                           |
| 160432 | Czech 2                           |
| 160433 | Czech 3                           |
| 160441 | Polish 1                          |
| 160442 | Polish 2                          |
| 160443 | Polish 3                          |
| 160444 | Polish 4                          |
| 160451 | Finnish 1                         |
| 160452 | Finnish 2                         |
| 160453 | Finnish 3                         |
| 160454 | Finnish 4                         |
| 160500 | Germanic Languages, Other         |
| 160501 | Dutch 1                           |
| 160502 | Dutch 2                           |
| 160503 | Dutch 3                           |
| 160511 | German 7                          |
| 160512 | German 8                          |
| 160513 | German 1                          |
| 160514 | German 2                          |
| 160515 | German 3                          |
| 160516 | German 4                          |
| 160517 | German, Advanced Placement        |
| 160518 | German Field-Based Experience     |
| 160519 | Foreign Language Contract, German |
| 160521 | Norwegian 1                       |
| 160522 | Norwegian 2                       |
| 160531 | Swedish 1                         |
| 160532 | Swedish 2                         |
| 160533 | Swedish 3                         |
| 160541 | Yiddish 1                         |
| 160542 | Yiddish 2                         |
| 160543 | Yiddish 3                         |
| 160600 | Greek, Other                      |
| 160611 | Modern Greek for Survival         |
| 160621 | Modern Greek                      |
| 160622 | Modern Greek 2                    |
| 160623 | Modern Greek 3                    |
| 160624 | Modern Greek 4                    |
| 160631 | Classical Greek 1                 |
| 160632 | Classical Greek 2                 |
| 160633 | Classical Greek 3                 |
| 160634 | Classical Greek 4                 |
| 160700 | Indic Languages, Other            |
| 160800 | Iranian Languages, Other          |
| 160900 | Italic Languages, Other           |
| 160901 | French 7                          |
| 160902 | French 8                          |
| 160903 | French 1                          |
| 160904 | French 2                          |



|        |                                    |
|--------|------------------------------------|
| 160905 | French 3                           |
| 160906 | French 4                           |
| 160907 | French, Advanced Placement         |
| 160908 | French Field-Based Experience      |
| 160909 | Foreign Language Contract, French  |
| 160910 | French, Conversational             |
| 160911 | Italian 7                          |
| 160912 | Italian 8                          |
| 160913 | Italian 1                          |
| 160914 | Italian 2                          |
| 160915 | Italian 3                          |
| 160916 | Italian 4                          |
| 160917 | Italian, Advanced Placement        |
| 160918 | Italian Field-Based Experience     |
| 160919 | Foreign Language Contract, Italian |
| 160920 | Latin 1                            |
| 160921 | Latin 2                            |
| 160922 | Latin 3                            |
| 160923 | Latin 4                            |
| 160924 | Latin, Advanced Placement          |
| 160925 | Foreign Language Contract, Latin   |
| 160926 | Portuguese 1                       |
| 160927 | Portuguese 2                       |
| 160928 | Portuguese 3                       |
| 160929 | Portuguese 4                       |
| 160930 | Portuguese 5                       |
| 160931 | Spanish 7                          |
| 160932 | Spanish 8                          |
| 160933 | Spanish 1                          |
| 160934 | Spanish 2                          |
| 160935 | Spanish 3                          |
| 160936 | Spanish 4                          |
| 160937 | Spanish, Advanced Placement        |
| 160938 | Spanish Field-Based Experience     |
| 160939 | Foreign Language Contract, Spanish |
| 160941 | Spanish for Travelers              |
| 160942 | Spanish, Commercial                |
| 161000 | Native American Languages, Other   |
| 161100 | Semitic Languages, Other           |
| 161111 | Hebrew 1                           |
| 161112 | Hebrew 2                           |
| 161113 | Hebrew 3                           |
| 161114 | Hebrew 4                           |
| 161115 | Arabic 1                           |
| 161116 | Arabic 2                           |
| 161117 | Arabic 3                           |
| 161118 | Arabic 4                           |

|        |                                    |
|--------|------------------------------------|
| 161119 | Foreign Language Contract - Arabic |
| 161211 | Turkish 1                          |
| 161212 | Turkish 2                          |
| 169900 | Foreign Languages, Other           |

**F2RSCI\_C Total Carnegie Units in Science**

| CSSC CODE | TITLE  |
|-----------|--|
| 140100    | Engineering, Other General                       |
| 140111    | Orientation to Engineering                       |
| 140200    | Aerospace, Aeronautical, and Astronautical       |
| 140211    | Aerospace Materials                              |
| 140221    | Aerospace Engineering Design                     |
| 140300    | Agricultural Engineering, Other                  |
| 140400    | Architectural Engineering, Other                 |
| 140411    | Strength of Materials - Architectural            |
| 140500    | Bioengineering and Biomedical Engineering, Other |
| 140600    | Ceramic Engineering, Other                       |
| 140700    | Chemical Engineering, Other                      |
| 140800    | Civil Engineering, Other                         |
| 140900    | Computer Engineering, Other                      |
| 141000    | Electrical, Electronics, and Communications      |
| 141100    | Engineering Mechanics, Other                     |
| 141200    | Engineering Related, Other                       |
| 141211    | Instrumentation Physics 1                        |
| 141212    | Instrumentation Physics 2                        |
| 141213    | Instrumentation Physics 3                        |
| 141214    | Instrumentation Physics 4 /Advanced Placement    |
| 141300    | Engineering Science, Other                       |
| 141400    | Environmental Health Engineering, Other          |
| 141500    | Geological Engineering, Other                    |
| 141600    | Geophysical Engineering, Other                   |
| 141700    | Industrial Engineering, Other                    |
| 141800    | Materials, Engineering, Other                    |
| 141900    | Mechanical Engineering, Other                    |
| 141911    | Strength of Materials - Mechanical Technology    |
| 142000    | Metallurgical Engineering, Other                 |
| 142011    | Metallurgy/Powder Metal Basics                   |
| 142100    | Mining and Mineral Engineering, Other            |
| 142200    | Naval Architecture and Marine Engineering, Other |
| 142300    | Nuclear Engineering, Other                       |
| 142400    | Ocean Engineering, Other                         |
| 142500    | Petroleum Engineering, Other                     |
| 142600    | Surveying and Mapping Sciences, Other            |
| 142611    | Cartography                                      |
| 142700    | Systems Engineering, Other                       |
| 142800    | Textile Engineering, Other                       |
| 149900    | Engineering, Other                               |
| 260100    | Biology, Other General                           |
| 260111    | Science 7  |
| 260121    | Biology, Basic 1                                 |
| 260122    | Biology, Basic 2                                 |
| 260131    | Biology, General 1                               |

|        |   |
|--------|---|
| 260132 | Biology, General 2                                    |
| 260141 | Biology, Honors 1                                     |
| 260142 | Biology, Advanced                                     |
| 260151 | Field Biology   |
| 260161 | Genetics  |
| 260171 | Biopsychology   |
| 260181 | Biology Seminar                                       |
| 260200 | Biochemistry and Biophysics, Other                    |
| 260211 | Biochemistry  |
| 260300 | Botany, Other   |
| 260311 | Botany  |
| 260411 | Cell Biology  |
| 260500 | Microbiology, Other                                   |
| 260511 | Microbiology  |
| 260600 | Miscellaneous Specialized Areas, Life Sciences, Other |
| 260611 | Ecology   |
| 260621 | Marine Biology  |
| 260622 | Marine Biology, Advanced                              |
| 260631 | Anatomy   |
| 260700 | Zoology, Other  |
| 260711 | Zoology   |
| 260721 | Zoology, Vertebrate                                   |
| 260731 | Zoology, Invertebrate                                 |
| 260741 | Animal Behavior                                       |
| 260751 | Physiology, Human                                     |
| 260752 | Physiology, Advanced                                  |
| 260761 | Pathology   |
| 260771 | Comparative Embryology                                |
| 269900 | Life Sciences, Other                                  |
| 300100 | Biological and Physical Sciences, Other               |
| 300111 | Science, Unified                                      |
| 300112 | College Pre-Science Skills                            |
| 300121 | Science Study, Independent                            |
| 300131 | Outdoor Education                                     |
| 300300 | Engineering and Other Disciplines, Other              |
| 300311 | Engineering Concepts                                  |
| 300600 | Systems Science, Other                                |
| 300611 | Futuristics   |
| 300621 | Environmental Science                                 |
| 300631 | Energy and Environment                                |
| 400100 | Physical Sciences, Other General                      |
| 400111 | Science 8   |
| 400121 | Physical Science                                      |
| 400131 | Chemistry and Physics Laboratory Techniques           |
| 400141 | Physical Science, Applied                             |
| 400200 | Astronomy, Other                                      |
| 400211 | Astronomy   |
| 400300 | Astrophysics, Other                                   |
| 400400 | Atmospheric Sciences and Meteorology, Other           |

|        |  |
|--------|--|
| 400411 | Meteorology                            |
| 400500 | Chemistry, Other                       |
| 400511 | Chemistry, Introductory                |
| 400521 | Chemistry 1                            |
| 400522 | Chemistry 2                            |
| 400531 | Organic Chemistry                      |
| 400541 | Physical Chemistry                     |
| 400551 | Consumer Chemistry                     |
| 400561 | Chemistry, Independent Study           |
| 400600 | Geological Sciences, Other             |
| 400611 | Earth Science                          |
| 400621 | Earth Science, College Preparatory     |
| 400631 | Geology                                |
| 400632 | Geology - Field Studies                |
| 400641 | Mineralogy                             |
| 400700 | Miscellaneous Physical Sciences, Other |
| 400711 | Oceanography                           |
| 400800 | Physics, Other                         |
| 400811 | Physics, General                       |
| 400821 | Physics 1                              |
| 400822 | Physics 2                              |
| 400831 | Physics 2 without Calculus             |
| 400841 | Electricity and Electronics Science    |
| 400851 | Acoustics                              |
| 400900 | Planetary Science, Other               |
| 400911 | Rocketry and Space Science             |
| 401011 | Aerospace Science                      |
| 409900 | Physical Sciences, Other               |
| 410100 | Biological Technologies, Other         |
| 410200 | Nuclear Technologies, Other            |
| 410211 | Radioactivity                          |
| 410300 | Physical Science Technologies, Other   |
| 419900 | Science Technologies, Other            |

**F2RBIO\_C Total Carnegie Units in Biology**

| CSSC CODE | TITLE   |
|-----------|---|
| 260100    | Biology, Other General                                |
| 260111    | Science 7   |
| 260121    | Biology, Basic 1                                      |
| 260122    | Biology, Basic 2                                      |
| 260131    | Biology, General 1                                    |
| 260132    | Biology, General 2                                    |
| 260141    | Biology, Honors 1                                     |
| 260142    | Biology, Advanced                                     |
| 260151    | Field Biology   |
| 260161    | Genetics  |
| 260171    | Biopsychology   |
| 260181    | Biology Seminar                                       |
| 260200    | Biochemistry and Biophysics, Other                    |
| 260211    | Biochemistry  |
| 260300    | Botany, Other   |
| 260311    | Botany  |
| 260411    | Cell Biology  |
| 260500    | Microbiology, Other                                   |
| 260511    | Microbiology  |
| 260600    | Miscellaneous Specialized Areas, Life Sciences, Other |
| 260611    | Ecology   |
| 260621    | Marine Biology  |
| 260622    | Marine Biology, Advanced                              |
| 260631    | Anatomy   |
| 260700    | Zoology, Other  |
| 260711    | Zoology   |
| 260721    | Zoology, Vertebrate                                   |
| 260731    | Zoology, Invertebrate                                 |
| 260741    | Animal Behavior                                       |
| 260751    | Physiology, Human                                     |
| 260752    | Physiology, Advanced                                  |
| 260761    | Pathology   |
| 260771    | Comparative Embryology                                |
| 269900    | Life Sciences, Other                                  |

**F2RCHE\_C Total Carnegie Units in Chemistry**

| CSSC CODE | TITLE                                       |
|-----------|---|
| 400131    | Chemistry and Physics Laboratory Techniques |
| 400500    | Chemistry, Other                            |
| 400511    | Chemistry, Introductory                     |
| 400521    | Chemistry 1                                 |
| 400522    | Chemistry 2                                 |
| 400531    | Organic Chemistry                           |
| 400541    | Physical Chemistry                          |
| 400551    | Consumer Chemistry                          |
| 400561    | Chemistry, Independent Study                |

**F2RPHY\_C Total Carnegie Units in Physics**

| CSSC CODE | TITLE                               |
|-----------|-------------------------------------|
| 400800    | Physics, Other                      |
| 400811    | Physics, General                    |
| 400821    | Physics 1                           |
| 400822    | Physics 2                           |
| 400831    | Physics 2 without Calculus          |
| 400841    | Electricity and Electronics Science |
| 400851    | Acoustics                           |

**F2REAR\_C Total Carnegie Units in Earth Science/Geology**

|        |  |
|--------|--|
| 400600 | Geological Sciences, Other             |
| 400611 | Earth Science                          |
| 400621 | Earth Science, College Preparatory     |
| 400631 | Geology                                |
| 400632 | Geology - Field Studies                |
| 400641 | Mineralogy                             |
| 400700 | Miscellaneous Physical Sciences, Other |
| 400711 | Oceanography                           |

**F2ROSC\_C Total Carnegie Units in Other Science Courses**

This variable was constructed by subtracting **F2REAR\_C**, **F2RBIO\_C**, **F2RCHE\_C**, and **F2RPHY\_C** from **F2RSCI\_C**.

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**F2RSOC\_C Total Carnegie Units in Social Studies**

| CSSC CODE | TITLE   |
|-----------|---|
| 050100    | Area Studies, Other                               |
| 050101    | Area Studies                                      |
| 050102    | American Studies, Basic                           |
| 050103    | American Studies, General                         |
| 050104    | America's People and Problems                     |
| 050105    | American Studies, Honors                          |
| 050106    | New England Studies                               |
| 050107    | Old South   |
| 050108    | American West                                     |
| 050109    | Southwest United States                           |
| 050110    | Anglo America                                     |
| 050111    | North America and Current Events                  |
| 050112    | North and South America                           |
| 050113    | Latin America                                     |
| 050114    | World Studies 1                                   |
| 050115    | World Studies 2                                   |
| 050116    | World Studies, Honors                             |
| 050117    | Comparative World Cultures                        |
| 050118    | European Culture Studies, Basic                   |
| 050119    | European Culture Studies, General                 |
| 050120    | European Culture Studies, Honors                  |
| 050121    | Developing Nations                                |
| 050122    | African Area Studies                              |
| 050123    | Africa and South America                          |
| 050124    | Asian and African Cultural Studies, Basic         |
| 050125    | Asian and African Cultural Studies, General       |
| 050126    | Asian and African Cultural Studies, Honors        |
| 050127    | Asian Studies                                     |
| 050128    | History of China                                  |
| 050129    | Asia, Africa and Mideast                          |
| 050130    | Africa and Middle East                            |
| 050131    | Middle Eastern Studies                            |
| 050132    | Middle East, War for Survival                     |
| 050133    | U S S R   |
| 050134    | Soviet Union and China                            |
| 050135    | Soviet Union and Afro American Developing Nations |
| 050136    | History of Russia                                 |
| 050137    | Neglected World                                   |
| 050138    | Global Education                                  |
| 050139    | Pacific Rim Nations                               |
| 050140    | Canadian Area Studies                             |
| 050200    | Ethnic Studies, Other                             |
| 050211    | Minorities in America                             |
| 050221    | Ethnic and Family Heritage                        |
| 050231    | Afro American Studies                             |



|        |   |
|--------|---|
| 050241 | Economics of Afro Americans                     |
| 050251 | Indians of North America                        |
| 050261 | Jewish Historical Significance                  |
| 050271 | Mexican American Heritage                       |
| 050281 | Hawaiian  |
| 050291 | Hawaiian Culture Studies, Modern                |
| 059900 | Area and Ethnic Studies, Other                  |
| 220100 | Law, Other                                      |
| 220111 | Law Fundamentals                                |
| 220121 | Law and You                                     |
| 220131 | Street Law                                      |
| 300400 | Humanities and Social Sciences, Other           |
| 300411 | Humanities                                      |
| 300421 | Humanities, European                            |
| 300431 | Humanities, American                            |
| 300441 | Humanities, African                             |
| 300451 | Humanities, Near East and Far East              |
| 300500 | Peace Studies, Other                            |
| 300700 | Women's Studies, Other                          |
| 300711 | Women's Studies                                 |
| 300721 | Women's Studies in Literature                   |
| 380100 | Philosophy, Other                               |
| 380111 | Philosophy                                      |
| 380121 | Ethics  |
| 380131 | Logic   |
| 380141 | Epistemics                                      |
| 380151 | Social Justice Issues                           |
| 420100 | Psychology, Other General                       |
| 420111 | Psychology                                      |
| 420112 | Psychology, Advanced                            |
| 420113 | Abnormal Psychology                             |
| 420200 | Clinical Psychology, Other                      |
| 420300 | Cognitive Psychology, Other                     |
| 420311 | Psychology of Learning                          |
| 420321 | Educational Psychology                          |
| 420400 | Community Psychology, Other                     |
| 420500 | Comparative Psychology, Other                   |
| 420600 | Counseling Psychology, Other                    |
| 420700 | Developmental Psychology, Other                 |
| 420711 | Child Psychology                                |
| 420721 | Adolescent Psychology                           |
| 420731 | Adjustment Psychology                           |
| 420800 | Experimental Psychology, Other                  |
| 420900 | Industrial and Organizational Psychology, Other |
| 421000 | Personality Psychology, Other                   |
| 421011 | Historical Personalities and Ideas              |
| 421021 | Humanistic Psychology                           |
| 421100 | Physiological Psychology, Other                 |
| 421200 | Psycholinguistics, Other                        |

421300 Psychometrics, Other  
421400 Psychopharmacology, Other  
421411 Psychopharmacology  
421500 Quantitative Psychology, Other  
421600 Social Psychology, Other  
421611 Social Psychology  
429900 Psychology, Other  
440100 Public Affairs, Other General  
440200 Community Services, Other  
440300 International Public Service, Other  
440400 Public Administration, Other  
440500 Public Policy Studies, Other  
440600 Public Works, Other  
440700 Social Work, Other  
440711 Human Services  
449900 Public Affairs, Other  
450100 Social Sciences, Other General  
450111 Social Science, Introduction  
450121 Social Science, Advanced Theory and Research  
450131 Social Science Seminar  
450141 Social Studies, Independent Study  
450200 Anthropology, Other  
450211 Anthropology  
450221 Comparative Cultural Patterns  
450231 Anthropology, Myth and Magic  
450241 Cultural Anthropology, Research  
450300 Archaeology, Other  
450311 Archaeology  
450400 Criminology, Other  
450500 Demography, Other  
450511 Population Education  
450600 Economics, Other  
450601 Economics, Theory  
450602 Economics and Economic Problems  
450603 Consumer Economics  
450606 Investment Economics  
450607 Television and Economics  
450608 Energy Education  
450609 American Labor History  
450610 Economics, Analysis and Criticism  
450611 Economics, College  
450612 International Economics  
450700 Geography, Other  
450701 Geography 8  
450702 Geography, United States  
450703 Geography, North American  
450704 World Geography  
450705 Geography, Western Hemisphere and Africa  
450706 Geography, Eastern Hemisphere

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|--------|---|
| 450707 | Physical Geography                            |
| 450708 | Economic and Political Geography              |
| 450709 | Human and Cultural Geography                  |
| 450710 | Field Geography, Honors                       |
| 450800 | History, Other                                |
| 450801 | History and Geography 7                       |
| 450802 | Our Cultural Heritage 7                       |
| 450803 | Social Studies 7, Honors                      |
| 450804 | United States History 8                       |
| 450805 | Social Studies 8                              |
| 450806 | Social Studies 8, Honors                      |
| 450807 | United States History, State and Local        |
| 450808 | United States History, Advanced Placement     |
| 450809 | American History, Basic                       |
| 450810 | American History                              |
| 450811 | United States History 1                       |
| 450812 | United States History 2                       |
| 450813 | United States History, Honors                 |
| 450814 | American History, Advanced Placement          |
| 450815 | Westward Movement                             |
| 450816 | Twentieth Century America                     |
| 450817 | Twenties and Thirties                         |
| 450818 | America Since 1945                            |
| 450819 | Nineteen Sixties                              |
| 450820 | Nineteen Seventies                            |
| 450821 | Reform in American History                    |
| 450822 | American Inquiries                            |
| 450823 | Historic Events, United States                |
| 450824 | American Wars, Causes and Effects             |
| 450825 | Civil War                                     |
| 450826 | Civil War, Reconstruction and Industrialism   |
| 450827 | War and Modern Consciousness                  |
| 450828 | World War II                                  |
| 450829 | United States Military History 1              |
| 450830 | United States Military History 2              |
| 450831 | United States History, Field Study            |
| 450832 | North American History                        |
| 450833 | Mexican History                               |
| 450834 | South American History                        |
| 450835 | World History                                 |
| 450836 | World History, College                        |
| 450837 | World History, Modern                         |
| 450838 | World Civilization, Twentieth Century         |
| 450839 | World Civilization, Twentieth Century, Honors |
| 450840 | Western Civilization 9                        |
| 450841 | Western Civilization 9, Honors                |
| 450842 | Western Civilization, History                 |
| 450843 | Early Western Civilization                    |
| 450844 | Western Civilization, Advanced Placement      |

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|--------|--|
| 450845 | Ancient and Classical World                    |
| 450846 | Ancient Greek History                          |
| 450847 | Rome and Her Empire                            |
| 450848 | Ancient History and Middle Ages                |
| 450849 | English History                                |
| 450850 | English History, Honors                        |
| 450851 | French Revolution, Honors                      |
| 450852 | Modern Europe                                  |
| 450853 | European History, Mid-Nineteenth Through       |
| 450854 | European History, Twentieth Century            |
| 450855 | European History, Advanced Readings            |
| 450856 | European History, Modern, Advanced Placement   |
| 450857 | Third World History                            |
| 450858 | African History                                |
| 450859 | Africa, Middle East and Latin America          |
| 450860 | Latin American History                         |
| 450861 | Middle East History                            |
| 450862 | Israel, History                                |
| 450863 | Eastern Civilization                           |
| 450864 | Far East, History                              |
| 450865 | Asian History, Modern                          |
| 450866 | Pacific Lands, History                         |
| 450867 | Russian History                                |
| 450868 | World Leaders, Past and Present                |
| 450869 | Historical Research                            |
| 450900 | International Relations, Other                 |
| 450911 | International Relations                        |
| 450921 | International Relations, Honors                |
| 450931 | International Law                              |
| 450941 | Model Security Council, Local                  |
| 450951 | Model United Nations, Local                    |
| 450952 | Model United Nations, National                 |
| 451000 | Political Science and Government, Other        |
| 451001 | Civics   |
| 451002 | State and Local Government                     |
| 451003 | Government, Basic                              |
| 451004 | American Government                            |
| 451005 | Presidency                                     |
| 451006 | Framework of the Constitution                  |
| 451007 | Individual vs State                            |
| 451008 | National State and Local Elections             |
| 451009 | Elections, Politics and Morality, Honors       |
| 451010 | Contemporary World Affairs                     |
| 451011 | American Foreign Policy                        |
| 451012 | Decision Making in a Crisis                    |
| 451013 | American Heritage, Honors                      |
| 451014 | Contemporary American Political Issues         |
| 451015 | Contemporary American Political Issues, Honors |
| 451016 | American Government and Economics, Basic       |

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|--------|---|
| 451017 | American Government and Economics         |
| 451018 | American Government and Economics, Honors |
| 451019 | Comparative Political Systems, Basic      |
| 451020 | Comparative World Governments             |
| 451021 | Americanism vs Communism                  |
| 451022 | Americanism vs Communism, Honors          |
| 451023 | Communism and Its Growth                  |
| 451024 | Civics, Honors                            |
| 451025 | Writings Influencing Government           |
| 451026 | Government Internship                     |
| 451027 | Model Senate                              |
| 451028 | Political Leadership                      |
| 451029 | Political Science                         |
| 451030 | Political Science, Advanced Placement     |
| 451031 | Political Science and Government -        |
| 451032 | Political Turmoil                         |
| 451033 | Contemporary Issues, Basic Skills         |
| 451100 | Sociology, Other                          |
| 451111 | American Social Problems, Introduction    |
| 451121 | Sociology, General                        |
| 451131 | Sociology, Issues                         |
| 451132 | The Poor in America                       |
| 451141 | Mobility in Society                       |
| 451151 | Violence In America                       |
| 451161 | Death and Dying                           |
| 451171 | Sociology, Honors                         |
| 451181 | Sociology, Research                       |
| 451200 | Urban Studies, Other                      |
| 451211 | Urban Problems                            |
| 451221 | Urban Ecology                             |
| 451231 | Technology and Urbanization               |
| 459900 | Social Sciences, Other                    |

**F2RHIS\_C Total Carnegie Units in History**

| CSSC CODE | TITLE   |
|-----------|---|
| 050100    | Area Studies, Other                               |
| 050101    | Area Studies                                      |
| 050102    | American Studies, Basic                           |
| 050103    | American Studies, General                         |
| 050104    | America's People and Problems                     |
| 050105    | American Studies, Honors                          |
| 050106    | New England Studies                               |
| 050107    | Old South   |
| 050108    | American West                                     |
| 050109    | Southwest United States                           |
| 050110    | Anglo America                                     |
| 050111    | North America and Current Events                  |
| 050112    | North and South America                           |
| 050113    | Latin America                                     |
| 050114    | World Studies 1                                   |
| 050115    | World Studies 2                                   |
| 050116    | World Studies, Honors                             |
| 050117    | Comparative World Cultures                        |
| 050118    | European Culture Studies, Basic                   |
| 050119    | European Culture Studies, General                 |
| 050120    | European Culture Studies, Honors                  |
| 050121    | Developing Nations                                |
| 050122    | African Area Studies                              |
| 050123    | Africa and South America                          |
| 050124    | Asian and African Cultural Studies, Basic         |
| 050125    | Asian and African Cultural Studies, General       |
| 050126    | Asian and African Cultural Studies, Honors        |
| 050127    | Asian Studies                                     |
| 050128    | History of China                                  |
| 050129    | Asia, Africa and Mideast                          |
| 050130    | Africa and Middle East                            |
| 050131    | Middle Eastern Studies                            |
| 050132    | Middle East, War for Survival                     |
| 050133    | U S S R   |
| 050134    | Soviet Union and China                            |
| 050135    | Soviet Union and Afro American Developing Nations |
| 050136    | History of Russia                                 |
| 050137    | Neglected World                                   |
| 050138    | Global Education                                  |
| 050139    | Pacific Rim Nations                               |
| 050140    | Canadian Area Studies                             |
| 050200    | Ethnic Studies, Other                             |
| 050211    | Minorities in America                             |
| 050221    | Ethnic and Family Heritage                        |
| 050231    | Afro American Studies                             |

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|        |   |
|--------|---|
| 050241 | Economics of Afro Americans                   |
| 050251 | Indians of North America                      |
| 050261 | Jewish Historical Significance                |
| 050271 | Mexican American Heritage                     |
| 050281 | Hawaiian                                      |
| 050291 | Hawaiian Culture Studies, Modern              |
| 059900 | Area and Ethnic Studies, Other                |
| 450801 | History and Geography 7                       |
| 450802 | Our Cultural Heritage 7                       |
| 450803 | Social Studies 7, Honors                      |
| 450804 | United States History 8                       |
| 450805 | Social Studies 8                              |
| 450806 | Social Studies 8, Honors                      |
| 450807 | United States History, State and Local        |
| 450808 | United States History, Advanced Placement     |
| 450809 | American History, Basic                       |
| 450810 | American History                              |
| 450811 | United States History 1                       |
| 450812 | United States History 2                       |
| 450813 | United States History, Honors                 |
| 450814 | American History, Advanced Placement          |
| 450815 | Westward Movement                             |
| 450816 | Twentieth Century America                     |
| 450817 | Twenties and Thirties                         |
| 450818 | America Since 1945                            |
| 450819 | Nineteen Sixties                              |
| 450820 | Nineteen Seventies                            |
| 450821 | Reform in American History                    |
| 450822 | American Inquiries                            |
| 450823 | Historic Events, United States                |
| 450824 | American Wars, Causes and Effects             |
| 450825 | Civil War                                     |
| 450826 | Civil War, Reconstruction and Industrialism   |
| 450827 | War and Modern Consciousness                  |
| 450828 | World War II                                  |
| 450829 | United States Military History 1              |
| 450830 | United States Military History 2              |
| 450831 | United States History, Field Study            |
| 450832 | North American History                        |
| 450833 | Mexican History                               |
| 450834 | South American History                        |
| 450835 | World History                                 |
| 450836 | World History, College                        |
| 450837 | World History, Modern                         |
| 450838 | World Civilization, Twentieth Century         |
| 450839 | World Civilization, Twentieth Century, Honors |
| 450840 | Western Civilization 9                        |
| 450841 | Western Civilization 9, Honors                |
| 450842 | Western Civilization, History                 |

450843 Early Western Civilization  
450844 Western Civilization, Advanced Placement  
450845 Ancient and Classical World  
450846 Ancient Greek History  
450847 Rome and Her Empire  
450848 Ancient History and Middle Ages  
450849 English History  
450850 English History, Honors  
450851 French Revolution, Honors  
450852 Modern Europe  
450853 European History, Mid-Nineteenth Through  
450854 European History, Twentieth Century  
450855 European History, Advanced Readings  
450856 European History, Modern, Advanced Placement  
450857 Third World History  
450858 African History  
450859 Africa, Middle East and Latin America  
450860 Latin American History  
450861 Middle East History  
450862 Israel, History  
450863 Eastern Civilization  
450864 Far East, History  
450865 Asian History, Modern  
450866 Pacific Lands, History  
450867 Russian History  
450868 World Leaders, Past and Present  
450869 Historical Research



**F2ROSO\_C Total Carnegie Units in Social Studies Other than History**

| CSSC CODE | TITLE   |
|-----------|---|
| 220100    | Law, Other                                      |
| 220111    | Law Fundamentals                                |
| 220121    | Law and You                                     |
| 220131    | Street Law                                      |
| 300400    | Humanities and Social Sciences, Other           |
| 300411    | Humanities                                      |
| 300421    | Humanities, European                            |
| 300431    | Humanities, American                            |
| 300441    | Humanities, African                             |
| 300451    | Humanities, Near East and Far East              |
| 300500    | Peace Studies, Other                            |
| 300700    | Women's Studies, Other                          |
| 300711    | Women's Studies                                 |
| 300721    | Women's Studies in Literature                   |
| 380100    | Philosophy, Other                               |
| 380111    | Philosophy                                      |
| 380121    | Ethics  |
| 380131    | Logic   |
| 380141    | Epistemics                                      |
| 380151    | Social Justice Issues                           |
| 420100    | Psychology, Other General                       |
| 420111    | Psychology                                      |
| 420112    | Psychology, Advanced                            |
| 420113    | Abnormal Psychology                             |
| 420200    | Clinical Psychology, Other                      |
| 420300    | Cognitive Psychology, Other                     |
| 420311    | Psychology of Learning                          |
| 420321    | Educational Psychology                          |
| 420400    | Community Psychology, Other                     |
| 420500    | Comparative Psychology, Other                   |
| 420600    | Counseling Psychology, Other                    |
| 420700    | Developmental Psychology, Other                 |
| 420711    | Child Psychology                                |
| 420721    | Adolescent Psychology                           |
| 420731    | Adjustment Psychology                           |
| 420800    | Experimental Psychology, Other                  |
| 420900    | Industrial and Organizational Psychology, Other |
| 421000    | Personality Psychology, Other                   |
| 421011    | Historical Personalities and Ideas              |
| 421021    | Humanistic Psychology                           |
| 421100    | Physiological Psychology, Other                 |
| 421200    | Psycholinguistics, Other                        |
| 421300    | Psychometrics, Other                            |
| 421400    | Psychopharmacology, Other                       |
| 421411    | Psychopharmacology                              |

|        |  |
|--------|--|
| 421500 | Quantitative Psychology, Other               |
| 421600 | Social Psychology, Other                     |
| 421611 | Social Psychology                            |
| 429900 | Psychology, Other                            |
| 440100 | Public Affairs, Other General                |
| 440200 | Community Services, Other                    |
| 440300 | International Public Service, Other          |
| 440400 | Public Administration, Other                 |
| 440500 | Public Policy Studies, Other                 |
| 440600 | Public Works, Other                          |
| 440700 | Social Work, Other                           |
| 440711 | Human Services                               |
| 449900 | Public Affairs, Other                        |
| 450100 | Social Sciences, Other General               |
| 450111 | Social Science, Introduction                 |
| 450121 | Social Science, Advanced Theory and Research |
| 450131 | Social Science Seminar                       |
| 450141 | Social Studies, Independent Study            |
| 450200 | Anthropology, Other                          |
| 450211 | Anthropology                                 |
| 450221 | Comparative Cultural Patterns                |
| 450231 | Anthropology, Myth and Magic                 |
| 450241 | Cultural Anthropology, Research              |
| 450300 | Archaeology, Other                           |
| 450311 | Archaeology                                  |
| 450400 | Criminology, Other                           |
| 450500 | Demography, Other                            |
| 450511 | Population Education                         |
| 450600 | Economics, Other                             |
| 450601 | Economics, Theory                            |
| 450602 | Economics and Economic Problems              |
| 450603 | Consumer Economics                           |
| 450604 | Filing Your Income Taxes                     |
| 450605 | Insurance Theory                             |
| 450606 | Investment Economics                         |
| 450607 | Television and Economics                     |
| 450608 | Energy Education                             |
| 450609 | American Labor History                       |
| 450610 | Economics, Analysis and Criticism            |
| 450611 | Economics, College                           |
| 450612 | International Economics                      |
| 450700 | Geography, Other                             |
| 450701 | Geography 8                                  |
| 450702 | Geography, United States                     |
| 450703 | Geography, North American                    |
| 450704 | World Geography                              |
| 450705 | Geography, Western Hemisphere and Africa     |
| 450706 | Geography, Eastern Hemisphere                |
| 450707 | Physical Geography                           |

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450708 Economic and Political Geography  
450709 Human and Cultural Geography  
450710 Field Geography, Honors  
450900 International Relations, Other  
450911 International Relations  
450921 International Relations, Honors  
450931 International Law  
450941 Model Security Council, Local  
450951 Model United Nations, Local  
450952 Model United Nations, National  
451000 Political Science and Government, Other  
451001 Civics  
451002 State and Local Government  
451003 Government, Basic  
451004 American Government  
451005 Presidency  
451006 Framework of the Constitution  
451007 Individual vs State  
451008 National State and Local Elections  
451009 Elections, Politics and Morality, Honors  
451010 Contemporary World Affairs  
451011 American Foreign Policy  
451012 Decision Making in a Crisis  
451013 American Heritage, Honors  
451014 Contemporary American Political Issues  
451015 Contemporary American Political Issues, Honors  
451016 American Government and Economics, Basic  
451017 American Government and Economics  
451018 American Government and Economics, Honors  
451019 Comparative Political Systems, Basic  
451020 Comparative World Governments  
451021 Americanism vs Communism  
451022 Americanism vs Communism, Honors  
451023 Communism and Its Growth  
451024 Civics, Honors  
451025 Writings Influencing Government  
451026 Government Internship  
451027 Model Senate  
451028 Political Leadership  
451029 Political Science  
451030 Political Science, Advanced Placement  
451031 Political Science and Government -  
451032 Political Turmoil  
451033 Contemporary Issues, Basic Skills  
451100 Sociology, Other  
451111 American Social Problems, Introduction  
451121 Sociology, General  
451131 Sociology, Issues  
451132 The Poor in America

|        |                             |
|--------|-----------------------------|
| 451141 | Mobility in Society         |
| 451151 | Violence In America         |
| 451161 | Death and Dying             |
| 451171 | Sociology, Honors           |
| 451181 | Sociology, Research         |
| 451200 | Urban Studies, Other        |
| 451211 | Urban Problems              |
| 451221 | Urban Ecology               |
| 451231 | Technology and Urbanization |
| 459900 | Social Sciences, Other      |

**F2RCOM\_C Total Carnegie Units in Computer Science/Programming/Data Processing**

| CSSC CODE | TITLE  |
|-----------|--|
| 070300    | Business Data Processing and Related Programs, Other |
| 070311    | Computers In Business                                |
| 070321    | Business Data Processing 1                           |
| 070322    | Business Data Processing 2                           |
| 070331    | Business Computer Programming 1                      |
| 070332    | Business Computer Programming 2                      |
| 070361    | Keyboarding  |
| 110100    | Computer and Information Sciences, Other General     |
| 110111    | Computer Appreciation                                |
| 110121    | Computer Mathematics 1                               |
| 110122    | Computer Mathematics 2                               |
| 110131    | Computer Applications                                |
| 110132    | Computer Applications, Independent Study             |
| 110141    | Computer Science, Advanced Placement                 |
| 110151    | Artificial Intelligence                              |
| 110200    | Computer Programming, Other                          |
| 110211    | Computer Programming 1                               |
| 110212    | Computer Programming 2                               |
| 110213    | Computer Programming 3                               |
| 110221    | FORTRAN, Introduction                                |
| 110231    | PASCAL, Introduction                                 |
| 110232    | Advanced PASCAL                                      |
| 110241    | BASIC, Introduction                                  |
| 110242    | Advanced BASIC                                       |
| 110251    | COBOL, Introduction                                  |
| 110252    | Advanced COBOL                                       |
| 110261    | LOGO, Introduction                                   |
| 110271    | RPG Programming, Introduction                        |
| 110300    | Data Processing, Other                               |
| 110311    | Data Processing, Introduction                        |
| 110312    | Data Processing, Intermediate                        |
| 110313    | Data Processing, Advanced                            |
| 110321    | Computer Programming - Cooperative Education         |
| 110400    | Information Sciences and Systems, Other              |
| 110500    | Systems Analysis, Other                              |
| 119900    | Computer and Information Sciences, Other             |
| 150431    | Computer-Assisted Design/Drafting (CAD)              |

**F2RVGN\_C Total Carnegie Units in General Introductory Vocational Courses**

| CSSC CODE | TITLE                                  |
|-----------|--|
| 010111    | Agribusiness, Introduction             |
| 010311    | Agricultural Production, General       |
| 020111    | Agricultural Sciences, General         |
| 060100    | Business and Management, Other General |
| 060111    | Business Introduction                  |
| 060121    | Business Law                           |
| 060131    | Business, Independent Study            |
| 060300    | Banking and Finance, Other             |
| 060311    | Financial Careers                      |
| 080711    | Distributive Education 1               |
| 170511    | Health Occupations 1                   |
| 320106    | Cooperative Education 1                |
| 320107    | Cooperative Education 2                |

**F2RVAG\_C Total Carnegie Units in Agriculture**

CSSC CODE TITLE

|        |   |
|--------|---|
| 010100 | Agricultural Business and Management, Other |
| 010121 | Agricultural Business Operation             |
| 010131 | Farm and Ranch Management                   |
| 010141 | State and Community Agriculture             |
| 010151 | Agricultural Mathematics                    |
| 010161 | Agricultural Microprocessing                |
| 010171 | Agriculture Cooperatives                    |
| 010172 | Agricultural Cooperative Education II       |
| 010181 | Agriculture, Independent Study              |
| 010182 | SOEP - Supervised Occupational              |
| 010200 | Agricultural Mechanics, Other               |
| 010211 | Agricultural Mechanics, General             |
| 010212 | Agricultural Mechanics 2                    |
| 010213 | Agricultural Mechanics 3                    |
| 010214 | Agricultural Mechanics 4                    |
| 010221 | Welding, Agricultural                       |
| 010231 | Power and Machinery, Agricultural           |
| 010241 | Farm Construction                           |
| 010251 | Electricity and Electronics, Agricultural   |
| 010261 | Soil and Water Mechanical Practices         |
| 010271 | Surveying, Agricultural                     |
| 010300 | Agricultural Production, Other              |
| 010312 | Agriculture Technology 1                    |
| 010313 | Agriculture Technology 2                    |
| 010321 | Animal Production                           |
| 010331 | Crop Production                             |
| 010400 | Agricultural Products and Processing, Other |
| 010411 | Agricultural Products and Processing I      |
| 010412 | Agricultural Products and Processing II     |
| 010421 | Agricultural Products and Processing -      |
| 010500 | Agricultural Services and Supplies, Other   |
| 010511 | Agricultural Supplies Marketing             |
| 010521 | Animal Grooming                             |
| 010600 | Horticulture, Other                         |
| 010611 | Horticulture                                |
| 010621 | Floriculture                                |
| 010631 | Landscaping                                 |
| 010632 | Landscaping, Advanced                       |
| 010641 | Greenhouse Management                       |
| 010651 | Nursery Operations and Management           |
| 010661 | Horticultural Mechanics I                   |
| 010662 | Horticultural Mechanics II                  |
| 010671 | Turf Management                             |
| 010681 | Fruit and Vegetable Production              |
| 010700 | International Agriculture, Other            |

|        |   |
|--------|---|
| 019900 | Agribusiness and Agricultural Production, Other |
| 020100 | Agricultural Sciences, Other General            |
| 020121 | Agricultural Occupations 1                      |
| 020122 | Agricultural Occupations 2                      |
| 020123 | Agricultural Occupations 3                      |
| 020124 | Agricultural Occupations 4                      |
| 020200 | Animal Sciences, Other                          |
| 020211 | Animal Sciences 1                               |
| 020212 | Animal Sciences 2                               |
| 020221 | Livestock 9                                     |
| 020222 | Livestock 10                                    |
| 020231 | Poultry   |
| 020241 | Dairy Production                                |
| 020251 | Nutrition and Feeds                             |
| 020261 | Horse Production                                |
| 020262 | Horseshoeing/Farrier Training                   |
| 020271 | Small Animal Production 1                       |
| 020272 | Small Animal Production 2                       |
| 020281 | Fish Production                                 |
| 020300 | Food Sciences, Other                            |
| 020400 | Plant Sciences, Other                           |
| 020411 | Agronomy  |
| 020421 | Ornamental Horticulture 1                       |
| 020422 | Ornamental Horticulture 2                       |
| 020423 | Ornamental Horticulture 3                       |
| 020500 | Soil Sciences, Other                            |
| 020511 | Soil Sciences, General                          |
| 020521 | Fertilizers and Chemicals                       |
| 029900 | Agricultural Sciences, Other                    |
| 030100 | Renewable Natural Resources, Other General      |
| 030200 | Conservation and Regulation, Other              |
| 030211 | Conservation and Regulation                     |
| 030212 | Environmental Management 1                      |
| 030213 | Environmental Management 2                      |
| 030221 | Environmental Management - Cooperative          |
| 030300 | Fishing and Fisheries, Other                    |
| 030311 | Waterman Occupations                            |
| 030400 | Forestry Production and Processing, Other       |
| 030500 | Forestry and Related Sciences, Other            |
| 030511 | Forestry Science 1                              |
| 030512 | Forestry Science 2                              |
| 030521 | Forestry Occupations - Work Experience          |
| 030600 | Wildlife Management, Other                      |
| 030611 | Wildlife Management                             |
| 030621 | Rural Recreation                                |
| 039900 | Renewable Natural Resources, Other              |



**F2RVBU\_C Total Carnegie Units in Business**

| CSSC CODE | TITLE  |
|-----------|--|
| 060141    | Business Education, Cooperative                      |
| 060200    | Accounting, Other                                    |
| 060211    | Accounting/Business Management Careers -             |
| 060331    | Consumer Lending                                     |
| 060400    | Business Administration and Management, Other        |
| 060411    | Business Organization and Management                 |
| 061000    | Investments and Securities, Other                    |
| 061011    | Investments and Taxation                             |
| 061800    | Small Business Management and Ownership, Other       |
| 061811    | Small Business Management                            |
| 061900    | Taxation, Other                                      |
| 070100    | Accounting, Bookkeeping, and Related Programs, Other |
| 070111    | Bookkeeping 1  |
| 070112    | Bookkeeping 2  |
| 070121    | Accounting 1   |
| 070122    | Accounting 2   |
| 070131    | Accounting, College                                  |
| 070141    | Bookkeeping and Accounting 1                         |
| 070142    | Bookkeeping and Accounting 2                         |
| 070151    | Recordkeeping 1                                      |
| 070152    | Recordkeeping 2                                      |
| 070153    | Personal Recordkeeping                               |
| 070161    | Office Machines                                      |
| 070162    | Office Machines, Vocational                          |
| 070200    | Banking and Related Financial Programs, Other        |
| 070201    | Banking & Financial Careers                          |
| 070211    | Bank Teller  |
| 070221    | Financial Mathematics                                |
| 070231    | Bank Proof Operator                                  |
| 070241    | Bank Data Entry Occupations                          |
| 070251    | Banking and Financial Careers - Cooperative          |
| 070341    | Key Punch Operator                                   |
| 070351    | Data Entry Operator 1                                |
| 070352    | Data Entry Operator 2                                |
| 070371    | Peripheral Computer Operator                         |
| 070600    | Secretarial and Related Programs, Other              |
| 070611    | Shorthand 1  |
| 070612    | Shorthand 2  |
| 070621    | Transcription  |
| 070631    | Secretarial Administration 1                         |
| 070632    | Secretarial Administration 2                         |
| 070641    | Word Processing 1                                    |
| 070642    | Word Processing 2                                    |
| 070643    | Word Processing 3                                    |
| 070651    | Reprographics  |

|        |   |
|--------|---|
| 070661 | Legal Office Procedures                             |
| 070662 | Court Reporter                                      |
| 070671 | Medical Office Procedures                           |
| 070681 | Legal/Medical Office Procedures                     |
| 070700 | Typing, General Office, and Related Programs, Other |
| 070712 | Typewriting 2                                       |
| 070713 | Typewriting 3                                       |
| 070731 | Office Procedures 1                                 |
| 070732 | Office Procedures 2                                 |
| 070733 | Simulated Office                                    |
| 070741 | Office Education 1, Cooperative                     |
| 070742 | Office Education 2, Cooperative                     |
| 079900 | Business and Office, Other                          |

**F2RVMA\_C Total Carnegie Units in Marketing and Distribution**

|        |  |
|--------|--|
| 060321 | Real Estate Finance                                  |
| 060700 | Institutional Management, Other                      |
| 060711 | Hotel and Motel Management                           |
| 060712 | Hotel and Motel Training                             |
| 060800 | Insurance and Risk Management, Other                 |
| 060811 | Insurance Careers                                    |
| 061400 | Marketing Management and Research, Other             |
| 061411 | Marketing Management and Decision Making             |
| 061700 | Real Estate, Other                                   |
| 061711 | Real Estate Marketing                                |
| 080100 | Apparel and Accessories Marketing, Other             |
| 080111 | Fashion Merchandising                                |
| 080121 | Fashion Design and Illustration                      |
| 080131 | Fashion Merchandising - Cooperative                  |
| 080132 | Fashion Merchandising - Cooperative                  |
| 080200 | Business and Personal Services Marketing, Other      |
| 080300 | Entrepreneurship, Other                              |
| 080311 | Starting Your Own Business                           |
| 080400 | Financial Services Marketing, Other                  |
| 080500 | Floristry, Farm and Garden Supplies Marketing, Other |
| 080511 | Floral Sales   |
| 080600 | Food Marketing, Other                                |
| 080611 | Food Marketing/Distribution - Overview               |
| 080612 | Grocery Management                                   |
| 080621 | Food Marketing - Cooperative Education 1             |
| 080700 | General Marketing, Other                             |
| 080712 | Distributive Education 2                             |
| 080713 | Distributive Education 3                             |
| 080721 | Distributive Education 1, Cooperative                |
| 080722 | Distributive Education 2, Cooperative                |
| 080731 | Salesmanship   |
| 080741 | Retail Learning Laboratory                           |
| 080751 | Cashier Checker Training                             |
| 080761 | Warehousing Industrial and Wholesale Material        |
| 080771 | Distributive Education, Independent Study            |
| 080800 | Home and Office Products Marketing, Other            |
| 080811 | Computer Sales Representative                        |
| 080900 | Hospitality and Recreation Marketing, Other          |
| 080911 | Orientation to Hospitality Careers                   |
| 080921 | Hospitality Sales 1                                  |
| 080922 | Hospitality Sales 2                                  |
| 081000 | Insurance Marketing, Other                           |
| 081100 | Transportation and Travel Marketing, Other           |
| 081111 | Tourism Services                                     |
| 081121 | Entertainment Park/Tourism - Cooperative             |
| 081200 | Vehicles and Petroleum Marketing, Other              |
| 081211 | Auto Parts Merchandising                             |

|        |  |
|--------|--|
| 081221 | Automotive Professional Training       |
| 089900 | Marketing and Distribution, Other      |
| 090200 | Advertising, Other                     |
| 090211 | Advertising                            |
| 120200 | Entertainment Services, Other          |
| 310100 | Parks and Recreation, Other General    |
| 310111 | Recreation Aide                        |
| 310121 | Search and Rescue                      |
| 310200 | Outdoor Recreation, Other              |
| 310211 | Winter/Ski Resort Operation            |
| 310300 | Parks and Recreation Management, Other |
| 310400 | Water Resources, Other                 |
| 319900 | Parks and Recreation, Other            |

**F2RVHE\_C Total Carnegie Units in Health and Human Resources**

|        |  |
|--------|--|
| 120300 | Funeral Services, Other                      |
| 170100 | Dental Services, Other                       |
| 170111 | Dental Assistant 1                           |
| 170112 | Dental Assistant 2                           |
| 170121 | Dental Assistant, Cooperative                |
| 170131 | Dental Technology 1                          |
| 170132 | Dental Technology 2                          |
| 170200 | Diagnostic and Treatment Services, Other     |
| 170211 | First Aid                                    |
| 170221 | EKG Technician                               |
| 170311 | Laboratory Program 1                         |
| 170312 | Laboratory Program 2                         |
| 170400 | Mental Health/Human Services, Other          |
| 170411 | Home Health Aide                             |
| 170421 | Community Health                             |
| 170431 | Mental Health Worker                         |
| 170500 | Miscellaneous Allied Health Services, Other  |
| 170521 | Health Occupations 2                         |
| 170522 | Central Service Technician                   |
| 170531 | Medical Terminology                          |
| 170541 | Medical Records Secretary                    |
| 170551 | Medical Assisting                            |
| 170561 | Sports Medicine                              |
| 170571 | Veterinary Science                           |
| 170581 | Chemistry for Health Science                 |
| 170591 | Health Occupations, Independent Study        |
| 170592 | Health Occupations - Cooperative Education 1 |
| 170593 | Health Occupations - Cooperative Education 2 |
| 170600 | Nursing-Related Services, Other              |
| 170621 | Nursing, Practical                           |
| 170631 | Nurse's Aide and Orderly                     |
| 170641 | Nurse's Aide, Cooperative                    |
| 170651 | Nurse's Mathematics                          |
| 170700 | Ophthalmic Services, Other                   |
| 170711 | Optical Services Assistant                   |
| 170800 | Rehabilitation Services, Other               |
| 179900 | Allied Health, Other                         |
| 430100 | Criminal Justice, Other                      |
| 430111 | Law Enforcement                              |
| 430121 | Law Science                                  |
| 430200 | Fire Protection, Other                       |
| 430211 | Fire Fighting Practices                      |
| 430221 | Fire Safety Education                        |
| 430311 | Security Guard                               |
| 439900 | Protective Services, Other                   |

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**F2RVHO\_C Total Carnegie Units in Vocational Home Economics**

|        |   |
|--------|---|
| 040500 | Interior Design, Other  |
| 040511 | Interior Design   |
| 190100 | Home Economics, Other General   |
| 190200 | Business Home Economics, Other  |
| 190300 | Family and Community Services, Other                                  |
| 190400 | Family/Consumer Resource Management, Other                            |
| 190500 | Food Sciences and Human Nutrition, Other                              |
| 190600 | Human Environment and Housing, Other                                  |
| 190700 | Individual and Family Development, Other                              |
| 190800 | International/Comparative Home Economics, Other                       |
| 190900 | Textiles and Clothing, Other  |
| 199900 | Home Economics, Other   |
| 200193 | Home Economics - Cooperative Education 1                              |
| 200194 | Home Economics - Cooperative Education 2                              |
| 200200 | Child Care and Guidance Management and Services, Other                |
| 200211 | Child Care Services   |
| 200221 | Child Care Aide   |
| 200231 | Child Care Management   |
| 200241 | Foster Care and Family Care   |
| 200251 | Teacher Aide/Elementary   |
| 200252 | Teacher Aide/Secondary  |
| 200261 | Child Care - Cooperative Education 1                                  |
| 200262 | Child Care - Cooperative Education 2                                  |
| 200300 | Clothing, Apparel, and Textiles Management, Production, and Services, |
| 200311 | Clothing Occupations 1  |
| 200312 | Clothing Occupations 2  |
| 200313 | Clothing Occupations 3  |
| 200314 | Clothing Occupations - Cooperative Education I                        |
| 200315 | Clothing Occupations - Cooperative Education 2                        |
| 200321 | Clothing Maintenance Aide   |
| 200331 | Commercial Garment and Apparel Construction                           |
| 200341 | Custom Apparel Construction   |
| 200351 | Custom Tailoring and Alteration                                       |
| 200361 | Wedding and Specialty Consulting                                      |
| 200371 | Fashion and Fabric Coordination                                       |
| 200381 | Textiles Testing  |
| 200391 | Clothing Production Management  |
| 200400 | Food Production, Management and Services, Other                       |
| 200411 | Food Service Training   |
| 200412 | Food Service Training 2   |
| 200413 | Food Services/Restaurant Management                                   |
| 200421 | Food Service Cooperative Training                                     |
| 200431 | Baking  |
| 200441 | Chef  |
| 200451 | Catering  |
| 200461 | Dietetic Aide   |
| 200471 | Food Testing  |

|        |  |
|--------|--|
| 200481 | School Food Service  |
| 200500 | Home Furnishings and Equipment Management, Production, and Services, |
| 200511 | Housing and Interior Design 1  |
| 200512 | Housing and Interior Design 2  |
| 200513 | Interior Design Occupations  |
| 200521 | Floral Design  |
| 200531 | Home Decorating  |
| 200541 | Home Furnishings Aide  |
| 200551 | Custom Drapery and Window Treatment Design                           |
| 200561 | Custom Slipcovering and Upholstering                                 |
| 200571 | Home-Service Assisting 1   |
| 200572 | Home Service Assisting 2   |
| 200573 | Home Service Asst - Cooperative Education 1                          |
| 200574 | Home Service Asst - Cooperative Education 2                          |
| 200600 | Institutional, Home Management, and Supporting                       |
| 200611 | Custodial Services   |
| 200621 | Executive Housekeeping   |
| 200631 | Homemaker's Aide   |
| 200641 | Companion to the Aged  |
| 200642 | Geriatrics 2   |
| 200643 | Geriatrics - Cooperative Education 1                                 |
| 200644 | Geriatrics - Cooperative Education 2                                 |
| 200651 | Consumer Aide  |
| 200661 | Therapeutic Recreation Aide  |
| 200671 | Institutional, Home Management Support Services -                    |
| 209900 | Vocational Home Economics, Other                                     |

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**F2RVTR\_C Total Carnegie Units in Trade and Industry**

|        |   |
|--------|---|
| 120100 | Dry Cleaning and Laundering Services, Other           |
| 120111 | Dry Cleaning 1  |
| 120112 | Dry Cleaning 2  |
| 120400 | Personal Services, Other                              |
| 120412 | Cosmetology 2   |
| 120413 | Cosmetology 3   |
| 120414 | Cosmetology - Cooperative Education 2                 |
| 120415 | Cosmetology - Cooperative Education 2                 |
| 120421 | Barbering 1   |
| 120422 | Barbering 2   |
| 120423 | Barbering 3   |
| 120431 | Personal Services Occupations                         |
| 120511 | General Services Occupations 1                        |
| 120512 | General Services Occupations 2                        |
| 120513 | General Services Occupations 3                        |
| 120514 | General Services Occupations 4                        |
| 120521 | Building & Grounds Maintenance                        |
| 120522 | Building & Grounds Maintenance                        |
| 120531 | Industrial Maintenance/Mechanics 1                    |
| 120532 | Industrial Maintenance/Mechanics 2                    |
| 129900 | Consumer, Personal, and Miscellaneous Services, Other |
| 150100 | Architectural Technologies, Other                     |
| 150111 | Structural Engineering Technician                     |
| 150200 | Civil Technologies, Other                             |
| 150211 | Surveying   |
| 150221 | Civil Engineering Technician                          |
| 150300 | Electrical and Electronic Technologies, Other         |
| 150311 | Audio Electronics                                     |
| 150321 | Electrical Technology                                 |
| 150331 | Electronic Technology 1                               |
| 150332 | Electronic Technology 2                               |
| 150333 | Electronics Fabrication                               |
| 150341 | Electrical/Electronics Engineering Technician         |
| 150400 | Electromechanical Instrumentation and Maintenance     |
| 150411 | Electromechanical Technology 1                        |
| 150412 | Electromechanical Technology 2                        |
| 150421 | Instrumentation Technology                            |
| 150500 | Environmental Control Technologies, Other             |
| 150511 | Environmental Control Technologies                    |
| 150600 | Industrial Production Technologies, Other             |
| 150601 | Industrial Research & Development                     |
| 150611 | Industrial Production Technology 1                    |
| 150612 | Industrial Production Technology 2                    |
| 150631 | Optics Technology                                     |
| 150700 | Quality Control and Safety Technologies, Other        |
| 150711 | Quality Control Technology                            |
| 150800 | Mechanical and Related Technologies, Other            |



|        |   |
|--------|---|
| 150811 | Automotive Design & Technology                          |
| 150821 | Mechanical Engineering Technology                       |
| 150900 | Mining and Petroleum Technologies, Other                |
| 150911 | Mining Technology                                       |
| 150921 | Petroleum Technology                                    |
| 159900 | Engineering and Engineering-Related Technologies, Other |
| 210110 | Industrial Occupations 2                                |
| 210111 | Industrial Cooperative Work Experience                  |
| 210112 | Industrial Cooperative Work Experience, Advanced        |
| 210121 | Machine Shop 1  |
| 210122 | Machine Shop 2  |
| 210123 | Machine Shop 3  |
| 210124 | Machine Shop 4  |
| 210125 | Industrial Education Management Trainee                 |
| 210130 | Electricity - Cooperative Education 1                   |
| 210131 | Electricity - Cooperative Education 2                   |
| 210140 | Electronics - Cooperative Education 1                   |
| 210141 | Electronics - Cooperative Education 2                   |
| 210150 | Electricity/Electronics - Cooperative                   |
| 210151 | Electricity/Electronics - Cooperative                   |
| 460100 | Brickmasonry, Stonemasonry, and Tile Setting, Other     |
| 460111 | Masonry 1   |
| 460112 | Masonry 2   |
| 460113 | Masonry 3   |
| 460121 | Tile Setting and Plastering                             |
| 460131 | Concrete Technician                                     |
| 460200 | Carpentry, Other  |
| 460211 | Carpentry 1   |
| 460212 | Carpentry 2   |
| 460213 | Carpentry 3   |
| 460300 | Electrical and Power Transmission Installation, Other   |
| 460311 | Housewiring 1   |
| 460312 | Housewiring 2   |
| 460321 | Electric Power and Communications Lineworker            |
| 460400 | Miscellaneous Construction Trades, Other                |
| 460411 | Building Construction 1                                 |
| 460412 | Building Construction 2                                 |
| 460413 | Building Construction 3                                 |
| 460421 | Painting and Decorating                                 |
| 460422 | Flooring Installation                                   |
| 460431 | Building Maintenance                                    |
| 460451 | Building Construction - Cooperative Education 1         |
| 460452 | Building Construction - Cooperative Education 2         |
| 460500 | Plumbing, Pipefitting, and Steamfitting, Other          |
| 460511 | Plumbing 1  |
| 460512 | Plumbing 2  |
| 469900 | Construction Trades, Other                              |
| 470100 | Electrical and Electronics Equipment Repair, Other      |
| 470111 | Small Appliance Repair                                  |

|        |  |
|--------|--|
| 470121 | Radio and TV Repair 1                                  |
| 470122 | Radio and TV Repair 2                                  |
| 470123 | Radio and TV Repair 3                                  |
| 470124 | Telecommunications Technician                          |
| 470131 | Appliance Repair 1                                     |
| 470132 | Appliance Repair 2                                     |
| 470141 | Vending Machine Repair                                 |
| 470151 | Business Machine Repair                                |
| 470161 | Industrial Electricity                                 |
| 470171 | Industrial Electronics                                 |
| 470181 | Food Processing Machine Maintenance Technician         |
| 470200 | Heating, Air Conditioning, and Refrigeration           |
| 470211 | Air Conditioning, Refrigeration, and Heating           |
| 470212 | Air Conditioning, Refrigeration, and Heating, Advanced |
| 470213 | Air Conditioning, Refrigeration and Heating 3          |
| 470300 | Industrial Equipment Maintenance and Repair, Other     |
| 470311 | Industrial Mechanics 1                                 |
| 470312 | Industrial Mechanics 2                                 |
| 470321 | Diesel Mechanics                                       |
| 470331 | Industrial Maintenance Mechanics 1                     |
| 470332 | Industrial Maintenance Mechanics 2                     |
| 470341 | Petroleum Drilling Equipment Operation                 |
| 470342 | Petroleum Drilling Equipment Operation                 |
| 470400 | Miscellaneous Mechanics and Repairers, Other           |
| 470411 | Musical Instrument Repair                              |
| 470421 | Instrument Maintenance and Repair                      |
| 470431 | Shoe Repair and Orthopedics 1                          |
| 470432 | Shoe Repair and Orthopedics 2                          |
| 470433 | Watch and Clock Repair                                 |
| 470434 | Bicycle Repair   |
| 470500 | Stationary Energy Sources, Other                       |
| 470511 | Power Mechanics 1                                      |
| 470512 | Power Mechanics 2                                      |
| 470513 | Power Mechanics 3                                      |
| 470514 | Power Mechanics 4                                      |
| 470521 | Hydraulics and Pneumatics                              |
| 470600 | Vehicle and Mobile Equipment Mechanics and             |
| 470611 | Small Engine Repair 1                                  |
| 470612 | Small Engine Repair 2                                  |
| 470622 | Auto Mechanics 2                                       |
| 470623 | Auto Mechanics 3                                       |
| 470624 | Auto Mechanics - Cooperative Education 1               |
| 470625 | Auto Mechanics - Cooperative Education 2               |
| 470631 | Auto Body 1  |
| 470632 | Auto Body 2  |
| 470633 | Auto Body 3  |
| 470641 | Auto Service 1   |
| 470642 | Auto Service 2   |
| 470661 | Airframes 1  |

|        |  |
|--------|--|
| 470662 | Airframes 2                                |
| 470671 | Aviation Powerplant 1                      |
| 470672 | Aviation Powerplant 2                      |
| 470673 | Aviation Powerplant 3                      |
| 470674 | Aviation Powerplant 4                      |
| 470681 | Aviation Quality Control 1                 |
| 470682 | Aviation Quality Control 2                 |
| 470691 | Aircraft Sheetmetal 1                      |
| 470692 | Aircraft Sheetmetal 2                      |
| 479900 | Mechanics and Repairers, Other             |
| 480100 | Drafting, Other                            |
| 480112 | Mechanical Drawing 2                       |
| 480113 | Mechanical Drawing 3                       |
| 480114 | Mechanical Drawing 4                       |
| 480121 | Architectural Drawing 1                    |
| 480122 | Architectural Drawing 2                    |
| 480123 | Architectural Drawing 3                    |
| 480124 | Architectural Drawing 4                    |
| 480131 | Engineering Drawing 1                      |
| 480132 | Engineering Drawing 2                      |
| 480141 | Blueprint Reading                          |
| 480151 | Drafting 1, Cooperative                    |
| 480152 | Drafting 2, Cooperative                    |
| 480200 | Graphic and Printing Communications, Other |
| 480211 | Commercial Art 1                           |
| 480212 | Commercial Art 2                           |
| 480213 | Commercial Art, Cooperative                |
| 480214 | Commercial Art 3                           |
| 480221 | Graphic Arts 1                             |
| 480222 | Graphic Arts 2                             |
| 480223 | Graphic Arts 3                             |
| 480224 | Graphic Arts 4                             |
| 480231 | Sign Painting 1                            |
| 480232 | Sign Painting 2                            |
| 480233 | Sign Painting 3                            |
| 480241 | Bindery                                    |
| 480251 | Electronic Composition                     |
| 480261 | Copy Editing                               |
| 480300 | Leatherworking and Upholstering, Other     |
| 480312 | Leatherwork 2                              |
| 480321 | Upholstery                                 |
| 480322 | Upholstery, Advanced                       |
| 480331 | Auto Upholstery                            |
| 480400 | Precision Food Production, Other           |
| 480411 | Meatcutting 1                              |
| 480412 | Meatcutting 2                              |
| 480500 | Precision Metal Work, Other                |
| 480512 | Metal 2                                    |
| 480513 | Metal 3                                    |

|        |  |
|--------|--|
| 480514 | Metal 4  |
| 480521 | Welding 1                                      |
| 480522 | Welding 2                                      |
| 480523 | Welding 3                                      |
| 480524 | Welding - Cooperative Education                |
| 480531 | Sheet Metal 1                                  |
| 480532 | Sheet Metal 2                                  |
| 480541 | Metal Restoration                              |
| 480551 | Foundry 1                                      |
| 480552 | Foundry 2                                      |
| 480600 | Precision Work, Assorted Materials, Other      |
| 480611 | Plastics 1                                     |
| 480612 | Plastics 2                                     |
| 480621 | Space Age Plastics                             |
| 480700 | Woodworking, Other                             |
| 480712 | Woodworking 2                                  |
| 480713 | Woodworking 3                                  |
| 480714 | Woodworking 4                                  |
| 480721 | Furniture Refinishing                          |
| 480731 | Cabinetmaking 1                                |
| 480732 | Cabinetmaking 2                                |
| 489900 | Precision Production, Other                    |
| 490121 | Aviation Technology 1                          |
| 490122 | Aviation Technology 2                          |
| 490123 | Aviation Technology 3                          |
| 490124 | Aviation Technology 4                          |
| 490131 | Air Travel Service Occupations                 |
| 490141 | Aircraft Parts Management 1                    |
| 490142 | Aircraft Parts Management 2                    |
| 490200 | Vehicle and Equipment Operation, Other         |
| 490211 | Forklift Operator                              |
| 490212 | Tractor-Trailer Truck Driving                  |
| 490213 | Heavy Vehicle Operation/Earth Moving Equipment |
| 490214 | Bus Driver/Chauffeur                           |
| 490300 | Water Transportation, Other                    |
| 490311 | Marine Mechanics, Basic                        |
| 490312 | Marine Mechanics, Advanced                     |
| 490321 | Boat Building                                  |
| 490331 | Navigation                                     |
| 490341 | Aquatic Occupations                            |
| 490411 | Introduction to Transportation Industry        |
| 490412 | Transportation Technology 2                    |
| 490421 | Transportation/Traffic Technician              |
| 499900 | Transportation and Material Moving, Other      |

**F2RVTE\_C Total Carnegie Units in Technical**

|        |  |
|--------|--|
| 080781 | Telephone Service Representative       |
| 080782 | Telephone Directory Assistant          |
| 100100 | Communication Technologies, Other      |
| 100141 | Broadcast Management 1                 |
| 100142 | Broadcast Management 2                 |
| 100143 | Broadcasting Practicum                 |
| 100161 | Radio Production                       |
| 100171 | Television Production 1                |
| 100172 | Television Production 2                |
| 100173 | Television Production 3                |
| 100174 | Television Production 4                |
| 100181 | Cable Television                       |
| 100191 | Radio/Television Production 1          |
| 100192 | Radio/Television Production 2          |
| 150621 | Chemical Manufacturing Technology      |
| 170300 | Medical Laboratory Technologies, Other |
| 170321 | Chemical Technology 1                  |
| 170322 | Chemical Technology 2                  |

## **Appendix I**

### **NELS:88 Second Follow-Up Transcript Component Codebooks**

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**NELS:88 Second Follow-Up**

**Transcript Component Student File Codebook**

Question STU\_ID Tape Pos. 1-7  
Format: I7

STU\_ID STUDENT ID  
Public student ID.

Question F2SCH\_ID Tape Pos. 8-12  
Format: I5

F2SCH\_ID PUBLIC ID OF LAST ATT. SCH.  
Public ID of last attended school.

Question F2TRSCWT Tape Pos. 13-22  
Format: R10.4

F2TRSCWT TRANSCRIPT WEIGHT  
Transcript Weight.

| RESPONSE                  | CODES     | FREQ  | PER-CENT | WGTD PCT |
|---------------------------|-----------|-------|----------|----------|
| 2.2148 TO 12532.0768..... | DDDD01.DD | 17285 | 100.0%   | 100.0%   |
| TOTALS:                   |           | 17285 | 100.0%   | 100.0%   |

NOTE: The two transcript panel weight variables, F2TRP1WT (grades 8-12) and F2TRP2WT (grades 10-12), are located at the end of the record.

Question F2RAB88 Tape Pos. 23-26  
Format: R4.1

F2RAB88 NUMBER OF DAYS ABSENT, 88-89  
Number of days absent during 88-89 school year

| RESPONSE           | CODES | FREQ  | PER-CENT     | WGTD PCT |
|--------------------|-------|-------|--------------|----------|
| NONE.....          | DD1.D | 375   | 5.6%         | 9.3%     |
| 00.5 TO 05.0.....  | DD2.D | 3504  | 20.3%        | 32.5%    |
| 05.5 TO 10.0.....  | DD3.D | 2458  | 14.2%        | 24.4%    |
| 10.5 TO 20.0.....  | DD4.D | 1910  | 11.1%        | 20.1%    |
| 20.5 TO 40.0.....  | DD5.D | 727   | 4.2%         | 9.3%     |
| 40.5 TO 60.0.....  | DD6.D | 181   | 0.9%         | 2.2%     |
| 60.5 TO 144.0..... | DD7.D | 74    | 0.4%         | 0.9%     |
| RESERVED CODES:    |       |       |              |          |
| MISSING DATA.....  | 999.8 | 7476  | 43.3% (MISS) |          |
| TOTALS:            |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. In the data file, values have been rounded to the nearest whole or half day. Values were temporarily collapsed for display in this user's manual.

Question F2RAB89 Tape Pos. 27-30  
Format: R4.1

F2RAB89 NUMBER OF DAYS ABSENT, 89-90  
Number of days absent during 89-90 school year

| RESPONSE           | CODES | FREQ  | PER-CENT     | WGTD PCT |
|--------------------|-------|-------|--------------|----------|
| NONE.....          | DD1.D | 853   | 5.0%         | 8.0%     |
| 00.5 TO 05.0.....  | DD2.D | 3446  | 19.9%        | 32.4%    |
| 05.5 TO 10.0.....  | DD3.D | 2422  | 14.0%        | 23.4%    |
| 10.5 TO 20.0.....  | DD4.D | 2111  | 12.2%        | 22.7%    |
| 20.5 TO 40.0.....  | DD5.D | 850   | 5.0%         | 9.8%     |
| 40.5 TO 60.0.....  | DD6.D | 174   | 1.0%         | 2.3%     |
| 60.5 TO 170.0..... | DD7.D | 121   | 0.7%         | 1.4%     |
| RESERVED CODES:    |       |       |              |          |
| MISSING DATA.....  | 999.8 | 7288  | 42.2% (MISS) |          |
| TOTALS:            |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. In the data file, values have been rounded to the nearest whole or half day. Values were temporarily collapsed for display in this user's manual.

Question F2RAB90 Tape Pos. 31-34  
Format: R4.1

F2RAB90 NUMBER OF DAYS ABSENT, 90-91  
Number of days absent during 90-91 school year

| RESPONSE           | CODES | FREQ  | PER-CENT     | WGTD PCT |
|--------------------|-------|-------|--------------|----------|
| NONE.....          | DD1.D | 671   | 3.9%         | 6.4%     |
| 00.5 TO 05.0.....  | DD2.D | 3151  | 18.2%        | 29.3%    |
| 05.5 TO 10.0.....  | DD3.D | 2328  | 13.5%        | 23.4%    |
| 10.5 TO 20.0.....  | DD4.D | 2254  | 13.0%        | 24.8%    |
| 20.5 TO 40.0.....  | DD5.D | 981   | 5.7%         | 12.1%    |
| 40.5 TO 60.0.....  | DD6.D | 189   | 1.1%         | 2.6%     |
| 60.5 TO 160.0..... | DD7.D | 110   | 0.6%         | 1.4%     |
| RESERVED CODES:    |       |       |              |          |
| MISSING DATA.....  | 999.8 | 7601  | 44.0% (MISS) |          |
| TOTALS:            |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. In the data file, values have been rounded to the nearest whole or half day. Values were temporarily collapsed for display in this user's manual.

Question F2RAB91 Tape Pos. 35-38  
Format: R4.1

F2RAB91 NUMBER OF DAYS ABSENT, 91-92  
Number of days absent during 91-92 school year

| RESPONSE           | CODES | FREQ  | PER-CENT     | WGTD PCT |
|--------------------|-------|-------|--------------|----------|
| NONE.....          | DD1.D | 473   | 2.7%         | 5.2%     |
| 00.5 TO 05.0.....  | DD2.D | 2771  | 16.0%        | 26.9%    |
| 05.5 TO 10.0.....  | DD3.D | 2474  | 14.3%        | 25.5%    |
| 10.5 TO 20.0.....  | DD4.D | 2500  | 15.0%        | 25.9%    |
| 20.5 TO 40.0.....  | DD5.D | 1097  | 6.3%         | 12.9%    |
| 40.5 TO 60.0.....  | DD6.D | 187   | 1.1%         | 2.2%     |
| 60.5 TO 128.0..... | DD7.D | 85    | 0.5%         | 1.3%     |
| RESERVED CODES:    |       |       |              |          |
| MISSING DATA.....  | 999.8 | 7598  | 44.0% (MISS) |          |
| TOTALS:            |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. In the data file, values have been rounded to the nearest whole or half day. Values were temporarily collapsed for display in this user's manual.

Question F2RSPFLC Tape Pos. 39-40  
Format: I2

F2RSPFLC SPECIALIZED COURSES OR PROGRAMS  
Participation in specialized courses or programs.

| RESPONSE                                       | CODES | FREQ  | PER-CENT    | WGTD PCT |
|--|-------|-------|-------------|----------|
| SPECIAL EDUCATION.....                         | D1    | 507   | 3.5%        | 4.7%     |
| BILINGUAL EDUCATION.....                       | D2    | 302   | 1.7%        | 1.5%     |
| GIFTED EDUCATION.....                          | D3    | 1423  | 8.2%        | 7.1%     |
| SPECIAL EDUCATION AND BILINGUAL EDUCATION..... | D4    | 8     | 0.0%        | 0.0%     |
| GIFTED EDUCATION AND BILINGUAL EDUCATION.....  | D5    | 45    | 0.3%        | 0.1%     |
| NONE OF THE ABOVE.....                         | D6    | 14500 | 84.5%       | 86.5%    |
| RESERVED CODES:                                |       |       |             |          |
| MISSING DATA.....                              | 98    | 300   | 1.7% (MISS) |          |
| TOTALS:  |       | 17285 | 100.0%      | 100.0%   |

Question F2RRANK Tape Pos. 41-44  
Format: I4

F2RRANK CLASS RANK FOR LAST YEAR ATTENDED  
Class rank for last year attended

| RESPONSE          | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-------------------|-------|-------|--------------|----------|
| 1 TO 807.....     | DD01  | 13393 | 77.5%        | 100.0%   |
| RESERVED CODES:   |       |       |              |          |
| MISSING DATA..... | 9998  | 3892  | 22.5% (MISS) |          |
| TOTALS:           |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this user's manual.



Question F2RCSIZE

Tape Pos. 45-48  
Format: I4

F2RCSIZE CLASS SIZE FOR LAST YEAR ATTENDED

Class size for last year attended

| RESPONSE          | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-------------------|-------|-------|--------------|----------|
| 1 TO 1438.....    | 0001  | 14149 | 81.9%        | 100.0%   |
| RESERVED CODES:   |       |       |              |          |
| MISSING DATA..... | 9998  | 3136  | 18.1% (MISS) |          |
| TOTALS:           |       | 17285 | 100.0%       | 100.0%   |

NOTE: this item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this user's manual.

Question F2RDTLMO

Tape Pos. 49-50  
Format: I2

F2RDTLMO MONTH STUDENT LEFT SCHOOL

Month student left school

| RESPONSE             | CODES | FREQ  | PER-CENT    | WGTD PCT |
|----------------------|-------|-------|-------------|----------|
| JANUARY.....         | 01    | 304   | 1.8%        | 2.6%     |
| FEBRUARY.....        | 02    | 215   | 1.2%        | 1.7%     |
| MARCH.....           | 03    | 221   | 1.3%        | 2.1%     |
| APRIL.....           | 04    | 185   | 1.1%        | 1.4%     |
| MAY.....             | 05    | 4944  | 28.6%       | 27.7%    |
| JUNE.....            | 06    | 9209  | 53.3%       | 54.9%    |
| JULY.....            | 07    | 102   | 0.6%        | 0.8%     |
| AUGUST.....          | 08    | 313   | 1.8%        | 2.2%     |
| SEPTEMBER.....       | 09    | 306   | 1.8%        | 2.6%     |
| OCTOBER.....         | 10    | 204   | 1.2%        | 1.7%     |
| NOVEMBER.....        | 11    | 154   | 0.9%        | 1.3%     |
| DECEMBER.....        | 12    | 136   | 0.8%        | 1.1%     |
| RESERVED CODES:      |       |       |             |          |
| MISSING DATA.....    | 98    | 572   | 3.3% (MISS) |          |
| LEGITIMATE SKIP..... | 99    | 420   | 2.4% (MISS) |          |
| TOTALS:              |       | 17285 | 100.0%      | 100.0%   |

Question F2RDTLYR

Tape Pos. 51-52  
Format: I2

F2RDTLYR YEAR STUDENT LEFT SCHOOL

Year student left school

| RESPONSE             | CODES | FREQ  | PER-CENT    | WGTD PCT |
|----------------------|-------|-------|-------------|----------|
| 1988.....            | 88    | 9     | 0.1%        | 0.1%     |
| 1989.....            | 89    | 309   | 1.8%        | 2.7%     |
| 1990.....            | 90    | 626   | 3.6%        | 5.0%     |
| 1991.....            | 91    | 940   | 5.4%        | 7.3%     |
| 1992.....            | 92    | 14488 | 83.8%       | 85.0%    |
| 1993.....            | 93    | 8     | 0.0%        | 0.1%     |
| RESERVED CODES:      |       |       |             |          |
| MISSING DATA.....    | 98    | 485   | 2.8% (MISS) |          |
| LEGITIMATE SKIP..... | 99    | 420   | 2.4% (MISS) |          |
| TOTALS:              |       | 17285 | 100.0%      | 100.0%   |

Question F2RREASL

Tape Pos. 53-54  
Format: I2

F2RREASL REASON STUDENT LEFT SCHOOL

Indicates the reason the student left school.

For some sample members, this item (and F2RTROUT, which is derived from F2RREASL) may appear to be inconsistent with F2DOSTAT. The majority of inconsistencies can be attributed to the disjunct data collection periods for the two items, and to differences between the NELS:88 and transcript schools' dropout definition. See F2TRSTYP for both elucidation and resolution of inconsistencies between F2RTROUT (transcript-indicated outcome) and F2DOSTAT. (Also, see Chapter 6 and Appendix G of the Second Follow-Up: Transcript Component Data File User's Manual for a discussion of F2TRSTYP as it relates to discrepancies between F2DOSTAT and F2RTROUT.)

| RESPONSE  | CODES | FREQ  | PER-CENT    | WGTD PCT |
|---|-------|-------|-------------|----------|
| STANDARD DIPLOMA.....                           | 01    | 13660 | 78.0%       | 75.6%    |
| HONORS DIPLOMA.....                             | 02    | 240   | 1.4%        | 1.1%     |
| DIPLOMA WITH SPECIAL EDUCATION ADJUSTMENTS..... | 03    | 22    | 0.1%        | 0.2%     |
| CERTIFICATE OF ATTENDANCE.....                  | 04    | 9     | 0.1%        | 0.1%     |
| STILL ENROLLED.....                             | 05    | 420   | 2.4%        | 3.1%     |
| DROPPED OUT.....                                | 06    | 2003  | 11.6%       | 15.7%    |
| TRANSFERRED.....                                | 07    | 424   | 2.5%        | 3.3%     |
| AGED OUT.....                                   | 08    | 25    | 0.1%        | 0.1%     |
| DIED.....                                       | 09    | 4     | 0.0%        | 0.0%     |
| HEALTH REASON.....                              | 10    | 10    | 0.1%        | 0.1%     |
| RECEIVED GED.....                               | 11    | 35    | 0.2%        | 0.2%     |
| OTHER.....                                      | 12    | 87    | 0.5%        | 0.6%     |
| RESERVED CODES:                                 |       |       |             |          |
| MISSING DATA.....                               | 98    | 346   | 2.0% (MISS) |          |
| TOTALS:   |       | 17285 | 100.0%      | 100.0%   |

Question F2RRLVRB

Tape Pos. 55-74  
Format: A20

F2RRLVRB VERBATIM OTHER REASON FOR LEAVING SCHOOL

Verbatim other reason for leaving school

| RESPONSE          | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-------------------|-------|-------|--------------|----------|
| DATA PRESENT..... | 1     | 67    | 0.4%         | 100.0%   |
| RESERVED CODES:   |       |       |              |          |
| MISSING DATA..... | 8     | 17218 | 99.6% (MISS) |          |
| TOTALS:           |       | 17285 | 100.0%       | 100.0%   |

NOTE: The verbatim responses to this item are in the datafile but there are too many unique responses to display in this codebook. As with any other variable, users can select and extract this variable and subsequently review it. For example, PROC PRINT in SAS may be used for such a list either in hardcopy or electronic output.

Question F2RGPA

Tape Pos. 75-78  
Format: R5.2

F2RGPA CUMULATIVE GPA FOR LAST YEAR ATTENDED

Cumulative GPA for last year attended

| RESPONSE          | CODES  | FREQ  | PER-CENT     | WGTD PCT |
|-------------------|--------|-------|--------------|----------|
| 0 TO 108.98.....  | 001.00 | 13583 | 78.6%        | 100.0%   |
| RESERVED CODES:   |        |       |              |          |
| MISSING DATA..... | 999.98 | 3702  | 21.4% (MISS) |          |
| TOTALS:           |        | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this user's manual.

Cumulative GPA has not been standardized. Some values exceed 100 percent, because of quality points awarded for advanced courses.

Question F2RPSATM Tape Pos. 80-81 Format: I2

F2RPSATM PSAT MATH

Preliminary Scholastic Aptitude Test (mathematics)

| RESPONSE                             | CODES | FREQ  | PER-CENT     | WGTD PCT |
|--------------------------------------|-------|-------|--------------|----------|
| 20 TO 30.....                        | 01    | 807   | 4.7%         | 16.6%    |
| 31 TO 40.....                        | 02    | 1946  | 11.3%        | 36.1%    |
| 41 TO 50.....                        | 03    | 1872  | 10.8%        | 33.1%    |
| 51 TO 60.....                        | 04    | 857   | 5.0%         | 11.3%    |
| 61 TO 70.....                        | 05    | 245   | 1.4%         | 2.4%     |
| 71 TO 80.....                        | 06    | 44    | 0.3%         | 0.5%     |
| RESERVED CODES:<br>MISSING DATA..... | 98    | 11514 | 66.6% (MISS) |          |
| TOTALS:                              |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this user's manual.

The valid range for this test score is 20 to 80.

Question F2RSATV Tape Pos. 87-89 Format: I3

F2RSATV SCHOLASTIC APTITUDE TEST (VERBAL)

Scholastic Aptitude Test (verbal)

| RESPONSE                             | CODES | FREQ  | PER-CENT     | WGTD PCT |
|--------------------------------------|-------|-------|--------------|----------|
| 200 TO 300.....                      | 001   | 246   | 1.4%         | 6.0%     |
| 310 TO 400.....                      | 002   | 1058  | 6.1%         | 22.8%    |
| 410 TO 500.....                      | 003   | 1470  | 8.5%         | 27.8%    |
| 510 TO 600.....                      | 004   | 1564  | 9.0%         | 25.5%    |
| 610 TO 700.....                      | 005   | 1001  | 5.8%         | 14.4%    |
| 710 TO 800.....                      | 006   | 317   | 1.8%         | 3.4%     |
| RESERVED CODES:<br>MISSING DATA..... | 998   | 11630 | 67.3% (MISS) |          |
| TOTALS:                              |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this user's manual.

The valid range for this test score is 200 to 800.

Question F2RPSATV Tape Pos. 82-83 Format: I2

F2RPSATV PSAT VERBAL

Preliminary Scholastic Aptitude Test (verbal)

| RESPONSE                             | CODES | FREQ  | PER-CENT     | WGTD PCT |
|--------------------------------------|-------|-------|--------------|----------|
| 20 TO 30.....                        | 01    | 425   | 2.5%         | 11.1%    |
| 31 TO 40.....                        | 02    | 1379  | 8.0%         | 26.2%    |
| 41 TO 50.....                        | 03    | 1836  | 10.6%        | 32.4%    |
| 51 TO 60.....                        | 04    | 1368  | 7.9%         | 20.7%    |
| 61 TO 70.....                        | 05    | 654   | 3.8%         | 8.4%     |
| 71 TO 80.....                        | 06    | 113   | 0.7%         | 1.1%     |
| RESERVED CODES:<br>MISSING DATA..... | 98    | 11510 | 66.6% (MISS) |          |
| TOTALS:                              |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this user's manual.

The valid range for this test score is 20 to 80.

Question F2RACTC Tape Pos. 90-91 Format: I2

F2RACTC ACT (COMPOSITE)

American College Test (composite score)

| RESPONSE                             | CODES | FREQ  | PER-CENT     | WGTD PCT |
|--------------------------------------|-------|-------|--------------|----------|
| 01 TO 05.....                        | 01    | 1     | 0.0%         | 0.0%     |
| 06 TO 10.....                        | 02    | 5     | 0.0%         | 0.1%     |
| 11 TO 15.....                        | 03    | 428   | 2.5%         | 11.2%    |
| 16 TO 20.....                        | 04    | 1777  | 10.3%        | 40.0%    |
| 21 TO 25.....                        | 05    | 1549  | 9.0%         | 32.5%    |
| 26 TO 30.....                        | 06    | 805   | 4.7%         | 14.3%    |
| 31 TO 35.....                        | 07    | 140   | 0.8%         | 2.0%     |
| RESERVED CODES:<br>MISSING DATA..... | 98    | 12580 | 72.8% (MISS) |          |
| TOTALS:                              |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this user's manual.

The valid range for this test score is 1 to 35.

Question F2RSATM Tape Pos. 84-86 Format: I3

F2RSATM SCHOLASTIC APTITUDE TEST (MATHEMATICS)

Scholastic Aptitude Test (mathematics)

| RESPONSE                             | CODES | FREQ  | PER-CENT     | WGTD PCT |
|--------------------------------------|-------|-------|--------------|----------|
| 200 TO 300.....                      | 001   | 596   | 3.4%         | 12.1%    |
| 310 TO 400.....                      | 002   | 1410  | 8.2%         | 28.2%    |
| 410 TO 500.....                      | 003   | 1809  | 10.5%        | 34.6%    |
| 510 TO 600.....                      | 004   | 1250  | 7.2%         | 19.0%    |
| 610 TO 700.....                      | 005   | 507   | 2.9%         | 5.3%     |
| 710 TO 800.....                      | 006   | 85    | 0.5%         | 0.7%     |
| RESERVED CODES:<br>MISSING DATA..... | 998   | 11628 | 67.3% (MISS) |          |
| TOTALS:                              |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this user's manual.

The valid range for this test score is 200 to 800.

Question F2RACTE Tape Pos. 92-93 Format: I2

F2RACTE ACT (ENGLISH SCORE)

American College Test (English score)

| RESPONSE                             | CODES | FREQ  | PER-CENT     | WGTD PCT |
|--------------------------------------|-------|-------|--------------|----------|
| 01 TO 05.....                        | 01    | 1     | 0.0%         | 0.0%     |
| 06 TO 10.....                        | 02    | 70    | 0.4%         | 2.7%     |
| 11 TO 15.....                        | 03    | 653   | 3.8%         | 15.1%    |
| 16 TO 20.....                        | 04    | 1574  | 9.1%         | 33.9%    |
| 21 TO 25.....                        | 05    | 1378  | 8.0%         | 31.2%    |
| 26 TO 30.....                        | 06    | 815   | 4.7%         | 15.2%    |
| 31 TO 35.....                        | 07    | 126   | 0.7%         | 1.8%     |
| RESERVED CODES:<br>MISSING DATA..... | 98    | 12668 | 73.3% (MISS) |          |
| TOTALS:                              |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this user's manual.

The valid range for this test score is 1 to 35.

Question F2RACTM Tape Pos. 94-95 Format: 12

F2RACTM ACT (MATH SCORE)

American College Test (mathematics score)

| RESPONSE                             | CODES | FREQ  | PER-CENT     | WGTD PCT |
|--------------------------------------|-------|-------|--------------|----------|
| 06 TO 10.....                        | 02    | 8     | 0.0%         | 0.1%     |
| 11 TO 15.....                        | 03    | 604   | 3.5%         | 14.1%    |
| 16 TO 20.....                        | 04    | 1761  | 10.2%        | 43.0%    |
| 21 TO 25.....                        | 05    | 1363  | 7.9%         | 27.2%    |
| 26 TO 30.....                        | 06    | 735   | 4.3%         | 12.9%    |
| 31 TO 36.....                        | 07    | 146   | 0.8%         | 2.7%     |
| RESERVED CODES:<br>MISSING DATA..... | 98    | 12668 | 73.3% (MISS) |          |
| TOTALS:                              |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this user's manual.

The valid range for this test score is 1 to 36.

Question F2RACTR Tape Pos. 96-97 Format: 12

F2RACTR ACT (READING)

American College Test (reading score)

| RESPONSE                             | CODES | FREQ  | PER-CENT     | WGTD PCT |
|--------------------------------------|-------|-------|--------------|----------|
| 01 TO 05.....                        | 01    | 2     | 0.0%         | 0.0%     |
| 06 TO 10.....                        | 02    | 72    | 0.4%         | 1.5%     |
| 11 TO 15.....                        | 03    | 590   | 3.4%         | 15.6%    |
| 16 TO 20.....                        | 04    | 1378  | 8.0%         | 29.6%    |
| 21 TO 25.....                        | 05    | 1316  | 7.6%         | 28.3%    |
| 26 TO 30.....                        | 06    | 821   | 4.7%         | 15.8%    |
| 31 TO 36.....                        | 07    | 437   | 2.5%         | 9.1%     |
| RESERVED CODES:<br>MISSING DATA..... | 98    | 12669 | 73.3% (MISS) |          |
| TOTALS:                              |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this user's manual.

The valid range for this test score is 1 to 36.

Question F2RACTS Tape Pos. 98-99 Format: 12

F2RACTS ACT (SCIENCE REASONING)

American College Test (science reasoning score)

| RESPONSE                             | CODES | FREQ  | PER-CENT     | WGTD PCT |
|--------------------------------------|-------|-------|--------------|----------|
| 06 TO 10.....                        | 02    | 7     | 0.0%         | 0.2%     |
| 11 TO 15.....                        | 03    | 384   | 2.2%         | 8.8%     |
| 16 TO 20.....                        | 04    | 1755  | 10.3%        | 43.0%    |
| 21 TO 25.....                        | 05    | 1603  | 9.3%         | 32.5%    |
| 26 TO 30.....                        | 06    | 880   | 5.1%         | 13.0%    |
| 31 TO 36.....                        | 07    | 151   | 0.9%         | 2.5%     |
| RESERVED CODES:<br>MISSING DATA..... | 98    | 12675 | 73.3% (MISS) |          |
| TOTALS:                              |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this user's manual.

The valid range for this test score is 1 to 36.

Question F2RAPBIO Tape Pos. 100-101 Format: 12

F2RAPBIO AP EXAM: BIOLOGY

Advanced Placement Exam: biology

| RESPONSE                        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|---------------------------------|-------|-------|--------------|----------|
| SCORE 1.....                    | 01    | 10    | 0.1%         | 5.6%     |
| SCORE 2.....                    | 02    | 23    | 0.1%         | 37.7%    |
| SCORE 3.....                    | 03    | 37    | 0.2%         | 22.4%    |
| SCORE 4.....                    | 04    | 37    | 0.2%         | 20.3%    |
| SCORE 5.....                    | 05    | 33    | 0.2%         | 14.1%    |
| RESERVED CODES:<br>MISSING..... | 98    | 17145 | 99.2% (MISS) |          |
| TOTALS:                         |       | 17285 | 100.0%       | 100.0%   |

Question F2RAPCHE Tape Pos. 102-103 Format: 12

F2RAPCHE AP EXAM: CHEMISTRY

Advanced Placement Exam: chemistry

| RESPONSE                        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|---------------------------------|-------|-------|--------------|----------|
| SCORE 1.....                    | 01    | 4     | 0.0%         | 4.1%     |
| SCORE 2.....                    | 02    | 10    | 0.1%         | 37.7%    |
| SCORE 3.....                    | 03    | 25    | 0.1%         | 27.0%    |
| SCORE 4.....                    | 04    | 18    | 0.1%         | 14.3%    |
| SCORE 5.....                    | 05    | 18    | 0.1%         | 16.9%    |
| RESERVED CODES:<br>MISSING..... | 98    | 17210 | 99.6% (MISS) |          |
| TOTALS:                         |       | 17285 | 100.0%       | 100.0%   |

Question F2RAPCGP Tape Pos. 104-105 Format: 12

F2RAPCGP AP EXAM: COMP. GOVT. AND POLITICS

Advanced Placement Exam: comparative government and politics

| RESPONSE                        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|---------------------------------|-------|-------|--------------|----------|
| SCORE 2.....                    | 02    | 2     | 0.0%         | 3.2%     |
| SCORE 3.....                    | 03    | 5     | 0.0%         | 20.0%    |
| SCORE 4.....                    | 04    | 4     | 0.0%         | 13.7%    |
| SCORE 5.....                    | 05    | 6     | 0.0%         | 63.1%    |
| RESERVED CODES:<br>MISSING..... | 98    | 17268 | 99.9% (MISS) |          |
| TOTALS:                         |       | 17285 | 100.0%       | 100.0%   |

Question F2RAPCSA Tape Pos. 106-107 Format: 12

F2RAPCSA AP EXAM: COMPUTER SCIENCE A

Advanced Placement Exam: computer science A

| RESPONSE                        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|---------------------------------|-------|-------|--------------|----------|
| SCORE 1.....                    | 01    | 1     | 0.0%         | 5.1%     |
| SCORE 2.....                    | 02    | 3     | 0.0%         | 11.9%    |
| SCORE 3.....                    | 03    | 2     | 0.0%         | 10.3%    |
| SCORE 4.....                    | 04    | 3     | 0.0%         | 23.0%    |
| SCORE 5.....                    | 05    | 7     | 0.0%         | 49.7%    |
| RESERVED CODES:<br>MISSING..... | 98    | 17269 | 99.9% (MISS) |          |
| TOTALS:                         |       | 17285 | 100.0%       | 100.0%   |

Question F2RAPCSB Tape Pos. 108-109 Format: 12

F2RAPCSB AP EXAM: COMPUTER SCIENCE AB

Advanced Placement Exam: computer science AB

| RESPONSE                        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|---------------------------------|-------|-------|--------------|----------|
| SCORE 2.....                    | 02    | 1     | 0.0%         | 1.7%     |
| SCORE 3.....                    | 03    | 4     | 0.0%         | 23.5%    |
| SCORE 4.....                    | 04    | 2     | 0.0%         | 17.1%    |
| SCORE 5.....                    | 05    | 6     | 0.0%         | 57.8%    |
| RESERVED CODES:<br>MISSING..... | 98    | 17272 | 99.9% (MISS) |          |
| TOTALS:                         |       | 17285 | 100.0%       | 100.0%   |

Question F2RAPLIT Tape Pos. 110-111 Format: 12

F2RAPLIT AP EXAM: ENGLISH LITERATURE AND COMP.

Advanced Placement Exam: English literature and composition

| RESPONSE                        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|---------------------------------|-------|-------|--------------|----------|
| SCORE 1.....                    | 01    | 2     | 0.0%         | 1.5%     |
| SCORE 2.....                    | 02    | 34    | 0.2%         | 16.3%    |
| SCORE 3.....                    | 03    | 96    | 0.6%         | 54.1%    |
| SCORE 4.....                    | 04    | 39    | 0.2%         | 16.6%    |
| SCORE 5.....                    | 05    | 53    | 0.3%         | 11.4%    |
| RESERVED CODES:<br>MISSING..... | 98    | 17061 | 98.7% (MISS) |          |
| TOTALS:                         |       | 17285 | 100.0%       | 100.0%   |

Question F2RAPLAN

Tape Pos. 112-113  
Format: I2

F2RAPLAN AP EXAM: ENGLISH LANGUAGE AND COMP.  
Advanced Placement Exam: English language and composition

| RESPONSE                        | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------------|-------|-------|----------|----------|
| SCORE 1.....                    | 01    | 3     | 0.0%     | 2.9%     |
| SCORE 2.....                    | 02    | 8     | 0.0%     | 15.9%    |
| SCORE 3.....                    | 03    | 38    | 0.2%     | 45.0%    |
| SCORE 4.....                    | 04    | 23    | 0.1%     | 26.9%    |
| SCORE 5.....                    | 05    | 15    | 0.1%     | 9.4%     |
| RESERVED CODES:<br>MISSING..... | 98    | 17198 | 99.5%    | (MISS)   |
| TOTALS:                         |       | 17285 | 100.0%   | 100.0%   |

Question F2RAPHAR

Tape Pos. 122-123  
Format: I2

F2RAPHAR AP EXAM: HISTORY OF ART  
Advanced Placement Exam: history of art

| RESPONSE                        | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------------|-------|-------|----------|----------|
| SCORE 1.....                    | 01    | 1     | 0.0%     | 1.4%     |
| SCORE 2.....                    | 02    | 3     | 0.0%     | 4.7%     |
| SCORE 3.....                    | 03    | 20    | 0.1%     | 56.5%    |
| SCORE 4.....                    | 04    | 8     | 0.0%     | 22.3%    |
| SCORE 5.....                    | 05    | 8     | 0.0%     | 15.1%    |
| RESERVED CODES:<br>MISSING..... | 98    | 17245 | 99.8%    | (MISS)   |
| TOTALS:                         |       | 17285 | 100.0%   | 100.0%   |

Question F2RAPEUH

Tape Pos. 114-115  
Format: I2

F2RAPEUH AP EXAM: EUROPEAN HISTORY  
Advanced Placement Exam: European history

| RESPONSE                        | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------------|-------|-------|----------|----------|
| SCORE 1.....                    | 01    | 2     | 0.0%     | 13.3%    |
| SCORE 2.....                    | 02    | 7     | 0.0%     | 5.2%     |
| SCORE 3.....                    | 03    | 55    | 0.3%     | 46.1%    |
| SCORE 4.....                    | 04    | 37    | 0.2%     | 20.1%    |
| SCORE 5.....                    | 05    | 14    | 0.1%     | 15.3%    |
| RESERVED CODES:<br>MISSING..... | 98    | 17170 | 99.3%    | (MISS)   |
| TOTALS:                         |       | 17285 | 100.0%   | 100.0%   |

Question F2RAPLCA

Tape Pos. 124-125  
Format: I2

F2RAPLCA AP EXAM: LATIN/CATULLUS HORACE  
Advanced Placement Exam: Latin/Catullus Horace

| RESPONSE                        | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------------|-------|-------|----------|----------|
| SCORE 1.....                    | 01    | 2     | 0.0%     | 14.2%    |
| SCORE 2.....                    | 02    | 3     | 0.0%     | 65.3%    |
| SCORE 3.....                    | 03    | 3     | 0.0%     | 12.9%    |
| SCORE 4.....                    | 04    | 1     | 0.0%     | 4.1%     |
| SCORE 5.....                    | 05    | 1     | 0.0%     | 3.6%     |
| RESERVED CODES:<br>MISSING..... | 98    | 17275 | 99.9%    | (MISS)   |
| TOTALS:                         |       | 17285 | 100.0%   | 100.0%   |

Question F2RAPFLA

Tape Pos. 116-117  
Format: I2

F2RAPFLA AP EXAM: FRENCH LANGUAGE  
Advanced Placement Exam: French language

| RESPONSE                        | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------------|-------|-------|----------|----------|
| SCORE 1.....                    | 01    | 2     | 0.0%     | 7.2%     |
| SCORE 2.....                    | 02    | 7     | 0.0%     | 24.2%    |
| SCORE 3.....                    | 03    | 17    | 0.1%     | 39.2%    |
| SCORE 4.....                    | 04    | 11    | 0.1%     | 17.8%    |
| SCORE 5.....                    | 05    | 11    | 0.1%     | 11.6%    |
| RESERVED CODES:<br>MISSING..... | 98    | 17237 | 99.7%    | (MISS)   |
| TOTALS:                         |       | 17285 | 100.0%   | 100.0%   |

Question F2RAPLVE

Tape Pos. 126-127  
Format: I2

F2RAPLVE AP EXAM: LATIN/VERGIL  
Advanced Placement Exam: Latin/Vergil

| RESPONSE                        | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------------|-------|-------|----------|----------|
| SCORE 1.....                    | 01    | 3     | 0.0%     | 42.7%    |
| SCORE 2.....                    | 02    | 4     | 0.0%     | 24.6%    |
| SCORE 3.....                    | 03    | 9     | 0.1%     | 15.7%    |
| SCORE 4.....                    | 04    | 4     | 0.0%     | 6.7%     |
| SCORE 5.....                    | 05    | 7     | 0.0%     | 10.2%    |
| RESERVED CODES:<br>MISSING..... | 98    | 17258 | 99.8%    | (MISS)   |
| TOTALS:                         |       | 17285 | 100.0%   | 100.0%   |

Question F2RAPFLI

Tape Pos. 118-119  
Format: I2

F2RAPFLI AP EXAM: FRENCH LITERATURE  
Advanced Placement Exam: French literature

| RESPONSE                        | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------------|-------|-------|----------|----------|
| SCORE 1.....                    | 01    | 3     | 0.0%     | 7.9%     |
| SCORE 2.....                    | 02    | 3     | 0.0%     | 3.3%     |
| SCORE 3.....                    | 03    | 5     | 0.0%     | 82.1%    |
| SCORE 4.....                    | 04    | 4     | 0.0%     | 5.7%     |
| SCORE 5.....                    | 05    | 2     | 0.0%     | 1.0%     |
| RESERVED CODES:<br>MISSING..... | 98    | 17268 | 99.9%    | (MISS)   |
| TOTALS:                         |       | 17285 | 100.0%   | 100.0%   |

Question F2RAPMAC

Tape Pos. 128-129  
Format: I2

F2RAPMAC AP EXAM: MACROECONOMICS  
Advanced Placement Exam: macroeconomics

| RESPONSE                        | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------------|-------|-------|----------|----------|
| SCORE 1.....                    | 01    | 1     | 0.0%     | 2.6%     |
| SCORE 2.....                    | 03    | 7     | 0.0%     | 34.4%    |
| SCORE 3.....                    | 02    | 4     | 0.0%     | 28.9%    |
| SCORE 4.....                    | 04    | 3     | 0.0%     | 34.1%    |
| SCORE 5.....                    | 05    | 4     | 0.0%     | 34.1%    |
| RESERVED CODES:<br>MISSING..... | 98    | 17270 | 99.9%    | (MISS)   |
| TOTALS:                         |       | 17285 | 100.0%   | 100.0%   |

Question F2RAPGER

Tape Pos. 120-121  
Format: I2

F2RAPGER AP EXAM: GERMAN LANGUAGE  
Advanced Placement Exam: German language

| RESPONSE                        | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------------|-------|-------|----------|----------|
| SCORE 2.....                    | 02    | 1     | 0.0%     | 29.1%    |
| SCORE 3.....                    | 03    | 2     | 0.0%     | 35.7%    |
| SCORE 4.....                    | 04    | 2     | 0.0%     | 35.2%    |
| RESERVED CODES:<br>MISSING..... | 98    | 17280 | 100.0%   | (MISS)   |
| TOTALS:                         |       | 17285 | 100.0%   | 100.0%   |

Question F2RAPCAB

Tape Pos. 130-131  
Format: I2

F2RAPCAB AP EXAM: MATHEMATICS: CALCULUS BC  
Advanced Placement Exam: mathematics: calculus BC

| RESPONSE                        | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------------|-------|-------|----------|----------|
| SCORE 1.....                    | 01    | 4     | 0.0%     | 2.1%     |
| SCORE 2.....                    | 02    | 2     | 0.0%     | 5.1%     |
| SCORE 3.....                    | 03    | 21    | 0.1%     | 32.8%    |
| SCORE 4.....                    | 04    | 17    | 0.1%     | 24.0%    |
| SCORE 5.....                    | 05    | 23    | 0.1%     | 36.0%    |
| RESERVED CODES:<br>MISSING..... | 98    | 17218 | 99.6%    | (MISS)   |
| TOTALS:                         |       | 17285 | 100.0%   | 100.0%   |

Question F2RAPCAA Tape Pos. 132-133 Format: I2

F2RAPCAA AP EXAM: MATHEMATICS: CALCULUS AB  
Advanced Placement Exam: mathematics: calculus AB

| RESPONSE        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-----------------|-------|-------|--------------|----------|
| SCORE 1.....    | 01    | 14    | 0.1%         | 17.8%    |
| SCORE 2.....    | 02    | 20    | 0.1%         | 30.3%    |
| SCORE 3.....    | 03    | 35    | 0.2%         | 19.5%    |
| SCORE 4.....    | 04    | 43    | 0.2%         | 16.8%    |
| SCORE 5.....    | 05    | 41    | 0.2%         | 15.6%    |
| RESERVED CODES: |       |       |              |          |
| MISSING.....    | 98    | 17132 | 99.1% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%       | 100.0%   |

Question F2RAPPCE Tape Pos. 142-143 Format: I2

F2RAPPCE AP EXAM: PHYSICS C: E & M  
Advanced Placement Exam: physics C: E & M

| RESPONSE        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-----------------|-------|-------|--------------|----------|
| SCORE 1.....    | 01    | 3     | 0.0%         | 23.3%    |
| SCORE 2.....    | 02    | 1     | 0.0%         | 3.5%     |
| SCORE 3.....    | 03    | 3     | 0.0%         | 18.8%    |
| SCORE 4.....    | 04    | 7     | 0.0%         | 37.5%    |
| SCORE 5.....    | 05    | 4     | 0.0%         | 17.0%    |
| RESERVED CODES: |       |       |              |          |
| MISSING.....    | 98    | 17267 | 99.9% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%       | 100.0%   |

Question F2RAPMIC Tape Pos. 134-135 Format: I2

F2RAPMIC AP EXAM: MICROECONOMICS  
Advanced Placement Exam: microeconomics

| RESPONSE        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-----------------|-------|-------|--------------|----------|
| SCORE 1.....    | 01    | 2     | 0.0%         | 29.3%    |
| SCORE 2.....    | 02    | 3     | 0.0%         | 7.3%     |
| SCORE 3.....    | 03    | 4     | 0.0%         | 41.7%    |
| SCORE 4.....    | 04    | 4     | 0.0%         | 21.7%    |
| RESERVED CODES: |       |       |              |          |
| MISSING.....    | 98    | 17272 | 99.9% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%       | 100.0%   |

Question F2RAPPCM Tape Pos. 144-145 Format: I2

F2RAPPCM AP EXAM: PHYSICS C: MECHANICS  
Advanced Placement Exam: physics C: mechanics

| RESPONSE        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-----------------|-------|-------|--------------|----------|
| SCORE 1.....    | 01    | 1     | 0.0%         | 9.5%     |
| SCORE 2.....    | 02    | 2     | 0.0%         | 11.1%    |
| SCORE 3.....    | 03    | 6     | 0.0%         | 18.1%    |
| SCORE 4.....    | 04    | 6     | 0.0%         | 29.2%    |
| SCORE 5.....    | 05    | 8     | 0.0%         | 32.2%    |
| RESERVED CODES: |       |       |              |          |
| MISSING.....    | 98    | 17262 | 99.9% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%       | 100.0%   |

Question F2RAPMLL Tape Pos. 136-137 Format: I2

F2RAPMLL AP EXAM: MUSIC LISTENING AND LIT.  
Advanced Placement Exam: music listening and literature

| RESPONSE        | CODES | FREQ  | PER-CENT      | WGTD PCT |
|-----------------|-------|-------|---------------|----------|
| SCORE 3.....    | 03    | 2     | 0.0%          | 87.9%    |
| SCORE 4.....    | 04    | 1     | 0.0%          | 6.1%     |
| SCORE 5.....    | 05    | 1     | 0.0%          | 6.1%     |
| RESERVED CODES: |       |       |               |          |
| MISSING.....    | 98    | 17281 | 100.0% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%        | 100.0%   |

Question F2RAPPSY Tape Pos. 146-147 Format: I2

F2RAPPSY AP EXAM: PSYCHOLOGY  
Advanced Placement Exam: psychology

| RESPONSE        | CODES | FREQ  | PER-CENT      | WGTD PCT |
|-----------------|-------|-------|---------------|----------|
| SCORE 1.....    | 01    | 1     | 0.0%          | 6.9%     |
| SCORE 2.....    | 02    | 1     | 0.0%          | 17.7%    |
| SCORE 4.....    | 04    | 2     | 0.0%          | 26.0%    |
| SCORE 5.....    | 05    | 3     | 0.0%          | 49.4%    |
| RESERVED CODES: |       |       |               |          |
| MISSING.....    | 98    | 17278 | 100.0% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%        | 100.0%   |

Question F2RAPMT Tape Pos. 138-139 Format: I2

F2RAPMT AP EXAM: MUSIC THEORY  
Advanced Placement Exam: music theory

| RESPONSE        | CODES | FREQ  | PER-CENT      | WGTD PCT |
|-----------------|-------|-------|---------------|----------|
| SCORE 2.....    | 02    | 1     | 0.0%          | 22.1%    |
| SCORE 4.....    | 04    | 1     | 0.0%          | 77.9%    |
| RESERVED CODES: |       |       |               |          |
| MISSING.....    | 98    | 17283 | 100.0% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%        | 100.0%   |

Question F2RAPSLA Tape Pos. 148-149 Format: I2

F2RAPSLA AP EXAM: SPANISH LANGUAGE  
Advanced Placement Exam: Spanish language

| RESPONSE        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-----------------|-------|-------|--------------|----------|
| SCORE 1.....    | 01    | 2     | 0.0%         | 3.8%     |
| SCORE 2.....    | 02    | 8     | 0.0%         | 28.1%    |
| SCORE 3.....    | 03    | 21    | 0.1%         | 28.4%    |
| SCORE 4.....    | 04    | 13    | 0.1%         | 32.8%    |
| SCORE 5.....    | 05    | 7     | 0.0%         | 7.3%     |
| RESERVED CODES: |       |       |              |          |
| MISSING.....    | 98    | 17234 | 99.7% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%       | 100.0%   |

Question F2RAPPB Tape Pos. 140-141 Format: I2

F2RAPPB AP EXAM: PHYSICS B  
Advanced Placement Exam: physics B

| RESPONSE        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-----------------|-------|-------|--------------|----------|
| SCORE 2.....    | 02    | 2     | 0.0%         | 19.8%    |
| SCORE 3.....    | 03    | 6     | 0.0%         | 10.9%    |
| SCORE 4.....    | 04    | 4     | 0.0%         | 28.2%    |
| SCORE 5.....    | 05    | 10    | 0.1%         | 41.1%    |
| RESERVED CODES: |       |       |              |          |
| MISSING.....    | 98    | 17263 | 99.9% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%       | 100.0%   |

Question F2RAPSLI Tape Pos. 150-151 Format: I2

F2RAPSLI AP EXAM: SPANISH LITERATURE  
Advanced Placement Exam: Spanish literature

| RESPONSE        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-----------------|-------|-------|--------------|----------|
| SCORE 1.....    | 01    | 1     | 0.0%         | 37.7%    |
| SCORE 3.....    | 03    | 3     | 0.0%         | 49.2%    |
| SCORE 4.....    | 04    | 3     | 0.0%         | 3.1%     |
| SCORE 5.....    | 05    | 2     | 0.0%         | 9.9%     |
| RESERVED CODES: |       |       |              |          |
| MISSING.....    | 98    | 17276 | 99.9% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%       | 100.0%   |

Question F2RAPSAG

Tape Pos. 152-153  
Format: I2

F2RAPSAG AP EXAM: STUDIO ART: GENERAL

Advanced Placement Exam: studio art: general

| RESPONSE                        | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------------|-------|-------|----------|----------|
| SCORE 2.....                    | 02    | 1     | 0.0%     | 3.6%     |
| SCORE 3.....                    | 03    | 2     | 0.0%     | 9.9%     |
| SCORE 4.....                    | 04    | 1     | 0.0%     | 18.9%    |
| SCORE 5.....                    | 05    | 4     | 0.0%     | 67.6%    |
| RESERVED CODES:<br>MISSING..... | 98    | 17277 | 100.0%   | (MISS)   |
| TOTALS:                         |       | 17285 | 100.0%   | 100.0%   |

Question F2RAPSAD

Tape Pos. 154-155  
Format: I2

F2RAPSAD AP EXAM: STUDIO ART: DRAWING

Advanced Placement Exam: studio art: drawing

| RESPONSE                        | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------------|-------|-------|----------|----------|
| SCORE 2.....                    | 02    | 1     | 0.0%     | 66.9%    |
| SCORE 3.....                    | 03    | 2     | 0.0%     | 25.3%    |
| SCORE 4.....                    | 04    | 1     | 0.0%     | 7.9%     |
| RESERVED CODES:<br>MISSING..... | 98    | 17281 | 100.0%   | (MISS)   |
| TOTALS:                         |       | 17285 | 100.0%   | 100.0%   |

Question F2RAPUSG

Tape Pos. 156-157  
Format: I2

F2RAPUSG AP EXAM: US GOVERNMENT AND POLITICS

Advanced Placement Exam: United States government and politics

| RESPONSE                        | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------------|-------|-------|----------|----------|
| SCORE 1.....                    | 01    | 4     | 0.0%     | 5.0%     |
| SCORE 2.....                    | 02    | 8     | 0.0%     | 55.7%    |
| SCORE 3.....                    | 03    | 14    | 0.1%     | 12.6%    |
| SCORE 4.....                    | 04    | 14    | 0.1%     | 13.5%    |
| SCORE 5.....                    | 05    | 12    | 0.1%     | 13.2%    |
| RESERVED CODES:<br>MISSING..... | 98    | 17233 | 99.7%    | (MISS)   |
| TOTALS:                         |       | 17285 | 100.0%   | 100.0%   |

Question F2RAPUSH

Tape Pos. 158-159  
Format: I2

F2RAPUSH AP EXAM: US HISTORY

Advanced Placement Exam: United States history

| RESPONSE                        | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------------|-------|-------|----------|----------|
| SCORE 1.....                    | 01    | 12    | 0.1%     | 4.0%     |
| SCORE 2.....                    | 02    | 75    | 0.4%     | 36.0%    |
| SCORE 3.....                    | 03    | 96    | 0.6%     | 31.9%    |
| SCORE 4.....                    | 04    | 90    | 0.5%     | 20.7%    |
| SCORE 5.....                    | 05    | 37    | 0.2%     | 7.5%     |
| RESERVED CODES:<br>MISSING..... | 98    | 16975 | 98.2%    | (MISS)   |
| TOTALS:                         |       | 17285 | 100.0%   | 100.0%   |

Question F2RACHM1

Tape Pos. 160-161  
Format: I2

F2RACHM1 ACH TEST: MATHEMATICS 1

College Board Achievement Test Score: mathematics level 1

| RESPONSE                        | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------------|-------|-------|----------|----------|
| 31 TO 40.....                   | 02    | 41    | 0.2%     | 7.6%     |
| 41 TO 50.....                   | 03    | 202   | 1.2%     | 23.3%    |
| 51 TO 60.....                   | 04    | 340   | 2.0%     | 39.7%    |
| 61 TO 70.....                   | 05    | 222   | 1.3%     | 26.9%    |
| 71 TO 80.....                   | 06    | 27    | 0.2%     | 2.5%     |
| RESERVED CODES:<br>MISSING..... | 98    | 16453 | 95.2%    | (MISS)   |
| TOTALS:                         |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual.

The valid range for this test score is 20 to 80.

Question F2RACHM2

Tape Pos. 162-163  
Format: I2

F2RACHM2 ACH TEST: MATHEMATICS 2

College Board Achievement Test Score: mathematics level 2

| RESPONSE                        | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------------|-------|-------|----------|----------|
| 20 TO 30.....                   | 01    | 1     | 0.0%     | 1.4%     |
| 31 TO 40.....                   | 02    | 6     | 0.0%     | 2.3%     |
| 41 TO 50.....                   | 03    | 25    | 0.1%     | 5.2%     |
| 51 TO 60.....                   | 04    | 94    | 0.5%     | 19.6%    |
| 61 TO 70.....                   | 05    | 204   | 1.2%     | 41.6%    |
| 71 TO 80.....                   | 06    | 173   | 1.0%     | 29.9%    |
| RESERVED CODES:<br>MISSING..... | 98    | 16782 | 97.1%    | (MISS)   |
| TOTALS:                         |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual.

The valid range for this test score is 20 to 80.

Question F2RACH2C

Tape Pos. 164-165  
Format: I2

F2RACH2C ACH TEST: MATHEMATICS 2C

College Board Achievement Test Score: mathematics level 2C

| RESPONSE                        | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------------|-------|-------|----------|----------|
| 51 TO 60.....                   | 04    | 3     | 0.0%     | 2.2%     |
| 61 TO 70.....                   | 05    | 8     | 0.0%     | 62.5%    |
| 71 TO 80.....                   | 06    | 8     | 0.0%     | 35.3%    |
| RESERVED CODES:<br>MISSING..... | 98    | 17266 | 99.9%    | (MISS)   |
| TOTALS:                         |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual.

The valid range for this test score is 20 to 80.

Question F2RACHPH

Tape Pos. 166-167  
Format: I2

F2RACHPH ACH TEST: PHYSICS

College Board Achievement Test Score: physics

| RESPONSE                        | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------------|-------|-------|----------|----------|
| 31 TO 40.....                   | 02    | 1     | 0.0%     | 0.1%     |
| 41 TO 50.....                   | 03    | 18    | 0.1%     | 12.4%    |
| 51 TO 60.....                   | 04    | 33    | 0.2%     | 41.3%    |
| 61 TO 70.....                   | 05    | 40    | 0.2%     | 29.2%    |
| 71 TO 80.....                   | 06    | 27    | 0.2%     | 17.0%    |
| RESERVED CODES:<br>MISSING..... | 98    | 17166 | 99.3%    | (MISS)   |
| TOTALS:                         |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual.

The valid range for this test score is 20 to 80.

Question: F2RACHCH

Tape Pos. 168-169  
Format: I2

F2RACHCH: ACH TEST: CHEMISTRY

College Board Achievement Test Score: chemistry

| RESPONSE        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-----------------|-------|-------|--------------|----------|
| 20: TO 30:..... | 01    | 1     | 0.0%         | 0.4%     |
| 31: TO 40:..... | 02    | 4     | 0.0%         | 2.0%     |
| 41: TO 50:..... | 03    | 64    | 0.4%         | 29.1%    |
| 51: TO 60:..... | 04    | 76    | 0.4%         | 30.0%    |
| 61: TO 70:..... | 05    | 97    | 0.6%         | 29.5%    |
| 71: TO 80:..... | 06    | 37    | 0.2%         | 8.8%     |
| RESERVED CODES: |       |       |              |          |
| MISSING.....    | 98    | 17006 | 98.4% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual.

The valid range for this test score is 20 to 80.

Question: F2RACHES

Tape Pos. 174-175  
Format: I2

F2RACHES: ACH TEST: ENGLISH: MULT. CHOICE/ESSAY

College Board Achievement Test Score: English composition-multiple choice/essay

| RESPONSE        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-----------------|-------|-------|--------------|----------|
| 20: TO 30:..... | 01    | 4     | 0.0%         | 0.6%     |
| 31: TO 40:..... | 02    | 39    | 0.2%         | 11.5%    |
| 41: TO 50:..... | 03    | 131   | 0.8%         | 40.0%    |
| 51: TO 60:..... | 04    | 178   | 1.0%         | 30.3%    |
| 61: TO 70:..... | 05    | 105   | 0.6%         | 16.3%    |
| 71: TO 80:..... | 06    | 14    | 0.1%         | 1.4%     |
| RESERVED CODES: |       |       |              |          |
| MISSING.....    | 98    | 16814 | 97.3% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual.

The valid range for this test score is 20 to 80.

Question: F2RACHBY

Tape Pos. 170-171  
Format: I2

F2RACHBY: ACH TEST: BIOLOGY

College Board Achievement Test Score: biology

| RESPONSE        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-----------------|-------|-------|--------------|----------|
| 31: TO 40:..... | 02    | 9     | 0.1%         | 3.0%     |
| 41: TO 50:..... | 03    | 43    | 0.2%         | 14.5%    |
| 51: TO 60:..... | 04    | 110   | 0.6%         | 45.4%    |
| 61: TO 70:..... | 05    | 109   | 0.6%         | 28.2%    |
| 71: TO 80:..... | 06    | 40    | 0.2%         | 8.9%     |
| RESERVED CODES: |       |       |              |          |
| MISSING.....    | 98    | 16978 | 98.2% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual.

The valid range for this test score is 20 to 80.

Question: F2RACHLR

Tape Pos. 176-177  
Format: I2

F2RACHLR: ACH TEST: LITERATURE

College Board Achievement Test Score: literature

| RESPONSE        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-----------------|-------|-------|--------------|----------|
| 20: TO 30:..... | 01    | 1     | 0.0%         | 1.6%     |
| 31: TO 40:..... | 02    | 9     | 0.1%         | 8.1%     |
| 41: TO 50:..... | 03    | 35    | 0.2%         | 38.3%    |
| 51: TO 60:..... | 04    | 40    | 0.2%         | 22.3%    |
| 61: TO 70:..... | 05    | 51    | 0.3%         | 29.3%    |
| 71: TO 80:..... | 06    | 4     | 0.0%         | 0.5%     |
| RESERVED CODES: |       |       |              |          |
| MISSING.....    | 98    | 17145 | 99.2% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual.

The valid range for this test score is 20 to 80.

Question: F2RACHEN

Tape Pos. 172-173  
Format: I2

F2RACHEN: ACH TEST: ENGLISH: MULTIPLE CHOICE

College Board Achievement Test Score: English composition-multiple choice

| RESPONSE        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-----------------|-------|-------|--------------|----------|
| 20: TO 30:..... | 01    | 3     | 0.0%         | 0.5%     |
| 31: TO 40:..... | 02    | 96    | 0.6%         | 11.3%    |
| 41: TO 50:..... | 03    | 261   | 1.5%         | 29.5%    |
| 51: TO 60:..... | 04    | 340   | 2.0%         | 34.7%    |
| 61: TO 70:..... | 05    | 202   | 1.2%         | 19.7%    |
| 71: TO 80:..... | 06    | 59    | 0.3%         | 4.4%     |
| RESERVED CODES: |       |       |              |          |
| MISSING.....    | 98    | 16324 | 94.4% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual.

The valid range for this test score is 20 to 80.

Question: F2RACHAH

Tape Pos. 178-179  
Format: I2

F2RACHAH: ACH TEST: AMERICAN HIST./SOC. STUDIES

College Board Achievement Test Score: American history and social studies

| RESPONSE        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-----------------|-------|-------|--------------|----------|
| 31: TO 40:..... | 02    | 27    | 0.2%         | 10.6%    |
| 41: TO 50:..... | 03    | 86    | 0.5%         | 21.1%    |
| 51: TO 60:..... | 04    | 136   | 0.8%         | 43.1%    |
| 61: TO 70:..... | 05    | 94    | 0.5%         | 21.0%    |
| 71: TO 80:..... | 06    | 17    | 0.1%         | 4.2%     |
| RESERVED CODES: |       |       |              |          |
| MISSING.....    | 98    | 16925 | 97.9% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual.

The valid range for this test score is 20 to 80.

Question: FZRACHEH

Tap: Pos. 180-181  
Format: I2

FZRACHEH ACH TEST: EUROPEAN HIST./WRLD CULTURES

College Board Achievement Test Score: European history and world cultures

| RESPONSE        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-----------------|-------|-------|--------------|----------|
| 41 TO 50.....   | 03    | 11    | 0.1%         | 20.4%    |
| 51 TO 60.....   | 04    | 9     | 0.1%         | 48.7%    |
| 61 TO 70.....   | 05    | 4     | 0.0%         | 28.2%    |
| 71 TO 80.....   | 06    | 2     | 0.0%         | 1.8%     |
| RESERVED CODES: |       |       |              |          |
| MISSING.....    | 98    | 17259 | 99.8% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual.

The valid range for this test score is 20 to 80.

Question: FZRACHSP

Tap: Pos. 188-189  
Format: I2

FZRACHSP ACH TEST: SPANISH

College Board Achievement Test Score: Spanish

| RESPONSE        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-----------------|-------|-------|--------------|----------|
| 20 TO 30.....   | 01    | 1     | 0.0%         | 0.3%     |
| 31 TO 40.....   | 02    | 13    | 0.1%         | 22.0%    |
| 41 TO 50.....   | 03    | 30    | 0.2%         | 36.2%    |
| 51 TO 60.....   | 04    | 48    | 0.3%         | 21.8%    |
| 61 TO 70.....   | 05    | 37    | 0.2%         | 11.9%    |
| 71 TO 80.....   | 06    | 15    | 0.1%         | 7.8%     |
| RESERVED CODES: |       |       |              |          |
| MISSING.....    | 98    | 17141 | 99.2% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual.

The valid range for this test score is 20 to 80.

Question: FZRACHFR

Tap: Pos. 182-183  
Format: I2

FZRACHFR ACH TEST: FRENCH

College Board Achievement Test Score: French

| RESPONSE        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-----------------|-------|-------|--------------|----------|
| 31 TO 40.....   | 02    | 11    | 0.1%         | 5.5%     |
| 41 TO 50.....   | 03    | 42    | 0.2%         | 26.1%    |
| 51 TO 60.....   | 04    | 50    | 0.3%         | 40.8%    |
| 61 TO 70.....   | 05    | 45    | 0.3%         | 20.8%    |
| 71 TO 80.....   | 06    | 28    | 0.2%         | 6.7%     |
| RESERVED CODES: |       |       |              |          |
| MISSING.....    | 98    | 17099 | 98.9% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual.

The valid range for this test score is 20 to 80.

Question: FZRACHMH

Tap: Pos. 190-191  
Format: I2

FZRACHMH ACH TEST: MODERN HEBREW

College Board Achievement Test Score: modern Hebrew

| RESPONSE        | CODES | FREQ  | PER-CENT      | WGTD PCT |
|-----------------|-------|-------|---------------|----------|
| 20 TO 30.....   | 01    | 1     | 0.0%          | 3.8%     |
| 31 TO 40.....   | 02    | 1     | 0.0%          | 3.8%     |
| 51 TO 60.....   | 04    | 1     | 0.0%          | 12.1%    |
| 61 TO 70.....   | 05    | 3     | 0.0%          | 46.2%    |
| 71 TO 80.....   | 06    | 2     | 0.0%          | 34.1%    |
| RESERVED CODES: |       |       |               |          |
| MISSING.....    | 98    | 17277 | 100.0% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%        | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual.

The valid range for this test score is 20 to 80.

Question: FZRACHGM

Tap: Pos. 184-185  
Format: I2

FZRACHGM ACH TEST: GERMAN

College Board Achievement Test Score: German

| RESPONSE        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-----------------|-------|-------|--------------|----------|
| 31 TO 40.....   | 02    | 2     | 0.0%         | 12.2%    |
| 41 TO 50.....   | 03    | 4     | 0.0%         | 55.3%    |
| 51 TO 60.....   | 04    | 4     | 0.0%         | 29.6%    |
| 61 TO 70.....   | 05    | 2     | 0.0%         | 2.2%     |
| 71 TO 80.....   | 06    | 1     | 0.0%         | 0.8%     |
| RESERVED CODES: |       |       |              |          |
| MISSING.....    | 98    | 17272 | 99.9% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual.

The valid range for this test score is 20 to 80.

Question: FZRACHIT

Tap: Pos. 192-193  
Format: I2

FZRACHIT ACH TEST: ITALIAN

College Board Achievement Test Score: Italian

| RESPONSE        | CODES | FREQ  | PER-CENT      | WGTD PCT |
|-----------------|-------|-------|---------------|----------|
| 31 TO 40.....   | 02    | 1     | 0.0%          | 20.6%    |
| 61 TO 70.....   | 05    | 1     | 0.0%          | 75.3%    |
| 71 TO 80.....   | 06    | 1     | 0.0%          | 4.1%     |
| RESERVED CODES: |       |       |               |          |
| MISSING.....    | 98    | 17282 | 100.0% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%        | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual.

The valid range for this test score is 20 to 80.

Question: FZRACHLT

Tap: Pos. 186-187  
Format: I2

FZRACHLT ACH TEST: LATIN

College Board Achievement Test Score: Latin

| RESPONSE        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|-----------------|-------|-------|--------------|----------|
| 31 TO 40.....   | 02    | 2     | 0.0%         | 12.9%    |
| 41 TO 50.....   | 03    | 5     | 0.0%         | 11.6%    |
| 51 TO 60.....   | 04    | 9     | 0.1%         | 25.7%    |
| 61 TO 70.....   | 05    | 11    | 0.1%         | 44.9%    |
| 71 TO 80.....   | 06    | 5     | 0.0%         | 4.8%     |
| RESERVED CODES: |       |       |              |          |
| MISSING.....    | 98    | 17251 | 99.8% (MISS) |          |
| TOTALS:         |       | 17285 | 100.0%       | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual.

The valid range for this test score is 20 to 80.



Question F2UNIV1

Tape Pos. 194-197.  
Format: I4

F2UNIV1 SAMPLE MEMBER STATUS IN ALL THREE WAVES

Indicates simultaneously the base year, first follow-up and second follow-up situation of every student sample member ever in the study. This variable has 107 valid values that account for every pattern encountered in NELS:88. Note however that there are gaps in the range of codes displayed in the student codebooks and on the files for different components. Value labels in the codebooks begin with BY status, followed by F1 and then F2 status. SAS and SPSS-X value labels follow the same sequence but are, of necessity, much shorter. See Appendix H of the Second Follow-up: Student Component Data File User's Manual for a list of abbreviations.

| RESPONSE                       | CODES | FREQ  | PER-CENT | WGTD PCT |
|--------------------------------|-------|-------|----------|----------|
| BY INELIG                      |       |       |          |          |
| F1 IN-SCHL, IN-GRADE           |       |       |          |          |
| F2 IN-SCHL, IN-GRADE.....      | 0001  | 72    | 0.4%     | 0.8%     |
| BY INELIG                      |       |       |          |          |
| F1 IN-SCHL, IN-GRADE           |       |       |          |          |
| F2 IN-SCHL, OUT-OF-GRADE.....  | 0002  | 1     | 0.0%     | 0.0%     |
| BY INELIG                      |       |       |          |          |
| F1 IN-SCHL, IN-GRADE           |       |       |          |          |
| F2 DROPOUT.....                | 0003  | 19    | 0.1%     | 0.2%     |
| BY INELIG                      |       |       |          |          |
| F1 IN-SCHL, IN-GRADE           |       |       |          |          |
| F2 STATUS UNK.....             | 0006  | 3     | 0.0%     | 0.0%     |
| BY ELIG                        |       |       |          |          |
| F1 IN-SCHL, OUT-OF-GRADE       |       |       |          |          |
| F2 IN-SCHL, IN-GRADE.....      | 0007  | 191   | 1.1%     | 1.6%     |
| BY ELIG                        |       |       |          |          |
| F1 IN-SCHL, OUT-OF-GRADE       |       |       |          |          |
| F2 IN-SCHL, OUT-OF-GRADE.....  | 0008  | 114   | 0.7%     | 1.1%     |
| BY ELIG                        |       |       |          |          |
| F1 IN-SCHL, OUT-OF-GRADE       |       |       |          |          |
| F2 DROPOUT.....                | 0009  | 235   | 1.4%     | 1.6%     |
| BY ELIG                        |       |       |          |          |
| F1 IN-SCHL, OUT-OF-GRADE       |       |       |          |          |
| F2 STATUS UNK.....             | 0012  | 8     | 0.0%     | 0.1%     |
| BY ELIG                        |       |       |          |          |
| F1 DROPOUT                     |       |       |          |          |
| F2 IN-SCHL, IN-GRADE.....      | 0013  | 20    | 0.1%     | 0.2%     |
| BY ELIG                        |       |       |          |          |
| F1 DROPOUT                     |       |       |          |          |
| F2 IN-SCHL, OUT-OF-GRADE.....  | 0014  | 10    | 0.1%     | 0.3%     |
| BY ELIG                        |       |       |          |          |
| F1 DROPOUT                     |       |       |          |          |
| F2 DROPOUT.....                | 0015  | 433   | 2.5%     | 3.5%     |
| BY ELIG                        |       |       |          |          |
| F1 DROPOUT                     |       |       |          |          |
| F2 STATUS UNK.....             | 0018  | 35    | 0.2%     | 0.4%     |
| BY ELIG                        |       |       |          |          |
| F1 INELIG                      |       |       |          |          |
| F2 IN-SCHL, IN-GRADE.....      | 0019  | 3     | 0.0%     | 0.0%     |
| BY ELIG                        |       |       |          |          |
| F1 INELIG                      |       |       |          |          |
| F2 DROPOUT.....                | 0021  | 5     | 0.0%     | 0.1%     |
| BY ELIG                        |       |       |          |          |
| F1 OUT-OF-SCOPE                |       |       |          |          |
| F2 IN-SCHL, IN-GRADE.....      | 0025  | 5     | 0.0%     | 0.0%     |
| BY ELIG                        |       |       |          |          |
| F1 OUT-OF-SCOPE                |       |       |          |          |
| F2 DROPOUT.....                | 0027  | 9     | 0.1%     | 0.1%     |
| BY ELIG                        |       |       |          |          |
| F1 OUT-OF-SCOPE                |       |       |          |          |
| F2 STATUS UNK.....             | 0030  | 4     | 0.0%     | 0.0%     |
| BY ELIG                        |       |       |          |          |
| F1 STATUS UNK                  |       |       |          |          |
| F2 IN-SCHL, IN-GRADE.....      | 0031  | 345   | 2.0%     | 2.2%     |
| BY ELIG                        |       |       |          |          |
| F1 STATUS UNK                  |       |       |          |          |
| F2 IN-SCHL, OUT-OF-GRADE.....  | 0032  | 11    | 0.1%     | 0.1%     |
| BY ELIG                        |       |       |          |          |
| F1 STATUS UNK                  |       |       |          |          |
| F2 DROPOUT.....                | 0033  | 49    | 0.3%     | 0.3%     |
| BY ELIG                        |       |       |          |          |
| F1 STATUS UNK                  |       |       |          |          |
| F2 STATUS UNK.....             | 0036  | 5     | 0.0%     | 0.0%     |
| BY ELIG                        |       |       |          |          |
| F1 IN-SCHL, IN-GRADE           |       |       |          |          |
| F2 IN-SCHL, IN-GRADE.....      | 0037  | 13518 | 78.2%    | 71.1%    |
| BY ELIG                        |       |       |          |          |
| F1 IN-SCHL, IN-GRADE           |       |       |          |          |
| F2 IN-SCHL, OUT-OF-GRADE.....  | 0038  | 148   | 0.9%     | 1.5%     |
| BY ELIG                        |       |       |          |          |
| F1 IN-SCHL, IN-GRADE           |       |       |          |          |
| F2 DROPOUT.....                | 0039  | 963   | 5.6%     | 7.1%     |
| BY ELIG                        |       |       |          |          |
| F1 IN-SCHL, IN-GRADE           |       |       |          |          |
| F2 STATUS UNK.....             | 0042  | 11    | 0.1%     | 0.1%     |
| BY NA                          |       |       |          |          |
| F1 FRESHENED IN-SCHL, IN-GRADE |       |       |          |          |
| F2 IN SCHL, IN-GRADE.....      | 0043  | 380   | 2.2%     | 2.5%     |
| BY NA                          |       |       |          |          |
| F1 FRESHENED IN-SCHL, IN-GRADE |       |       |          |          |
| F2 IN SCHL, OUT-OF-GRADE.....  | 0044  | 27    | 0.2%     | 0.2%     |
| BY NA                          |       |       |          |          |
| F1 FRESHENED IN-SCHL, IN-GRADE |       |       |          |          |
| F2 DROPOUT.....                | 0045  | 149   | 0.9%     | 0.8%     |
| BY NA                          |       |       |          |          |
| F1 FRESHENED IN-SCHL, IN-GRADE |       |       |          |          |
| F2 STATUS UNK.....             | 0048  | 7     | 0.0%     | 0.1%     |
| BY NA                          |       |       |          |          |
| F1 FRESHENED INELIG            |       |       |          |          |
| F2 IN SCHL, IN-GRADE.....      | 0049  | 2     | 0.0%     | 0.0%     |
| BY NA                          |       |       |          |          |
| F1 FRESHENED INELIG            |       |       |          |          |
| F2 DROPOUT.....                | 0051  | 2     | 0.0%     | 0.0%     |
| BY NA                          |       |       |          |          |
| F1 FRESHENED DROPOUT           |       |       |          |          |
| F2 IN SCHL, IN-GRADE.....      | 0055  | 4     | 0.0%     | 0.1%     |

|                               |      |       |        |        |
|-------------------------------|------|-------|--------|--------|
| BY NA                         |      |       |        |        |
| F1 FRESHENED DROPOUT          |      |       |        |        |
| F2 DROPOUT.....               | 0057 | 109   | 0.6%   | 0.6%   |
| BY NA                         |      |       |        |        |
| F1 FRESHENED DROPOUT          |      |       |        |        |
| F2 STATUS UNK.....            | 0060 | 9     | 0.1%   | 0.1%   |
| BY NA                         |      |       |        |        |
| F1 FRESHENED OUT-OF-SCOPE     |      |       |        |        |
| F2 IN SCHL, OUT-OF-GRADE..... | 0062 | 1     | 0.0%   | 0.0%   |
| BY NA                         |      |       |        |        |
| F1 FRESHENED OUT-OF-SCOPE     |      |       |        |        |
| F2 DROPOUT.....               | 0063 | 1     | 0.0%   | 0.0%   |
| BY NA                         |      |       |        |        |
| F1 FRESHENED STATUS UNK       |      |       |        |        |
| F2 IN SCHL, IN-GRADE.....     | 0067 | 16    | 0.1%   | 0.1%   |
| BY NA                         |      |       |        |        |
| F1 FRESHENED STATUS UNK       |      |       |        |        |
| F2 IN SCHL, OUT-OF-GRADE..... | 0068 | 1     | 0.0%   | 0.0%   |
| BY NA                         |      |       |        |        |
| F1 FRESHENED STATUS UNK       |      |       |        |        |
| F2 DROPOUT.....               | 0069 | 16    | 0.1%   | 0.1%   |
| BY NA                         |      |       |        |        |
| F1 FRESHENED STATUS UNK       |      |       |        |        |
| F2 STATUS UNK.....            | 0072 | 3     | 0.0%   | 0.0%   |
| BY NA                         |      |       |        |        |
| F1 NA                         |      |       |        |        |
| F2 FRESHENED IN-SCHL IN-GRADE | 0073 | 210   | 1.2%   | 1.1%   |
| BY NA                         |      |       |        |        |
| F1 NA                         |      |       |        |        |
| F2 FRESHENED DROPOUT.....     | 0074 | 11    | 0.1%   | 0.0%   |
| BY INELIG                     |      |       |        |        |
| F1 IN-SCHL, OUT-OF-GRADE      |      |       |        |        |
| F2 IN-SCHL, IN-GRADE.....     | 0078 | 8     | 0.0%   | 0.2%   |
| BY INELIG                     |      |       |        |        |
| F1 IN-SCHL, OUT-OF-GRADE      |      |       |        |        |
| F2 IN-SCHL, OUT-OF-GRADE..... | 0079 | 3     | 0.0%   | 0.0%   |
| BY INELIG                     |      |       |        |        |
| F1 IN-SCHL, OUT-OF-GRADE      |      |       |        |        |
| F2 DROPOUT.....               | 0080 | 8     | 0.0%   | 0.1%   |
| BY INELIG                     |      |       |        |        |
| F1 IN-SCHL, OUT-OF-GRADE      |      |       |        |        |
| F2 STATUS UNK.....            | 0083 | 1     | 0.0%   | 0.0%   |
| BY INELIG                     |      |       |        |        |
| F1 DROPOUT                    |      |       |        |        |
| F2 IN-SCHL, OUT-OF-GRADE..... | 0085 | 1     | 0.0%   | 0.1%   |
| BY INELIG                     |      |       |        |        |
| F1 DROPOUT                    |      |       |        |        |
| F2 DROPOUT.....               | 0086 | 15    | 0.1%   | 0.2%   |
| BY INELIG                     |      |       |        |        |
| F1 DROPOUT                    |      |       |        |        |
| F2 STATUS UNK.....            | 0089 | 1     | 0.0%   | 0.0%   |
| BY INELIG                     |      |       |        |        |
| F1 INELIG                     |      |       |        |        |
| F2 IN-SCHL, IN-GRADE.....     | 0090 | 20    | 0.1%   | 0.2%   |
| BY INELIG                     |      |       |        |        |
| F1 INELIG                     |      |       |        |        |
| F2 IN-SCHL, OUT-OF-GRADE..... | 0091 | 2     | 0.0%   | 0.0%   |
| BY INELIG                     |      |       |        |        |
| F1 INELIG                     |      |       |        |        |
| F2 DROPOUT.....               | 0092 | 9     | 0.1%   | 0.1%   |
| BY INELIG                     |      |       |        |        |
| F1 INELIG                     |      |       |        |        |
| F2 INELIG.....                | 0093 | 51    | 0.3%   | 0.9%   |
| BY INELIG                     |      |       |        |        |
| F1 STATUS UNK                 |      |       |        |        |
| F2 INELIG.....                | 0105 | 1     | 0.0%   | 0.0%   |
| TOTALS:                       |      | 17285 | 100.0% | 100.0% |

Question F2UNIV2A

Tape Pos. 198-198  
Format: I1

F2UNIV2A HOW STUDENT ENTERED THE SAMPLE

Indicates how the student sample member entered the sample.

| RESPONSE           | CODES | FREQ  | PER-CENT | WGTD PCT |
|--------------------|-------|-------|----------|----------|
| BY ELIGIBLE.....   | 1     | 16122 | 93.3%    | 91.3%    |
| BY INELIGIBLE..... | 2     | 215   | 1.2%     | 3.0%     |
| F1 FRESHENED.....  | 3     | 727   | 4.2%     | 4.6%     |
| F2 FRESHENED.....  | 4     | 221   | 1.3%     | 1.1%     |
| TOTALS:            |       | 17285 | 100.0%   | 100.0%   |

Question F2UNIV2B

Tape Pos. 199-199  
Format: I1

F2UNIV2B BASE YEAR STATUS OF SAMPLE MEMBER

Indicates base year status of sample member.

| RESPONSE              | CODES | FREQ  | PER-CENT | WGTD PCT |
|-----------------------|-------|-------|----------|----------|
| FRESHENED(F1/F2)..... | 0     | 948   | 5.5%     | 5.7%     |
| IN-SCHL IN-GRADE..... | 1     | 16122 | 93.3%    | 91.3%    |
| INELIGIBLE.....       | 4     | 215   | 1.2%     | 3.0%     |
| TOTALS:               |       | 17285 | 100.0%   | 100.0%   |

Question F2UNIV2C

Tape Pos. 200-201  
Format: I2

F2UNIV2C F1 STATUS OF SAMPLE MEMBER

Indicates first follow-up status of sample member.

| RESPONSE              | CODES | FREQ  | PER-CENT | WGTD PCT |
|-----------------------|-------|-------|----------|----------|
| FRESHENED IN F2.....  | 00    | 221   | 1.3%     | 1.1%     |
| IN-SCHL INGRADE.....  | 01    | 15298 | 88.5%    | 84.4%    |
| IN-SCHL OUTGRADE..... | 02    | 568   | 3.3%     | 4.7%     |
| DROPOUT.....          | 03    | 637   | 3.7%     | 5.5%     |
| INELIGIBLE.....       | 04    | 94    | 0.5%     | 1.4%     |
| OUT-OF-SCOPE.....     | 05    | 20    | 0.1%     | 0.1%     |
| STATUS UNKNOWN.....   | 06    | 447   | 2.6%     | 2.9%     |
| TOTALS:               |       | 17285 | 100.0%   | 100.0%   |

Question F2UNIV2D

Tape Pos. 202-203  
Format: I2

F2UNIV2D F2 STATUS OF SAMPLE MEMBER

Indicates second follow-up status of sample member.

| RESPONSE             | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------------|-------|-------|----------|----------|
| IN-SCH INGRADE.....  | 01    | 14794 | 85.6%    | 80.1%    |
| IN-SCH OUTGRADE..... | 02    | 319   | 1.8%     | 3.3%     |
| DROPOUT.....         | 03    | 2033  | 11.8%    | 14.8%    |
| INELIGIBLE.....      | 04    | 52    | 0.3%     | 0.9%     |
| STATUS UNKNOWN.....  | 06    | 87    | 0.5%     | 0.9%     |
| TOTALS:              |       | 17285 | 100.0%   | 100.0%   |

Question F2RWTST

Tape Pos. 204-204  
Format: I1

F2RWTST F2 WEIGHTING ENROLLMENT STATUS

Sample member's F2 enrollment status (real and imputed) used in weighting

| RESPONSE                       | CODES | FREQ  | PER-CENT | WGTD PCT |
|--------------------------------|-------|-------|----------|----------|
| IN-SCHOOL IN GRADE.....        | 1     | 14794 | 85.6%    | 80.1%    |
| IN-SCHOOL OUT OF GRADE.....    | 2     | 319   | 1.8%     | 3.3%     |
| DROPOUT.....                   | 3     | 2120  | 12.3%    | 15.8%    |
| INELIGIBLE OR OUT-OF-SCOPE.... | 4     | 52    | 0.3%     | 0.9%     |
| TOTALS:                        |       | 17285 | 100.0%   | 100.0%   |

Question F2BYQFLG

Tape Pos. 205-205  
Format: I1

F2BYQFLG BASE YEAR QUESTIONNAIRE AVAILABLE

Indicates whether or not sample member completed a base year student questionnaire.

| RESPONSE               | CODES | FREQ  | PER-CENT | WGTD PCT |
|------------------------|-------|-------|----------|----------|
| DID NOT COMPLETE.....  | 0     | 2038  | 11.8%    | 14.2%    |
| COMPLETED BY QUEX..... | 1     | 15247 | 88.2%    | 85.8%    |
| TOTALS:                |       | 17285 | 100.0%   | 100.0%   |

Question F2F1QFLG

Tape Pos. 206-206  
Format: I1

F2F1QFLG F1 QUESTIONNAIRE AVAILABLE

Indicates whether or not sample member completed a first follow-up student or dropout questionnaire.

| RESPONSE                   | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------------------|-------|-------|----------|----------|
| DID NOT COMPLETE.....      | 0     | 1053  | 6.1%     | 9.4%     |
| STUDENT QUEX COMPLETE..... | 1     | 15636 | 90.5%    | 85.5%    |
| DROPOUT QUEX COMPLETE..... | 2     | 596   | 3.4%     | 5.1%     |
| TOTALS:                    |       | 17285 | 100.0%   | 100.0%   |

Question F2QFLG

Tape Pos. 207-207  
Format: I1

F2QFLG F2 QUESTIONNAIRE AVAILABLE

Indicates whether or not sample member completed a second follow-up student or dropout questionnaire.

| RESPONSE                   | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------------------|-------|-------|----------|----------|
| DID NOT COMPLETE.....      | 0     | 879   | 5.1%     | 10.4%    |
| STUDENT QUEX COMPLETE..... | 1     | 14887 | 86.1%    | 78.8%    |
| DROPOUT QUEX COMPLETE..... | 2     | 1519  | 8.8%     | 10.8%    |
| TOTALS:                    |       | 17285 | 100.0%   | 100.0%   |

Question F2NSSFLG

Tape Pos. 208-208  
Format: I1

F2NSSFLG F2 NEW STUDENT SUPPLEMENT AVAILABLE

Indicates whether or not sample member completed a second follow-up New Student Supplement (NSS).

| RESPONSE                       | CODES | FREQ  | PER-CENT | WGTD PCT |
|--------------------------------|-------|-------|----------|----------|
| SUPPLEMENT N/A OR MISSING..... | 0     | 16745 | 96.9%    | 96.7%    |
| SUPPLEMENT COMPLETED.....      | 1     | 540   | 3.1%     | 3.3%     |
| TOTALS:                        |       | 17285 | 100.0%   | 100.0%   |

Question F2BYTXFL

Tape Pos. 209-209  
Format: I1

F2BYTXFL BASE YEAR STUDENT TESTS AVAILABLE

Indicates whether or not sample member completed the BY cognitive tests.

| RESPONSE              | CODES | FREQ  | PER-CENT | WGTD PCT |
|-----------------------|-------|-------|----------|----------|
| DID NOT COMPLETE..... | 0     | 2603  | 15.1%    | 17.1%    |
| COMPLETED TESTS.....  | 1     | 14682 | 84.9%    | 82.9%    |
| TOTALS:               |       | 17285 | 100.0%   | 100.0%   |

Question F2FITXFL

Tape Pos. 210-210  
Format: I1

F2FITXFL F1 STUDENT TESTS AVAILABLE

Indicates whether or not sample member completed a first follow-up cognitive test.

| RESPONSE              | CODES | FREQ  | PER-CENT | WGTD PCT |
|-----------------------|-------|-------|----------|----------|
| DID NOT COMPLETE..... | 0     | 2072  | 12.0%    | 17.9%    |
| COMPLETED TESTS.....  | 1     | 15213 | 88.0%    | 82.1%    |
| TOTALS:               |       | 17285 | 100.0%   | 100.0%   |

Question F2TXFLG

Tape Pos. 211-211  
Format: I1

F2TXFLG F2 STUDENT TESTS AVAILABLE

Indicates whether or not sample member completed a second follow-up cognitive test.

| RESPONSE              | CODES | FREQ  | PER-CENT | WGTD PCT |
|-----------------------|-------|-------|----------|----------|
| DID NOT COMPLETE..... | 0     | 4263  | 24.7%    | 29.3%    |
| COMPLETED TESTS.....  | 1     | 13022 | 75.3%    | 70.7%    |
| TOTALS:               |       | 17285 | 100.0%   | 100.0%   |

Question F2BYF1PN Tape Pos. 212-212  
Format: I1

F2BYF1PN BY AND F1 QUESTIONNAIRES AVAILABLE

Indicates whether or not sample member on second follow-up file is part of the base year/first follow-up panel sample (eighth grade [1988] to tenth grade [1990] longitudinal panel).

| RESPONSE                      | CODES | FREQ  | PER-CENT | WGTD PCT |
|-------------------------------|-------|-------|----------|----------|
| NOT BY / F1 PANEL MEMBER..... | 0     | 2558  | 14.8%    | 14.8%    |
| BY / F1 PANEL MEMBER.....     | 1     | 14727 | 85.2%    | 85.2%    |
| TOTALS:                       |       | 17285 | 100.0%   | 100.0%   |

Question G10COHRT Tape Pos. 217-217  
Format: I1

G10COHRT MEMBER 10TH GRADE IN-SCHOOL CLASS 89-90

Indicates whether or not sample member is a member of the 10th grade cohort (whether or not s/he was enrolled in the 10th grade during the 1989-90 school year)

| RESPONSE               | CODES | FREQ  | PER-CENT | WGTD PCT |
|------------------------|-------|-------|----------|----------|
| NOT A MEMBER.....      | 0     | 1778  | 10.3%    | 10.3%    |
| SPRING MEMBER.....     | 1     | 15298 | 88.5%    | 88.5%    |
| FALL MEMBER.....       | 2     | 122   | 0.7%     | 0.7%     |
| INELIGIBLE MEMBER..... | 3     | 87    | 0.5%     | 0.5%     |
| TOTALS:                |       | 17285 | 100.0%   | 100.0%   |

Question F2F1PNFL Tape Pos. 213-213  
Format: I1

F2F1PNFL F1 & F2 QUESTIONNAIRES AVAILABLE

Indicates whether or not sample member on second follow-up file is a member of the first follow-up/second follow-up panel sample (tenth grade [1990] to twelfth grade [1992] longitudinal panel).

| RESPONSE                                     | CODES | FREQ  | PER-CENT | WGTD PCT |
|--|-------|-------|----------|----------|
| NOT F1 / F2 PANEL MEMBER.....                | 0     | 1650  | 9.5%     | 9.5%     |
| F1 / F2 PANEL MEMBER, NOT IN 10TH GRADE..... | 1     | 1010  | 5.8%     | 5.8%     |
| F1 / F2 PANEL MEMBER.....                    | 2     | 14625 | 84.6%    | 84.6%    |
| TOTALS:                                      |       | 17285 | 100.0%   | 100.0%   |

Question G12COHRT Tape Pos. 218-218  
Format: I1

G12COHRT MEMBER 12TH GRADE IN-SCHOOL CLASS 91-92

Indicates whether or not sample member is a member of the 12th grade cohort (whether or not s/he was enrolled in the 12th grade during the 1991-92 school year)

| RESPONSE               | CODES | FREQ  | PER-CENT | WGTD PCT |
|------------------------|-------|-------|----------|----------|
| NOT A MEMBER.....      | 0     | 2428  | 14.0%    | 14.0%    |
| SPRING MEMBER.....     | 1     | 14794 | 85.6%    | 85.6%    |
| FALL MEMBER.....       | 2     | 11    | 0.1%     | 0.1%     |
| INELIGIBLE MEMBER..... | 3     | 52    | 0.3%     | 0.3%     |
| TOTALS:                |       | 17285 | 100.0%   | 100.0%   |

Question F2PNLFLG Tape Pos. 214-214  
Format: I1

F2PNLFLG BY & F1 & F2 QUESTIONNAIRES AVAILABLE

Indicates whether or not sample member on second follow-up file is a member of the base year/first follow-up/second follow-up panel sample (participation in all three waves of NELS:88: eighth grade [1988], tenth grade [1990], and twelfth grade [1992]).

| RESPONSE                           | CODES | FREQ  | PER-CENT | WGTD PCT |
|------------------------------------|-------|-------|----------|----------|
| NOT BY / F1 / F2 PANEL MEMBER..... | 0     | 3002  | 17.4%    | 17.4%    |
| BY / F1 / F2 PANEL MEMBER.....     | 1     | 14283 | 82.6%    | 82.6%    |
| TOTALS:                            |       | 17285 | 100.0%   | 100.0%   |

Question F2F1STAT Tape Pos. 219-220  
Format: I2

F2F1STAT STATUS OF SAMPLE MEMBER IN F1

Indicates final status in the first follow-up for sample members who appear on the file.

| RESPONSE                        | CODES | FREQ  | PER-CENT | WGTD PCT    |
|---------------------------------|-------|-------|----------|-------------|
| PARTICIPATED.....               | 00    | 16232 | 93.9%    | 95.6%       |
| OTHER NON-RESPONDENT.....       | 01    | 277   | 1.6%     | 1.6%        |
| UNLOCATABLE.....                | 02    | 52    | 0.3%     | 0.3%        |
| REFUSED.....                    | 03    | 388   | 2.2%     | 2.3%        |
| INELIGIBLE.....                 | 04    | 8     | 0.0%     | 0.0%        |
| OUT OF COUNTRY.....             | 05    | 20    | 0.1%     | 0.1%        |
| RESERVED CODES:<br>MISSING..... |       | 98    | 308      | 1.8% (MISS) |
| TOTALS:                         |       | 17285 | 100.0%   | 100.0%      |

Question F2CXTFGL Tape Pos. 215-215  
Format: I1

F2CXTFGL SAMPLE MEMBER PART OF F2 CONTEXT SAMPLE

Indicates whether or not the sample member was part of the F2 contextual sample.

| RESPONSE                         | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------------------------|-------|-------|----------|----------|
| NOT A MEMBER.....                | 0     | 2194  | 12.7%    | 12.7%    |
| MEMBER AND QUEX COMPLETE.....    | 1     | 14591 | 84.4%    | 84.4%    |
| MEMBER BUT NO QUEX COMPLETE..... | 2     | 500   | 2.9%     | 2.9%     |
| TOTALS:                          |       | 17285 | 100.0%   | 100.0%   |

Question F2STAT Tape Pos. 221-222  
Format: I2

F2STAT STATUS OF SAMPLE MEMBER IN F2

Indicates final status in the second follow-up for sample members who appear on the file.

| RESPONSE                  | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------|-------|-------|----------|----------|
| PARTICIPATED.....         | 00    | 16406 | 94.9%    | 94.9%    |
| OTHER NON-RESPONDENT..... | 01    | 476   | 2.8%     | 2.8%     |
| UNLOCATABLE.....          | 02    | 157   | 0.9%     | 0.9%     |
| REFUSED.....              | 03    | 194   | 1.1%     | 1.1%     |
| INELIGIBLE.....           | 04    | 52    | 0.3%     | 0.3%     |
| TOTALS:                   |       | 17285 | 100.0%   | 100.0%   |

Question G8COHORT Tape Pos. 216-216  
Format: I1

G8COHORT MEMBER 8TH GRADE IN-SCHOOL CLASS 87-88

Indicates whether or not sample member is a member of the 8th grade cohort (whether or not s/he was enrolled in the 8th grade during the 1987-88 school year)

| RESPONSE               | CODES | FREQ  | PER-CENT | WGTD PCT |
|------------------------|-------|-------|----------|----------|
| NOT A MEMBER.....      | 0     | 948   | 5.5%     | 5.5%     |
| SPRING MEMBER.....     | 1     | 16122 | 93.3%    | 93.3%    |
| INELIGIBLE MEMBER..... | 3     | 215   | 1.2%     | 1.2%     |
| TOTALS:                |       | 17285 | 100.0%   | 100.0%   |

Question F2F1DDST

Tape Pos. 223-224  
Format: I2

F2F1DDST F1 DROPOUT STATUS

Indicates enrollment status, either dropout or student, as of the first follow-up ONLY. For more information on selecting dropouts by different dropout definitions, see Appendix D of the Second Follow-Up: Dropout Component Data File User's Manual.

| RESPONSE                       | CODES | FREQ  | PER-CENT | WGTD PCT |
|--------------------------------|-------|-------|----------|----------|
| DID NOT DROP OUT.....          | 00    | 15878 | 91.9%    | 89.9%    |
| NOT DETERMINED.....            | 01    | 471   | 2.7%     | 3.0%     |
| DROPOUT, RETURNED.....         | 02    | 76    | 0.4%     | 0.5%     |
| HOMESTUDY.....                 | 03    | 7     | 0.0%     | 0.0%     |
| SCHOOL REPORTED DROPOUT.....   | 04    | 32    | 0.2%     | 0.3%     |
| DROPOUT, NO RETURN.....        | 05    | 600   | 3.5%     | 5.2%     |
| NOT APPLICABLE, F2 FRESHENED.. | 06    | 221   | 1.3%     | 1.1%     |
| TOTALS:                        |       | 17285 | 100.0%   | 100.0%   |

Question F2DOSTAT

Tape Pos. 225-225  
Format: I1

F2DOSTAT F2 DROPOUT STATUS

Indicates enrollment status, either dropout or student, as of the second follow-up ONLY. Also permits identification of dropouts according to either the NELS:88 first follow-up definition of a dropout or the HS&B/NELS:88 second follow-up definition. For more information on selecting dropouts by different dropout definitions, see Appendix D of the Second Follow-Up: Dropout Component Data File User's Manual.

For some sample members, this item may appear to be inconsistent with F2RTROUT. See F2TRSTYP for both elucidation and resolution of inconsistencies between F2RTROUT (transcript-indicated outcome) and F2DOSTAT. (See Chapter 6 and Appendix G of the Second Follow-Up: Transcript Component Data File User's manual for a discussion of F2TRSTYP and discrepancies between F2DOSTAT and F2RTROUT.)

| RESPONSE                     | CODES | FREQ  | PER-CENT | WGTD PCT |
|------------------------------|-------|-------|----------|----------|
| DID NOT DROP OUT.....        | 0     | 15098 | 87.3%    | 83.7%    |
| STATUS NOT DETERMINED.....   | 1     | 87    | 0.5%     | 0.9%     |
| DROPOUT, BUT RETURNED.....   | 2     | 67    | 0.4%     | 0.5%     |
| ALTERNATIVE STUDENT.....     | 3     | 666   | 3.9%     | 4.5%     |
| SCHOOL REPORTED DROPOUT..... | 4     | 70    | 0.4%     | 0.6%     |
| DROPOUT, NO RETURN.....      | 5     | 1297  | 7.5%     | 9.6%     |
| TOTALS:                      |       | 17285 | 100.0%   | 100.0%   |

Question F2TRSTYP

Tape Pos. 226-227  
Format: I2

F2TRSTYP DROPOUT STATUS DISCREPANCY INDICATOR

This variable elucidates and resolves discrepancies between F2DOSTAT and F2RTROUT. The majority of inconsistencies can be attributed to the disjoint data collection periods for the two items, and to differences between the NELS:88 and transcript schools' dropout definition. (See Chapter 6 and Appendix G of the Second Follow-Up: Transcript Component Data File User's Manual for a discussion of F2TRSTYP as it relates to discrepancies between F2DOSTAT and F2RTROUT.)

| RESPONSE              | CODES | FREQ  | PER-CENT | WGTD PCT |
|-----------------------|-------|-------|----------|----------|
| F2RTROUT-stu          |       |       |          |          |
| F2DOSTAT-stu          |       |       |          |          |
| F2RWTST-stu           |       |       |          |          |
| F2QFLG-stu quex.....  | 01    | 13854 | 80.2%    | 72.1%    |
| F2RTROUT-stu          |       |       |          |          |
| F2DOSTAT-stop         |       |       |          |          |
| F2RWTST-stu           |       |       |          |          |
| F2QFLG-stu quex.....  | 02    | 23    | 0.1%     | 0.1%     |
| F2RTROUT-stu          |       |       |          |          |
| F2DOSTAT-stu          |       |       |          |          |
| F2RWTST-stu           |       |       |          |          |
| F2QFLG-no quex.....   | 03    | 466   | 2.7%     | 5.9%     |
| F2RTROUT-stu          |       |       |          |          |
| F2DOSTAT-stop         |       |       |          |          |
| F2RWTST-stu           |       |       |          |          |
| F2QFLG-no quex.....   | 04    | 2     | 0.0%     | 0.0%     |
| F2RTROUT-stu          |       |       |          |          |
| F2DOSTAT-unk          |       |       |          |          |
| F2RWTST-drop          |       |       |          |          |
| F2QFLG-no quex.....   | 05    | 8     | 0.0%     | 0.1%     |
| F2RTROUT-stu          |       |       |          |          |
| F2DOSTAT-drop         |       |       |          |          |
| F2RWTST-drop          |       |       |          |          |
| F2QFLG-stu quex.....  | 06    | 39    | 0.2%     | 0.3%     |
| F2RTROUT-stu          |       |       |          |          |
| F2DOSTAT-drop         |       |       |          |          |
| F2RWTST-drop          |       |       |          |          |
| F2QFLG-drop quex..... | 07    | 55    | 0.3%     | 0.4%     |
| F2RTROUT-stu          |       |       |          |          |
| F2DOSTAT-drop         |       |       |          |          |
| F2RWTST-drop          |       |       |          |          |
| F2QFLG-no quex.....   | 08    | 20    | 0.1%     | 0.2%     |
| F2RTROUT-drop         |       |       |          |          |
| F2DOSTAT-drop         |       |       |          |          |
| F2RWTST-drop          |       |       |          |          |
| F2QFLG-stu quex.....  | 09    | 174   | 1.0%     | 1.3%     |
| F2RTROUT-drop         |       |       |          |          |
| F2DOSTAT-drop         |       |       |          |          |
| F2RWTST-drop          |       |       |          |          |
| F2QFLG-drop quex..... | 10    | 1279  | 7.4%     | 9.0%     |
| F2RTROUT-drop         |       |       |          |          |
| F2DOSTAT-drop         |       |       |          |          |
| F2RWTST-drop          |       |       |          |          |
| F2QFLG-no quex.....   | 11    | 171   | 1.0%     | 1.5%     |
| F2RTROUT-drop         |       |       |          |          |
| F2DOSTAT-unk          |       |       |          |          |
| F2RWTST-drop          |       |       |          |          |
| F2QFLG-no quex.....   | 12    | 52    | 0.3%     | 0.6%     |
| F2RTROUT-drop         |       |       |          |          |
| F2DOSTAT-stu          |       |       |          |          |
| F2RWTST-stu           |       |       |          |          |
| F2QFLG-stu quex.....  | 13    | 246   | 1.4%     | 1.7%     |
| F2RTROUT-drop         |       |       |          |          |
| F2DOSTAT-stop         |       |       |          |          |
| F2RWTST-stu           |       |       |          |          |
| F2QFLG-stu quex.....  | 14    | 25    | 0.1%     | 0.2%     |
| F2RTROUT-drop         |       |       |          |          |
| F2DOSTAT-stu          |       |       |          |          |
| F2RWTST-stu           |       |       |          |          |
| F2QFLG-no quex.....   | 15    | 33    | 0.2%     | 0.5%     |
| F2RTROUT-drop         |       |       |          |          |
| F2DOSTAT-stop         |       |       |          |          |
| F2RWTST-stu           |       |       |          |          |
| F2QFLG-no quex.....   | 16    | 3     | 0.0%     | 0.1%     |
| F2RTROUT-trnsfr       |       |       |          |          |
| F2DOSTAT-stu          |       |       |          |          |
| F2RWTST-stu           |       |       |          |          |
| F2QFLG-stu quex.....  | 17    | 142   | 0.8%     | 1.0%     |
| F2RTROUT-trnsfr       |       |       |          |          |
| F2DOSTAT-stop         |       |       |          |          |
| F2RWTST-stu           |       |       |          |          |
| F2QFLG-stu quex.....  | 18    | 6     | 0.0%     | 0.0%     |
| F2RTROUT-trnsfr       |       |       |          |          |
| F2DOSTAT-stu          |       |       |          |          |
| F2RWTST-stu           |       |       |          |          |
| F2QFLG-no quex.....   | 19    | 23    | 0.1%     | 0.4%     |
| F2RTROUT-trnsfr       |       |       |          |          |
| F2DOSTAT-stop         |       |       |          |          |
| F2RWTST-stu           |       |       |          |          |
| F2QFLG-no quex.....   | 20    | 1     | 0.0%     | 0.0%     |
| F2RTROUT-trnsfr       |       |       |          |          |
| F2DOSTAT-unk          |       |       |          |          |
| F2RWTST-drop          |       |       |          |          |
| F2QFLG-no quex.....   | 21    | 16    | 0.1%     | 0.1%     |
| F2RTROUT-trnsfr       |       |       |          |          |
| F2DOSTAT-drop         |       |       |          |          |
| F2RWTST-drop          |       |       |          |          |
| F2QFLG-stu quex.....  | 22    | 47    | 0.3%     | 0.3%     |
| F2RTROUT-trnsfr       |       |       |          |          |
| F2DOSTAT-drop         |       |       |          |          |
| F2RWTST-drop          |       |       |          |          |
| F2QFLG-drop quex..... | 23    | 134   | 0.8%     | 0.9%     |
| F2RTROUT-trnsfr       |       |       |          |          |
| F2DOSTAT-drop         |       |       |          |          |
| F2RWTST-drop          |       |       |          |          |
| F2QFLG-no quex.....   | 24    | 30    | 0.2%     | 0.3%     |
| F2RTROUT-unk          |       |       |          |          |
| F2DOSTAT-stu          |       |       |          |          |
| F2RWTST-stu           |       |       |          |          |
| F2QFLG-stu quex.....  | 25    | 308   | 1.8%     | 1.8%     |

| Question     | F2DSTAT      | F2RWTST      | F2QFLG          | STU   | QUX    | FREQ   | PER-CENT | WGTD PCT |
|--------------|--------------|--------------|-----------------|-------|--------|--------|----------|----------|
| F2RTROUT-unk | F2DSTAT-stop | F2RWTST-stu  | F2QFLG-stu      | 26    | 6      | 0.0%   | 0.1%     |          |
| F2RTROUT-unk | F2DSTAT-stu  | F2RWTST-stu  | F2QFLG-no qux   | 27    | 26     | 0.2%   | 0.3%     |          |
| F2RTROUT-unk | F2DSTAT-stop | F2RWTST-stu  | F2QFLG-no qux   | 28    | 1      | 0.0%   | 0.0%     |          |
| F2RTROUT-unk | F2DSTAT-unk  | F2RWTST-drop | F2QFLG-no qux   | 29    | 11     | 0.1%   | 0.1%     |          |
| F2RTROUT-unk | F2DSTAT-drop | F2RWTST-drop | F2QFLG-stu qux  | 30    | 17     | 0.1%   | 0.1%     |          |
| F2RTROUT-unk | F2DSTAT-drop | F2RWTST-drop | F2QFLG-drop qux | 31    | 51     | 0.3%   | 0.4%     |          |
| F2RTROUT-unk | F2DSTAT-drop | F2RWTST-drop | F2QFLG-no qux   | 32    | 16     | 0.1%   | 0.1%     |          |
| TOTALS:      |              |              |                 | 17285 | 100.0% | 100.0% |          |          |

NOTE: On the 7/94 release of the transcript data and in the public and restricted use versions of the second follow-up student data, the labels for values 9 and 10 of F2RSTYP were reversed and have been corrected in this display of the variable. Value 9 should read: F2RTROUT-drop, F2DSTAT-drop, F2RWTST-drop, and F2QFLG-stu. Value 10 should read: F2RTROUT-drop, F2DSTAT-drop, F2RWTST-drop, and F2QFLG-drop

Question F2SEX Tape Pos. 228-228  
Format: I1

F2SEX COMPOSITE SEX

The most complete indicator of sample member's gender, this variable is based on the first follow-up (F1SEX) composite and augmented by second follow-up New Student Supplement information or, if still missing, imputation from student first names.

| RESPONSE | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------|-------|-------|----------|----------|
| MALE     | 1     | 8776  | 50.8%    | 51.0%    |
| FEMALE   | 2     | 8509  | 49.2%    | 49.0%    |
| TOTALS:  |       | 17285 | 100.0%   | 100.0%   |

Question F2RACE1 Tape Pos. 229-229  
Format: I1

F2RACE1 COMPOSITE RACE

Indicates student's "best known" race, based on second follow-up New Student Supplement data (when available) or F1RACE composite.

| RESPONSE                 | CODES | FREQ  | PER-CENT | WGTD PCT |
|--------------------------|-------|-------|----------|----------|
| ASIAN, PACIFIC ISLANDER  | 1     | 1162  | 6.7%     | 3.9%     |
| HISPANIC                 | 2     | 2198  | 12.7%    | 11.4%    |
| BLACK, NOT HISPANIC      | 3     | 1695  | 9.8%     | 13.6%    |
| WHITE, NOT HISPANIC      | 4     | 11897 | 68.8%    | 69.5%    |
| AMERICAN INDIAN, ALASKAN | 5     | 215   | 1.2%     | 1.5%     |
| RESERVED CODES:          |       |       |          |          |
| MISSING                  | 8     | 118   | 0.7%     | (MISS)   |
| TOTALS:                  |       | 17285 | 100.0%   | 100.0%   |

Question F2BYSES Tape Pos. 230-234  
Format: R5.3

F2BYSES BY SOCIO-ECONOMIC STATUS COMPOSITE

This continuous variable estimates socioeconomic status. It was derived from the BY parent questionnaire data or the BY student questionnaire data.

| RESPONSE        | CODES  | FREQ  | PER-CENT | WGTD PCT |
|-----------------|--------|-------|----------|----------|
| -2.97 TO 2.56   | 01.000 | 15245 | 88.2%    | 100.0%   |
| RESERVED CODES: |        |       |          |          |
| MISSING         | 99.998 | 2040  | 11.8%    | (MISS)   |
| TOTALS:         |        | 17285 | 100.0%   | 100.0%   |

NOTE: This composite has been updated since it was initially released in the base year.

Question F2F1SES Tape Pos. 235-239  
Format: R5.3

F2F1SES F1 SOCIO-ECONOMIC STATUS COMPOSITE

This continuous variable estimates socioeconomic status. It was derived from the BY parent questionnaire data, the BY student questionnaire data, or the first follow-up New Student Supplement data.

| RESPONSE        | CODES  | FREQ  | PER-CENT | WGTD PCT |
|-----------------|--------|-------|----------|----------|
| -3.29 TO 2.762  | 01.000 | 15677 | 90.7%    | 100.0%   |
| RESERVED CODES: |        |       |          |          |
| MISSING         | 99.998 | 1608  | 9.3%     | (MISS)   |
| TOTALS:         |        | 17285 | 100.0%   | 100.0%   |

NOTE: This composite has been updated since it was initially released in the first follow-up.

Question F2SES1 Tape Pos. 240-244  
Format: R5.3

F2SES1 F2 SOCIO-ECONOMIC STATUS COMPOSITE

This continuous variable estimates socioeconomic status. It was derived from the BY parent questionnaire data, the BY student questionnaire data, or the first follow-up or second follow-up New Student Supplement data.

| RESPONSE        | CODES  | FREQ  | PER-CENT | WGTD PCT |
|-----------------|--------|-------|----------|----------|
| -3.243 TO 2.753 | 01.000 | 16144 | 93.4%    | 100.0%   |
| RESERVED CODES: |        |       |          |          |
| MISSING         | 99.998 | 1141  | 6.6%     | (MISS)   |
| TOTALS:         |        | 17285 | 100.0%   | 100.0%   |

Question F2BYSESQ Tape Pos. 245-245  
Format: I1

F2BYSESQ BASE YEAR SOCIO-ECONOMIC QUARTILE

Indicates the quartile into which F2BYSES falls. It is constructed by recoding F2BYSES into quartiles based on the weighted (with BYQWT) marginal distribution.

| RESPONSE        | CODES | FREQ  | PER-CENT | WGTD PCT |
|-----------------|-------|-------|----------|----------|
| QUARTILE 1 LOW  | 1     | 3453  | 20.0%    | 24.0%    |
| QUARTILE 2      | 2     | 3632  | 21.0%    | 25.9%    |
| QUARTILE 3      | 3     | 3617  | 20.9%    | 24.3%    |
| QUARTILE 4 HIGH | 4     | 4543  | 26.3%    | 25.8%    |
| RESERVED CODES: |       |       |          |          |
| MISSING         | 8     | 2040  | 11.8%    | (MISS)   |
| TOTALS:         |       | 17285 | 100.0%   | 100.0%   |

NOTE: This composite has been updated since it was initially released in the base year.

Question F2F1SESQ Tape Pos. 246-246  
Format: I1

F2F1SESQ F1 SOCIO-ECONOMIC QUARTILE

Indicates the quartile into which F2F1SES falls. It is constructed by recoding F2F1SES into quartiles based on the weighted (with F1QWT) marginal distribution.

| RESPONSE        | CODES | FREQ  | PER-CENT | WGTD PCT |
|-----------------|-------|-------|----------|----------|
| QUARTILE 1 LOW  | 1     | 3643  | 21.1%    | 24.5%    |
| QUARTILE 2      | 2     | 3795  | 22.0%    | 25.7%    |
| QUARTILE 3      | 3     | 3664  | 21.2%    | 24.8%    |
| QUARTILE 4 HIGH | 4     | 4575  | 26.5%    | 25.1%    |
| RESERVED CODES: |       |       |          |          |
| MISSING         | 8     | 1608  | 9.3%     | (MISS)   |
| TOTALS:         |       | 17285 | 100.0%   | 100.0%   |

NOTE: This composite has been updated since it was initially released in the first follow-up.

Question F2SES1Q

Tape Pos. 247-247  
Format: I1

F2SES1Q F2 SOCIO-ECONOMIC QUARTILE

Indicates the quartile into which F2SES1 falls. It is constructed by recoding F2SES1 into quartiles based on the weighted (with F2QWT) marginal distribution.

| RESPONSE                        | CODES | FREQ  | PER-CENT    | WGTD PCT |
|---------------------------------|-------|-------|-------------|----------|
| QUARTILE 1 LOW.....             | 1     | 3549  | 20.5%       | 23.5%    |
| QUARTILE 2.....                 | 2     | 3886  | 22.5%       | 25.9%    |
| QUARTILE 3.....                 | 3     | 3932  | 22.7%       | 25.0%    |
| QUARTILE 4 HIGH.....            | 4     | 4777  | 27.6%       | 25.6%    |
| RESERVED CODES:<br>MISSING..... | 8     | 1141  | 6.6% (MISS) |          |
| TOTALS:                         |       | 17285 | 100.0%      | 100.0%   |

Question F2BIRTHM

Tape Pos. 248-249  
Format: I2

F2BIRTHM BIRTH MONTH OF SAMPLE MEMBER

This variable was taken from an updated version of F1BIRTHM which included birth data for base year ineligible students and other teen sample members for whom F1BIRTHM was previously missing. For first follow-up nonrespondents and students who were freshened in the second follow-up, the second follow-up New Student Supplement data were used.

| RESPONSE                        | CODES | FREQ  | PER-CENT    | WGTD PCT |
|---------------------------------|-------|-------|-------------|----------|
| JANUARY.....                    | 01    | 1215  | 7.0%        | 7.1%     |
| FEBRUARY.....                   | 02    | 1184  | 6.8%        | 7.3%     |
| MARCH.....                      | 03    | 1369  | 7.9%        | 8.1%     |
| APRIL.....                      | 04    | 1408  | 8.1%        | 8.4%     |
| MAY.....                        | 05    | 1383  | 8.0%        | 7.7%     |
| JUNE.....                       | 06    | 1377  | 8.0%        | 8.8%     |
| JULY.....                       | 07    | 1470  | 8.5%        | 9.8%     |
| AUGUST.....                     | 08    | 1479  | 8.6%        | 8.9%     |
| SEPTEMBER.....                  | 09    | 1389  | 8.0%        | 8.2%     |
| OCTOBER.....                    | 10    | 1402  | 8.1%        | 9.1%     |
| NOVEMBER.....                   | 11    | 1340  | 7.8%        | 8.3%     |
| DECEMBER.....                   | 12    | 1346  | 7.8%        | 8.2%     |
| RESERVED CODES:<br>MISSING..... | 98    | 923   | 5.3% (MISS) |          |
| TOTALS:                         |       | 17285 | 100.0%      | 100.0%   |

Question F2BIRTHY

Tape Pos. 250-251  
Format: I2

F2BIRTHY BIRTH YEAR OF SAMPLE MEMBER

This variable was taken from an updated version of F1BIRTHY which included birth data for base year ineligible students and other teen sample members for whom birth data were previously missing. For first follow-up nonrespondents and students who were freshened in the second follow-up, the second follow-up New Student Supplement data were used.

| RESPONSE                        | CODES | FREQ  | PER-CENT    | WGTD PCT |
|---------------------------------|-------|-------|-------------|----------|
| 1970.....                       | 70    | 18    | 0.1%        | 0.2%     |
| 1971.....                       | 71    | 112   | 0.6%        | 0.8%     |
| 1972.....                       | 72    | 846   | 4.9%        | 5.7%     |
| 1973.....                       | 73    | 4960  | 28.7%       | 32.4%    |
| 1974.....                       | 74    | 10390 | 60.1%       | 59.7%    |
| 1975.....                       | 75    | 148   | 0.9%        | 0.8%     |
| 1976.....                       | 76    | 8     | 0.0%        | 0.3%     |
| 1978.....                       | 78    | 2     | 0.0%        | 0.0%     |
| 1979.....                       | 79    | 7     | 0.0%        | 0.0%     |
| RESERVED CODES:<br>MISSING..... | 98    | 794   | 4.6% (MISS) |          |
| TOTALS:                         |       | 17285 | 100.0%      | 100.0%   |

Question F2HSPROG

Tape Pos. 252-253  
Format: I2

F2HSPROG RESPONDENT-INDICATED HIGH SCHOOL PROGRAM

High school program (current or last attended) as reported in the F2 student (F2S12A) or dropout (F2D20) questionnaire

| RESPONSE                                       | CODES | FREQ  | PER-CENT    | WGTD PCT |
|--|-------|-------|-------------|----------|
| GENERAL HIGH SCHOOL PROGRAM.....               | 01    | 6184  | 35.8%       | 40.1%    |
| ACADEMIC PROGRAM.....                          | 02    | 6845  | 39.6%       | 37.7%    |
| VOCATIONAL/TECHNICAL.....                      | 03    | 1795  | 10.4%       | 11.9%    |
| OTHER SPECIALIZED HS PROGRAM..                 | 04    | 300   | 1.7%        | 2.8%     |
| SPECIAL EDUCATION PROGRAM.....                 | 05    | 113   | 0.7%        | 0.9%     |
| ALTERNATIVE/DROPOUT<br>PREVENTION PROGRAM..... | 06    | 174   | 1.0%        | 1.7%     |
| DON'T KNOW.....                                | 07    | 824   | 4.8%        | 5.0%     |
| RESERVED CODES:<br>MISSING.....                | 98    | 1050  | 6.1% (MISS) |          |
| TOTALS:  |       | 17285 | 100.0%      | 100.0%   |

Question F2BY2XCO

Tape Pos. 254-257  
Format: R4.2

F2BY2XCO BY STD TEST COMP (READING, MATH)

Base year standardized test composite (reading, math)

| RESPONSE                        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|---------------------------------|-------|-------|--------------|----------|
| 30.71 TO 75.81.....             | 01.00 | 14678 | 84.9%        | 100.0%   |
| RESERVED CODES:<br>MISSING..... | 99.98 | 4     | 0.0% (MISS)  |          |
| DID NOT COMPLETE TEST.....      | 99.99 | 2603  | 15.1% (MISS) |          |
| TOTALS:                         |       | 17285 | 100.0%       | 100.0%   |

Question F2F12XCO

Tape Pos. 258-261  
Format: R4.2

F2F12XCO F1 STD TEST COMP (READING, MATH)

First follow-up standardized test composite (reading, math)

| RESPONSE                        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|---------------------------------|-------|-------|--------------|----------|
| 30.27 TO 71.82.....             | 01.00 | 15210 | 88.0%        | 100.0%   |
| RESERVED CODES:<br>MISSING..... | 99.98 | 3     | 0.0% (MISS)  |          |
| DID NOT COMPLETE TEST.....      | 99.99 | 2072  | 12.0% (MISS) |          |
| TOTALS:                         |       | 17285 | 100.0%       | 100.0%   |

Question F22XCOMP

Tape Pos. 262-265  
Format: R4.2

F22XCOMP F2 STD TEST COMP (READING, MATH)

Second follow-up standardized test composite (reading, math)

| RESPONSE                        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|---------------------------------|-------|-------|--------------|----------|
| 27.86 TO 71.37.....             | 01.00 | 13009 | 75.3%        | 100.0%   |
| RESERVED CODES:<br>MISSING..... | 99.98 | 13    | 0.1% (MISS)  |          |
| DID NOT COMPLETE TEST.....      | 99.99 | 4263  | 24.7% (MISS) |          |
| TOTALS:                         |       | 17285 | 100.0%       | 100.0%   |

Question F2BY2XQU

Tape Pos. 266-266  
Format: I1

F2BY2XQU BY STD TEST QUARTILE (1=LOW)

Base year standardized test quartile (1=low)

| RESPONSE                        | CODES | FREQ  | PER-CENT     | WGTD PCT |
|---------------------------------|-------|-------|--------------|----------|
| QUARTILE 1 LOW.....             | 1     | 2988  | 17.3%        | 24.1%    |
| QUARTILE 2.....                 | 2     | 3451  | 20.0%        | 24.7%    |
| QUARTILE 3.....                 | 3     | 3710  | 21.5%        | 25.1%    |
| QUARTILE 4 HIGH.....            | 4     | 4529  | 26.2%        | 26.1%    |
| RESERVED CODES:<br>MISSING..... | 8     | 4     | 0.0% (MISS)  |          |
| DID NOT COMPLETE TEST.....      | 9     | 2603  | 15.1% (MISS) |          |
| TOTALS:                         |       | 17285 | 100.0%       | 100.0%   |

Question F2F12XQU Tape Pos. 267-267  
Format: I1

F2F12XQU F1 STD TEST QUARTILE (1=LOW)

First follow-up standardized test quartile (1=low)

| RESPONSE                   | CODES | FREQ  | PER-CENT     | WGTD PCT |
|----------------------------|-------|-------|--------------|----------|
| QUARTILE 1 LOW.....        | 1     | 3382  | 19.6%        | 24.7%    |
| QUARTILE 2.....            | 2     | 3632  | 21.0%        | 25.6%    |
| QUARTILE 3.....            | 3     | 3810  | 22.0%        | 24.2%    |
| QUARTILE 4 HIGH.....       | 4     | 4386  | 25.4%        | 25.5%    |
| RESERVED CODES:            |       |       |              |          |
| MISSING.....               | 8     | 3     | 0.0% (MISS)  |          |
| DID NOT COMPLETE TEST..... | 9     | 2072  | 12.0% (MISS) |          |
| TOTALS:                    |       | 17285 | 100.0%       | 100.0%   |

Question F22XQURT Tape Pos. 268-268  
Format: I1

F22XQURT F2 STD TEST QUARTILE (1=LOW)

Second follow-up standardized test quartile (1=low)

| RESPONSE                   | CODES | FREQ  | PER-CENT     | WGTD PCT |
|----------------------------|-------|-------|--------------|----------|
| QUARTILE 1 LOW.....        | 1     | 2707  | 15.7%        | 23.7%    |
| QUARTILE 2.....            | 2     | 3118  | 18.0%        | 25.0%    |
| QUARTILE 3.....            | 3     | 3367  | 19.5%        | 25.9%    |
| QUARTILE 4 HIGH.....       | 4     | 3817  | 22.1%        | 25.3%    |
| RESERVED CODES:            |       |       |              |          |
| MISSING.....               | 8     | 13    | 0.1% (MISS)  |          |
| DID NOT COMPLETE TEST..... | 9     | 4263  | 24.7% (MISS) |          |
| TOTALS:                    |       | 17285 | 100.0%       | 100.0%   |

Question G8CTRL2 Tape Pos. 269-269  
Format: I1

G8CTRL2 BASE YEAR SCHOOL CLASSIFICATION

Classifies the student's base year school type into public, Catholic, private NAIS, and other private-not NAIS, as obtained from Quality Education Data (QED).

| RESPONSE                  | CODES | FREQ  | PER-CENT    | WGTD PCT |
|---------------------------|-------|-------|-------------|----------|
| PUBLIC SCHOOL.....        | 1     | 13607 | 78.7%       | 88.3%    |
| CATHOLIC SCHOOL.....      | 2     | 1229  | 7.1%        | 7.3%     |
| NAIS PRIVATE SCHOOL.....  | 3     | 1090  | 6.3%        | 1.0%     |
| OTHER PRIVATE SCHOOL..... | 4     | 411   | 2.4%        | 3.4%     |
| RESERVED CODES:           |       |       |             |          |
| MISSING.....              | 8     | 948   | 5.5% (MISS) |          |
| TOTALS:                   |       | 17285 | 100.0%      | 100.0%   |

Question G1OCTRL2 Tape Pos. 270-271  
Format: I2

G1OCTRL2 F1 SCHOOL CLASSIFICATION

Classifies the student's first follow-up school type into public, Catholic, private NAIS, and other private-not NAIS, as obtained from Quality Education Data (QED).

| RESPONSE                  | CODES | FREQ  | PER-CENT    | WGTD PCT |
|---------------------------|-------|-------|-------------|----------|
| PUBLIC SCHOOL.....        | 01    | 14538 | 84.1%       | 91.4%    |
| CATHOLIC SCHOOL.....      | 02    | 842   | 4.9%        | 5.1%     |
| NAIS PRIVATE SCHOOL.....  | 03    | 1027  | 5.9%        | 1.3%     |
| OTHER PRIVATE SCHOOL..... | 04    | 289   | 1.7%        | 2.2%     |
| NON-TRADITIONAL.....      | 05    | 1     | 0.0%        | 0.0%     |
| RESERVED CODES:           |       |       |             |          |
| MISSING.....              | 98    | 588   | 3.4% (MISS) |          |
| TOTALS:                   |       | 17285 | 100.0%      | 100.0%   |

NOTE: This variable is copied from the F1 reconstructed student datafile. The characteristic described applies to the F1 school in which the student was enrolled at that time. Or, if the sample member completed a dropout questionnaire in F1 and characteristics of the last school attended in that instrument are available either in the NELS:88 school files or in the QED sample files, then these characteristics appear in this variable.

Question TRNCTRL2 Tape Pos. 272-273  
Format: I2

TRNCTRL2 SCHOOL CLASSIFICATION

Classifies the student's last attended school type into public, Catholic, private NAIS, and other private-not NAIS, as obtained from Quality Education Data (QED).

| RESPONSE                  | CODES | FREQ  | PER-CENT    | WGTD PCT |
|---------------------------|-------|-------|-------------|----------|
| PUBLIC SCHOOL.....        | 01    | 15150 | 87.6%       | 92.5%    |
| CATHOLIC SCHOOL.....      | 02    | 817   | 4.7%        | 4.3%     |
| NAIS PRIVATE SCHOOL.....  | 03    | 1034  | 6.0%        | 1.3%     |
| OTHER PRIVATE SCHOOL..... | 04    | 283   | 1.6%        | 1.9%     |
| RESERVED CODES:           |       |       |             |          |
| MISSING.....              | 98    | 1     | 0.0% (MISS) |          |
| TOTALS:                   |       | 17285 | 100.0%      | 100.0%   |

NOTE: "Last attended school" refers to the last school attended by the sample member as determined from transcript data.

Question G8URBN3 Tape Pos. 274-274  
Format: I1

G8URBN3 TYPE OF SCHL DISTRICT, DIOCESE, COUNTY

Trichotomizes the urbanicity of the area in which the sample member's base year school is located. This metropolitan status is defined by QED for public school districts, for Catholic dioceses, or in some cases for the county in which the school is located. QED bases the classifications on the Federal Information Processing Standards as used by the U.S. Census.

| RESPONSE               | CODES | FREQ  | PER-CENT    | WGTD PCT |
|------------------------|-------|-------|-------------|----------|
| URBAN.....             | 1     | 4130  | 23.9%       | 26.1%    |
| SUBURBAN.....          | 2     | 6982  | 40.4%       | 43.5%    |
| RURAL/OUTSIDE MSA..... | 3     | 5225  | 30.2%       | 30.4%    |
| RESERVED CODES:        |       |       |             |          |
| MISSING.....           | 8     | 948   | 5.5% (MISS) |          |
| TOTALS:                |       | 17285 | 100.0%      | 100.0%   |

Question G1OURBN3 Tape Pos. 275-275  
Format: I1

G1OURBN3 TYPE OF SCHL DISTRICT, DIOCESE, COUNTY

Trichotomizes the urbanicity of the area in which the sample member's first follow-up school is located. This metropolitan status is defined by QED for public school districts, for Catholic dioceses, or in some cases for the county in which the school is located. QED bases the classifications on the Federal Information Processing Standards as used by the U.S. Census.

| RESPONSE                                | CODES | FREQ  | PER-CENT    | WGTD PCT |
|---|-------|-------|-------------|----------|
| URBAN.....                              | 1     | 4753  | 27.5%       | 28.9%    |
| SUBURBAN.....                           | 2     | 6604  | 38.2%       | 40.2%    |
| RURAL/OUTSIDE MSA.....                  | 3     | 5371  | 31.1%       | 30.8%    |
| NOT ENROLLED IN TRADITIONAL SCHOOL..... | 4     | 1     | 0.0%        | 0.0%     |
| RESERVED CODES:                         |       |       |             |          |
| MISSING.....                            | 8     | 556   | 3.2% (MISS) |          |
| TOTALS:                                 |       | 17285 | 100.0%      | 100.0%   |

NOTE: This variable is copied from the F1 reconstructed student datafile. The characteristic described applies to the F1 school in which the student was enrolled at that time. Or, if the sample member completed a dropout questionnaire in F1 and characteristics of the last school attended in that instrument are available either in the NELS:88 school files or in the QED sample files, then these characteristics appear in this variable.

Question TRNURBN3

Tape Pos. 276-276  
Format: I1

TRNURBN3 TYPE OF SCHL DISTRICT, DIOCESE, COUNTY

Trichotomizes the urbanicity of the area in which the sample member's last attended school is located. This metropolitan status is defined by QED for public school districts, for Catholic dioceses, or in some cases for the county in which the school is located. QED bases the classifications on the Federal Information Processing Standards as used by the U.S. Census.

| RESPONSE                        | CODES | FREQ  | PER-CENT    | WGTD PCT |
|---------------------------------|-------|-------|-------------|----------|
| URBAN.....                      | 1     | 4933  | 28.5%       | 28.5%    |
| SUBURBAN.....                   | 2     | 6833  | 39.5%       | 40.6%    |
| RURAL/OUTSIDE MSA.....          | 3     | 5518  | 31.9%       | 30.9%    |
| RESERVED CODES:<br>MISSING..... | 8     | 1     | 0.0% (MISS) |          |
| TOTALS:                         |       | 17285 | 100.0%      | 100.0%   |

NOTE: "Last attended school" refers to the last school attended by the sample member as determined from transcript data.

Question GBREGON

Tape Pos. 277-278  
Format: I2

GBREGON REGION OF THE COUNTRY (4 CENSUS REGIONS)

Indicates in which of the four US Census regions the student's base year school is located, based on the school state.

| RESPONSE                        | CODES | FREQ  | PER-CENT    | WGTD PCT |
|---------------------------------|-------|-------|-------------|----------|
| NORTHEAST.....                  | 01    | 2988  | 17.3%       | 19.5%    |
| MIDWEST.....                    | 02    | 4430  | 25.6%       | 25.6%    |
| SOUTH.....                      | 03    | 5570  | 32.2%       | 35.0%    |
| WEST.....                       | 04    | 3349  | 19.4%       | 19.9%    |
| RESERVED CODES:<br>MISSING..... | 98    | 948   | 5.5% (MISS) |          |
| TOTALS:                         |       | 17285 | 100.0%      | 100.0%   |

Question GIOREGDN

Tape Pos. 279-280  
Format: I2

GIOREGDN REGION OF THE COUNTRY (4 CENSUS REGIONS)

Indicates in which of the four US Census regions the student's first follow-up school is located, based on the school state.

| RESPONSE                                | CODES | FREQ  | PER-CENT    | WGTD PCT |
|---|-------|-------|-------------|----------|
| NORTHEAST.....                          | 01    | 3020  | 17.5%       | 19.0%    |
| MIDWEST.....                            | 02    | 4475  | 25.9%       | 25.0%    |
| SOUTH.....                              | 03    | 5865  | 33.9%       | 36.7%    |
| WEST.....                               | 04    | 3378  | 19.5%       | 19.3%    |
| NOT ENROLLED IN TRADITIONAL SCHOOL..... | 05    | 1     | 0.0%        | 0.0%     |
| RESERVED CODES:<br>MISSING.....         | 98    | 546   | 3.2% (MISS) |          |
| TOTALS:                                 |       | 17285 | 100.0%      | 100.0%   |

NOTE: This variable is copied from the F1 reconstructed student datafile. The characteristic described applies to the F1 school in which the student was enrolled at that time. Or, if the sample member completed a dropout questionnaire in F1 and characteristics of the last school attended in that instrument are available either in the NELS:88 school files or in the QED sample files, then these characteristics appear in this variable.

Question TRNREGON

Tape Pos. 281-282  
Format: I2

TRNREGON REGION OF THE COUNTRY (4 CENSUS REGIONS)

Indicates in which of the four US Census regions the student's last attended school is located, based on the school state.

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| NORTHEAST..... | 01    | 3105  | 18.0%    | 18.9%    |
| MIDWEST.....   | 02    | 4605  | 26.6%    | 24.6%    |
| SOUTH.....     | 03    | 6035  | 34.9%    | 36.4%    |
| WEST.....      | 04    | 3540  | 20.5%    | 20.0%    |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: "Last attended school" refers to the last school attended by the sample member as determined from transcript data.

Question TRNSTATE

Tape Pos. 283-284  
Format: A2

TRNSTATE LOCATION OF STUDENT'S SCHOOL (STATE)

Indicates the student's last attended school state. The values for this variable are the standard two-column Post Office state abbreviations (additional values are listed below).

| RESPONSE                  | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------|-------|-------|----------|----------|
| ALASKA.....               | AK    | 73    | 0.4%     | 0.3%     |
| ALABAMA.....              | AL    | 294   | 1.7%     | 2.0%     |
| ARKANSAS.....             | AR    | 136   | 0.8%     | 0.8%     |
| ARIZONA.....              | AZ    | 213   | 1.2%     | 1.9%     |
| CALIFORNIA.....           | CA    | 1824  | 10.6%    | 9.6%     |
| COLORADO.....             | CO    | 155   | 0.9%     | 0.7%     |
| CONNECTICUT.....          | CT    | 149   | 0.9%     | 1.3%     |
| DISTRICT OF COLUMBIA..... | DC    | 5     | 0.0%     | 0.5%     |
| DELAWARE.....             | DE    | 31    | 0.2%     | 0.2%     |
| FLORIDA.....              | FL    | 720   | 4.2%     | 4.2%     |
| GEORGIA.....              | GA    | 318   | 1.8%     | 2.5%     |
| HAWAII.....               | HI    | 83    | 0.5%     | 0.4%     |
| IOWA.....                 | IA    | 199   | 1.2%     | 0.9%     |
| IDAHO.....                | ID    | 102   | 0.6%     | 0.8%     |
| ILLINOIS.....             | IL    | 728   | 4.2%     | 4.2%     |
| INDIANA.....              | IN    | 326   | 1.9%     | 1.5%     |
| KANSAS.....               | KS    | 206   | 1.2%     | 1.1%     |
| KENTUCKY.....             | KY    | 304   | 1.8%     | 1.7%     |
| LOUISIANA.....            | LA    | 338   | 2.0%     | 1.6%     |
| MASSACHUSETTS.....        | MA    | 404   | 2.3%     | 2.1%     |
| MARYLAND.....             | MD    | 209   | 1.2%     | 1.6%     |
| MAINE.....                | ME    | 75    | 0.4%     | 0.5%     |
| MICHIGAN.....             | MI    | 691   | 4.0%     | 4.1%     |
| MINNESOTA.....            | MN    | 250   | 1.4%     | 1.2%     |
| MISSOURI.....             | MO    | 522   | 3.0%     | 2.9%     |
| MISSISSIPPI.....          | MS    | 185   | 1.1%     | 0.9%     |
| MONTANA.....              | MT    | 51    | 0.3%     | 0.4%     |
| NORTH CAROLINA.....       | NC    | 440   | 2.5%     | 2.7%     |
| NORTH DAKOTA.....         | ND    | 112   | 0.6%     | 0.6%     |
| NEBRASKA.....             | NE    | 127   | 0.7%     | 0.8%     |
| NEW HAMPSHIRE.....        | NH    | 58    | 0.3%     | 0.3%     |
| NEW JERSEY.....           | NJ    | 413   | 2.4%     | 2.7%     |
| NEW MEXICO.....           | NM    | 222   | 1.3%     | 1.0%     |
| NEVADA.....               | NV    | 102   | 0.6%     | 0.8%     |
| NEW YORK.....             | NY    | 1093  | 6.3%     | 5.4%     |
| OHIO.....                 | OH    | 802   | 4.6%     | 4.4%     |
| OKLAHOMA.....             | OK    | 263   | 1.5%     | 1.8%     |
| OREGON.....               | OR    | 166   | 1.0%     | 0.9%     |
| PENNSYLVANIA.....         | PA    | 819   | 4.7%     | 5.8%     |
| RHODE ISLAND.....         | RI    | 53    | 0.3%     | 0.6%     |
| SOUTH CAROLINA.....       | SC    | 423   | 2.4%     | 3.1%     |
| SOUTH DAKOTA.....         | SD    | 17    | 0.1%     | 0.1%     |
| TENNESSEE.....            | TN    | 419   | 2.4%     | 2.4%     |
| TEXAS.....                | TX    | 1424  | 8.2%     | 7.7%     |
| UTAH.....                 | UT    | 151   | 0.9%     | 0.7%     |
| VIRGINIA.....             | VA    | 450   | 2.6%     | 2.5%     |
| VERMONT.....              | VT    | 41    | 0.2%     | 0.2%     |
| WASHINGTON.....           | WA    | 331   | 1.9%     | 2.0%     |
| WISCONSIN.....            | WI    | 525   | 3.0%     | 2.8%     |
| WEST VIRGINIA.....        | WV    | 76    | 0.4%     | 0.5%     |
| WYOMING.....              | WY    | 67    | 0.4%     | 0.3%     |
| TOTALS:                   |       | 17285 | 100.0%   | 100.0%   |

NOTE: "Last attended school" refers to the last school attended by the sample member as determined from transcript data.

Question F2RCRLST

Tape Pos. 285-285  
Format: I1

F2RCRLST TYPE OF COURSE LIST

Indicates the type of course list submitted by school. The course list was used to identify course titles listed on a sample member's transcript.

| RESPONSE              | CODES | FREQ  | PER-CENT | WGTD PCT |
|-----------------------|-------|-------|----------|----------|
| COURSE CATALOG.....   | 1     | 13679 | 79.1%    | 76.5%    |
| STUDENT HANDBOOK..... | 2     | 281   | 1.6%     | 1.6%     |
| OTHER COURSE LST..... | 3     | 1469  | 8.5%     | 8.4%     |
| NO LST SUBMITTED..... | 4     | 1856  | 10.7%    | 13.4%    |
| TOTALS:               |       | 17285 | 100.0%   | 100.0%   |

Question F2RTROS

Tape Pos. 286-286  
Format: I1

F2RTROS G9 TRANSCRIPT DATA AVAILABILITY

Ninth grade transcript data available

| RESPONSE                | CODES | FREQ  | PER-CENT | WGTD PCT |
|-------------------------|-------|-------|----------|----------|
| DATA NOT AVAILABLE..... | 0     | 402   | 2.3%     | 2.9%     |
| DATA AVAILABLE.....     | 1     | 16883 | 97.7%    | 97.1%    |
| TOTALS:                 |       | 17285 | 100.0%   | 100.0%   |



Question F2RTR10

Tape Pos. 287-287  
Format: I1

F2RTR10 G10 TRANSCRIPT DATA AVAILABILITY

Tenth grade transcript data available

| RESPONSE                | CODES | FREQ  | PER-CENT | WGTD PCT |
|-------------------------|-------|-------|----------|----------|
| DATA NOT AVAILABLE..... | 0     | 819   | 4.7%     | 6.5%     |
| DATA AVAILABLE.....     | 1     | 16466 | 95.3%    | 93.5%    |
| TOTALS:                 |       | 17285 | 100.0%   | 100.0%   |

Question F2RTR11

Tape Pos. 288-288  
Format: I1

F2RTR11 G11 TRANSCRIPT DATA AVAILABILITY

Eleventh grade transcript data available

| RESPONSE                | CODES | FREQ  | PER-CENT | WGTD PCT |
|-------------------------|-------|-------|----------|----------|
| DATA NOT AVAILABLE..... | 0     | 1789  | 10.4%    | 13.4%    |
| DATA AVAILABLE.....     | 1     | 15496 | 89.6%    | 86.6%    |
| TOTALS:                 |       | 17285 | 100.0%   | 100.0%   |

Question F2RTR12

Tape Pos. 289-289  
Format: I1

F2RTR12 G12 TRANSCRIPT DATA AVAILABILITY

Twelfth grade transcript data available

| RESPONSE                | CODES | FREQ  | PER-CENT | WGTD PCT |
|-------------------------|-------|-------|----------|----------|
| DATA NOT AVAILABLE..... | 0     | 2496  | 14.4%    | 18.9%    |
| DATA AVAILABLE.....     | 1     | 14789 | 85.6%    | 81.1%    |
| TOTALS:                 |       | 17285 | 100.0%   | 100.0%   |

Question F2RTROUT

Tape Pos. 290-291  
Format: I2

F2RTROUT TRANSCRIPT-INDICATED OUTCOME

Indicates the sample member's transcript-indicated outcome.

For some sample members, this item (and F2RREASL, from which it is derived) may appear to be inconsistent with F2DOSTAT. The majority of inconsistencies can be attributed to the disjunct data collection periods for the two items, and to differences between the NELS:88 and transcript schools' dropout definition. See F2RTRSTYP for both elucidation and resolution of inconsistencies between F2RTROUT (transcript-indicated outcome) and F2DOSTAT. (Also, see Chapter 6 and Appendix G of the Second Follow-Up: Transcript Component Data File User's Manual for a discussion of F2RTRSTYP as it relates to discrepancies between F2DOSTAT and F2RTROUT.)

| RESPONSE  | CODES | FREQ  | PER-CENT | WGTD PCT |
|---|-------|-------|----------|----------|
| SPRING 1992 GRADUATE.....                       | 01    | 13471 | 77.9%    | 72.1%    |
| OTHER 1992 GRADUATE.....                        | 02    | 272   | 1.6%     | 1.7%     |
| PRE-1992 GRADUATE.....                          | 03    | 154   | 0.9%     | 1.1%     |
| DIPLOMA WITH SPECIAL EDUCATION ADJUSTMENTS..... | 04    | 22    | 0.1%     | 0.2%     |
| CERTIFICATE OF ATTENDANCE.....                  | 05    | 9     | 0.1%     | 0.1%     |
| STILL ENROLLED IN SCHOOL.....                   | 06    | 420   | 2.4%     | 3.0%     |
| DROPPED OUT.....                                | 07    | 2003  | 11.6%    | 15.3%    |
| TRANSFERRED.....                                | 08    | 424   | 2.5%     | 3.2%     |
| AGED OUT.....                                   | 09    | 4     | 0.0%     | 0.0%     |
| DIED.....                                       | 10    | 25    | 0.1%     | 0.1%     |
| LEFT FOR HEALTH REASON.....                     | 11    | 10    | 0.1%     | 0.1%     |
| RECEIVED GED.....                               | 12    | 35    | 0.2%     | 0.2%     |
| OTHER.....                                      | 13    | 87    | 0.5%     | 0.6%     |
| STATUS UNDETERMINED.....                        | 14    | 349   | 2.0%     | 2.3%     |
| TOTALS:   |       | 17285 | 100.0%   | 100.0%   |

Question F2RTRPRG

Tape Pos. 292-293  
Format: I2

F2RTRPRG TRANSCRIPT-INDICATED HIGH SCHOOL PROGRAM

High school program, as determined from high school credits earned

| RESPONSE                              | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------------------------|-------|-------|----------|----------|
| RIGOROUS ACADEMIC TRACK.....          | 01    | 2980  | 17.2%    | 15.4%    |
| ACADEMIC TRACK.....                   | 02    | 7831  | 45.3%    | 41.8%    |
| VOCATIONAL TRACK.....                 | 03    | 982   | 5.7%     | 5.9%     |
| VOCATIONAL AND RIGOROUS ACADEMIC..... | 04    | 118   | 0.7%     | 0.8%     |
| ACADEMIC AND VOCATIONAL.....          | 05    | 1056  | 6.1%     | 5.7%     |
| NONE OF THE ABOVE.....                | 06    | 4318  | 25.0%    | 30.4%    |
| TOTALS:                               |       | 17285 | 100.0%   | 100.0%   |

Question F2RNWB1A

Tape Pos. 294-294  
Format: I1

F2RNWB1A NEW BASICS: 4E+3SS+3S+3M+.5CS+2FL (HS+B)

New basics program of 4E+3SS+3S+3M+.5CS+2FL (HS&B-equivalent)

| RESPONSE              | CODES | FREQ  | PER-CENT | WGTD PCT |
|-----------------------|-------|-------|----------|----------|
| FAILED THRESHOLD..... | 0     | 14708 | 85.1%    | 87.0%    |
| MET THRESHOLD.....    | 1     | 2577  | 14.9%    | 13.0%    |
| TOTALS:               |       | 17285 | 100.0%   | 100.0%   |

Question F2RNWB2A

Tape Pos. 295-295  
Format: I1

F2RNWB2A NEW BASICS: 4E+3SS+3S+3M+.5CS (HS+B)

New basics program of 4E+3SS+3S+3M+.5CS (HS&B-equivalent)

| RESPONSE              | CODES | FREQ  | PER-CENT | WGTD PCT |
|-----------------------|-------|-------|----------|----------|
| FAILED THRESHOLD..... | 0     | 14021 | 81.1%    | 83.2%    |
| MET THRESHOLD.....    | 1     | 3264  | 18.9%    | 16.8%    |
| TOTALS:               |       | 17285 | 100.0%   | 100.0%   |

Question F2RNWB3A

Tape Pos. 296-296  
Format: I1

F2RNWB3A NEW BASICS: 4E+3SS+3S+3M+2FL (HS+B)

New basics program of 4E+3SS+3S+3M+2FL (HS&B-equivalent)

| RESPONSE              | CODES | FREQ  | PER-CENT | WGTD PCT |
|-----------------------|-------|-------|----------|----------|
| FAILED THRESHOLD..... | 0     | 12394 | 71.7%    | 75.3%    |
| MET THRESHOLD.....    | 1     | 4891  | 28.3%    | 24.7%    |
| TOTALS:               |       | 17285 | 100.0%   | 100.0%   |

Question F2RNWB4A

Tape Pos. 297-297  
Format: I1

F2RNWB4A NEW BASICS: 4E+3SS+3S+3M (HS+B)

New basics program of 4E+3SS+3S+3M (HS&B-equivalent)

| RESPONSE              | CODES | FREQ  | PER-CENT | WGTD PCT |
|-----------------------|-------|-------|----------|----------|
| FAILED THRESHOLD..... | 0     | 11236 | 65.0%    | 68.5%    |
| MET THRESHOLD.....    | 1     | 6049  | 35.0%    | 31.5%    |
| TOTALS:               |       | 17285 | 100.0%   | 100.0%   |

Question F2RNWB5A

Tape Pos. 298-298  
Format: I1

F2RNWB5A NEW BASICS: 4E+3SS+2S+2M (HS+B)

New basics program of 4E+3SS+2S+2M (HS&B-equivalent)

| RESPONSE              | CODES | FREQ  | PER-CENT | WGTD PCT |
|-----------------------|-------|-------|----------|----------|
| FAILED THRESHOLD..... | 0     | 8070  | 46.7%    | 49.5%    |
| MET THRESHOLD.....    | 1     | 9215  | 53.3%    | 50.5%    |
| TOTALS:               |       | 17285 | 100.0%   | 100.0%   |

Question F2RNWB1B

Tape Pos. 299-299  
Format: I1

F2RNWB1B NEW BASICS: 4E+3SS+3S+3M+.5CS+2FL (NAEP)

New basics program of 4E+3SS+3S+3M+.5CS+2FL (NAEP-equivalent)

| RESPONSE              | CODES | FREQ  | PER-CENT | WGTD PCT |
|-----------------------|-------|-------|----------|----------|
| FAILED THRESHOLD..... | 0     | 14187 | 82.1%    | 83.9%    |
| MET THRESHOLD.....    | 1     | 3098  | 17.9%    | 16.1%    |
| TOTALS:               |       | 17285 | 100.0%   | 100.0%   |

Question F2RNWB2B

Tape Pos. 300-300  
Format: I1

F2RNWB2B NEW BASICS: 4E+3SS+3S+3M+.5CS (NAEP)

New basics program of 4E+3SS+3S+3M+.5CS (NAEP-equivalent)

| RESPONSE              | CODES | FREQ  | PER-CENT | WGTD PCT |
|-----------------------|-------|-------|----------|----------|
| FAILED THRESHOLD..... | 0     | 13355 | 77.3%    | 79.3%    |
| MET THRESHOLD.....    | 1     | 3930  | 22.7%    | 20.7%    |
| TOTALS:               |       | 17285 | 100.0%   | 100.0%   |

Question F2RNWB3B

Tape Pos. 301-301  
Format: I1

F2RNWB3B NEW BASICS: 4E+3SS+3S+3M+2FL (NAEP)

New basics program of 4E+3SS+3S+3M+2FL (NAEP-equivalent)

| RESPONSE              | CODES | FREQ  | PER-CENT | WGTD PCT |
|-----------------------|-------|-------|----------|----------|
| FAILED THRESHOLD..... | 0     | 12204 | 70.6%    | 74.1%    |
| MET THRESHOLD.....    | 1     | 5081  | 29.4%    | 25.9%    |
| TOTALS:               |       | 17285 | 100.0%   | 100.0%   |

Question F2RNWB4B

Tape Pos. 302-302  
Format: I1

F2RNWB4B NEW BASICS: 4E+3SS+3S+3M (NAEP)

New basics program of 4E+3SS+3S+3M (NAEP-equivalent)

| RESPONSE              | CODES | FREQ  | PER-CENT | WGTD PCT |
|-----------------------|-------|-------|----------|----------|
| FAILED THRESHOLD..... | 0     | 10926 | 63.2%    | 66.7%    |
| MET THRESHOLD.....    | 1     | 6359  | 36.8%    | 33.3%    |
| TOTALS:               |       | 17285 | 100.0%   | 100.0%   |

Question F2RNWB5B

Tape Pos. 303-303  
Format: I1

F2RNWB5B NEW BASICS: 4E+3SS+2S+2M (NAEP)

New basics program of 4E+3SS+2S+2M (NAEP-equivalent)

| RESPONSE              | CODES | FREQ  | PER-CENT | WGTD PCT |
|-----------------------|-------|-------|----------|----------|
| FAILED THRESHOLD..... | 0     | 7474  | 43.2%    | 46.3%    |
| MET THRESHOLD.....    | 1     | 9811  | 56.8%    | 53.7%    |
| TOTALS:               |       | 17285 | 100.0%   | 100.0%   |

Question F2RHEN\_C

Tape Pos. 304-307  
Format: R4.2

F2RHEN\_C UNITS IN ENGLISH (HS+B)

Total Carnegie units in English (HS+B)

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 723   | 4.2%     | 5.7%     |
| 00.01 TO 00.49..... | 02.00 | 11    | 0.1%     | 0.1%     |
| 00.50 TO 00.99..... | 03.00 | 289   | 1.7%     | 1.9%     |
| 01.00 TO 01.99..... | 04.00 | 961   | 5.6%     | 6.9%     |
| 02.00 TO 02.99..... | 05.00 | 1137  | 6.6%     | 8.0%     |
| 03.00 TO 03.99..... | 06.00 | 2855  | 16.5%    | 15.4%    |
| 04.00 TO 04.99..... | 07.00 | 9166  | 53.0%    | 50.0%    |
| 05.00 TO 13.00..... | 08.00 | 2143  | 12.4%    | 12.1%    |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RHMA\_C

Tape Pos. 308-311  
Format: R4.2

F2RHMA\_C UNITS IN MATHEMATICS (HS+B)

Total Carnegie units in mathematics (HS+B)

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 875   | 5.1%     | 6.8%     |
| 00.01 TO 00.49..... | 02.00 | 9     | 0.1%     | 0.1%     |
| 00.50 TO 00.99..... | 03.00 | 388   | 2.2%     | 3.5%     |
| 01.00 TO 01.99..... | 04.00 | 1673  | 9.7%     | 11.3%    |
| 02.00 TO 02.99..... | 05.00 | 3492  | 20.2%    | 21.4%    |
| 03.00 TO 03.99..... | 06.00 | 5250  | 30.4%    | 30.1%    |
| 04.00 TO 04.99..... | 07.00 | 4815  | 27.9%    | 22.8%    |
| 05.00 TO 08.33..... | 08.00 | 783   | 4.5%     | 4.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RHSC\_C

Tape Pos. 312-315  
Format: R4.2

F2RHSC\_C UNITS IN SCIENCE (HS+B)

Total Carnegie units in science (HS+B)

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 718   | 4.2%     | 5.7%     |
| 00.01 TO 00.49..... | 02.00 | 12    | 0.1%     | 0.1%     |
| 00.50 TO 00.99..... | 03.00 | 355   | 2.1%     | 3.2%     |
| 01.00 TO 01.99..... | 04.00 | 1901  | 11.0%    | 12.5%    |
| 02.00 TO 02.99..... | 05.00 | 5544  | 32.1%    | 33.7%    |
| 03.00 TO 03.99..... | 06.00 | 4996  | 28.9%    | 28.9%    |
| 04.00 TO 04.99..... | 07.00 | 2975  | 17.2%    | 14.2%    |
| 05.00 TO 11.00..... | 08.00 | 784   | 4.5%     | 3.6%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RHSC\_C

Tape Pos. 316-319  
Format: R4.2

F2RHSC\_C UNITS IN SOCIAL STUDIES (HS+B)

Total Carnegie units in social studies (HS+B)

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 695   | 4.0%     | 5.8%     |
| 00.01 TO 00.49..... | 02.00 | 10    | 0.1%     | 0.1%     |
| 00.50 TO 00.99..... | 03.00 | 334   | 1.9%     | 2.6%     |
| 01.00 TO 01.99..... | 04.00 | 1155  | 6.7%     | 8.1%     |
| 02.00 TO 02.99..... | 05.00 | 2691  | 15.6%    | 15.8%    |
| 03.00 TO 03.99..... | 06.00 | 7436  | 43.0%    | 40.4%    |
| 04.00 TO 04.99..... | 07.00 | 3969  | 23.0%    | 21.8%    |
| 05.00 TO 11.00..... | 08.00 | 995   | 5.8%     | 5.5%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RHCO\_C

Tape Pos. 320-323  
Format: R4.2

F2RHCO\_C UNITS IN COMPUTER SCIENCE (HS+B)

Total Carnegie units in computer science/programming/data processing (HS+B)

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 9722  | 56.2%    | 58.0%    |
| 00.01 TO 00.49 | 02.00 | 255   | 1.5%     | 1.6%     |
| 00.50 TO 00.99 | 03.00 | 3914  | 22.6%    | 21.5%    |
| 01.00 TO 01.99 | 04.00 | 2889  | 16.7%    | 16.3%    |
| 02.00 TO 02.99 | 05.00 | 416   | 2.4%     | 2.0%     |
| 03.00 TO 03.99 | 06.00 | 53    | 0.3%     | 0.3%     |
| 04.00 TO 04.99 | 07.00 | 19    | 0.1%     | 0.1%     |
| 05.00 TO 09.00 | 08.00 | 17    | 0.1%     | 0.1%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RHMG2

Tape Pos. 332-335  
Format: R4.2

F2RHMG2 AVERAGE GRADE IN MATHEMATICS (HS+B)

Average grade in mathematics (HS+B)

| RESPONSE                                       | CODES | FREQ  | PER-CENT    | WGTD PCT |
|--|-------|-------|-------------|----------|
| A = 01.00 TO 03.50                             | 01.00 | 1590  | 9.2%        | 7.7%     |
| B = 03.51 TO 06.50                             | 02.00 | 4642  | 26.9%       | 23.9%    |
| C = 06.51 TO 09.50                             | 03.00 | 6197  | 35.9%       | 38.9%    |
| D = 09.51 TO 12.00                             | 04.00 | 3678  | 21.3%       | 23.7%    |
| F = 12.01 TO 13.00                             | 05.00 | 703   | 4.1%        | 5.8%     |
| RESERVED CODES:<br>NO CREDIT/GRADES IN SUBJECT | 99.98 | 475   | 2.7% (MISS) |          |
| TOTALS:  |       | 17285 | 100.0%      | 100.0%   |

NOTE: This composite is an average in which '01.00' represents the highest grade (comparable to 'A+') and '12.01 - 13.00' represents the lowest grade (comparable to 'F').

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RHFO\_C

Tape Pos. 324-327  
Format: R4.2

F2RHFO\_C UNITS IN FOREIGN LANGUAGES (HS+B)

Total Carnegie units in foreign languages (HS+B)

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 5468  | 31.6%    | 37.8%    |
| 00.01 TO 00.49 | 02.00 | 16    | 0.1%     | 0.1%     |
| 00.50 TO 00.99 | 03.00 | 523   | 3.0%     | 3.2%     |
| 01.00 TO 01.99 | 04.00 | 2547  | 14.7%    | 15.2%    |
| 02.00 TO 02.99 | 05.00 | 4534  | 26.2%    | 24.2%    |
| 03.00 TO 03.99 | 06.00 | 2385  | 13.8%    | 11.8%    |
| 04.00 TO 04.99 | 07.00 | 1362  | 7.9%     | 6.1%     |
| 05.00 TO 15.50 | 08.00 | 450   | 2.6%     | 1.7%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RHSCG2

Tape Pos. 336-339  
Format: R4.2

F2RHSCG2 AVERAGE GRADE IN SCIENCE (HS+B)

Average grade in science (HS+B)

| RESPONSE                                       | CODES | FREQ  | PER-CENT    | WGTD PCT |
|--|-------|-------|-------------|----------|
| A = 01.00 TO 03.50                             | 01.00 | 1749  | 10.1%       | 8.4%     |
| B = 03.51 TO 06.50                             | 02.00 | 5140  | 29.7%       | 27.1%    |
| C = 06.51 TO 09.50                             | 03.00 | 6089  | 35.2%       | 36.8%    |
| D = 09.51 TO 12.00                             | 04.00 | 3265  | 18.9%       | 21.5%    |
| F = 12.01 TO 13.00                             | 05.00 | 752   | 4.4%        | 6.2%     |
| RESERVED CODES:<br>NO CREDIT/GRADES IN SUBJECT | 99.98 | 290   | 1.7% (MISS) |          |
| TOTALS:  |       | 17285 | 100.0%      | 100.0%   |

NOTE: This composite is an average in which '01.00' represents the highest grade (comparable to 'A+') and '12.01 - 13.00' represents the lowest grade (comparable to 'F').

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RHENG2

Tape Pos. 328-331  
Format: R4.2

F2RHENG2 AVERAGE GRADE IN ENGLISH (HS+B)

Average grade in English (HS+B)

| RESPONSE                                       | CODES | FREQ  | PER-CENT    | WGTD PCT |
|--|-------|-------|-------------|----------|
| A = 01.00 TO 03.50                             | 01.00 | 1954  | 11.3%       | 9.2%     |
| B = 03.51 TO 06.50                             | 02.00 | 5813  | 33.6%       | 30.9%    |
| C = 06.51 TO 09.50                             | 03.00 | 5725  | 33.1%       | 35.5%    |
| D = 09.51 TO 12.00                             | 04.00 | 2751  | 15.9%       | 19.3%    |
| F = 12.01 TO 13.00                             | 05.00 | 658   | 3.8%        | 5.1%     |
| RESERVED CODES:<br>NO CREDIT/GRADES IN SUBJECT | 99.98 | 384   | 2.2% (MISS) |          |
| TOTALS:  |       | 17285 | 100.0%      | 100.0%   |

NOTE: This composite is an average in which '01.00' represents the highest grade (comparable to 'A+') and '12.01 - 13.00' represents the lowest grade (comparable to 'F').

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RHSOG2

Tape Pos. 340-343  
Format: R4.2

F2RHSOG2 AVERAGE GRADE IN SOCIAL STUDIES (HS+B)

Average grade in social studies (HS+B)

| RESPONSE                                       | CODES | FREQ  | PER-CENT    | WGTD PCT |
|--|-------|-------|-------------|----------|
| A = 01.00 TO 03.50                             | 01.00 | 2468  | 14.3%       | 11.8%    |
| B = 03.51 TO 06.50                             | 02.00 | 5523  | 32.0%       | 30.3%    |
| C = 06.51 TO 09.50                             | 03.00 | 5422  | 31.4%       | 33.4%    |
| D = 09.51 TO 12.00                             | 04.00 | 2824  | 16.3%       | 18.2%    |
| F = 12.01 TO 13.00                             | 05.00 | 791   | 4.6%        | 6.3%     |
| RESERVED CODES:<br>NO CREDIT/GRADES IN SUBJECT | 99.98 | 257   | 1.5% (MISS) |          |
| TOTALS:  |       | 17285 | 100.0%      | 100.0%   |

NOTE: This composite is an average in which '01.00' represents the highest grade (comparable to 'A+') and '12.01 - 13.00' represents the lowest grade (comparable to 'F').

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RHCOG2

Tape Pos. 344-347  
Format: R4.2

F2RHCOG2 AVERAGE GRADE IN COMP. SCIENCE (HS+B)

Average grade in computer science/programming/data processing (HS+B)

| RESPONSE                                       | CODES | FREQ  | PER-CENT     | WGTD PCT |
|--|-------|-------|--------------|----------|
| A = 01.00 TO 03.50.....                        | 01.00 | 2472  | 14.3%        | 28.6%    |
| B = 03.51 TO 06.50.....                        | 02.00 | 2490  | 14.4%        | 31.3%    |
| C = 06.51 TO 09.50.....                        | 03.00 | 1700  | 9.8%         | 24.2%    |
| D = 09.51 TO 12.00.....                        | 04.00 | 780   | 4.5%         | 11.2%    |
| F = 12.01 TO 13.00.....                        | 05.00 | 304   | 1.8%         | 4.7%     |
| RESERVED CODES:<br>NO CREDIT/GRADES IN SUBJECT | 99.98 | 9539  | 55.2% (MISS) |          |
| TOTALS:  |       | 17285 | 100.0%       | 100.0%   |

NOTE: This composite is an average in which '01.00' represents the highest grade (comparable to 'A+') and '12.01 - 13.00' represents the lowest grade (comparable to 'F').

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RHFOG2

Tape Pos. 348-351  
Format: R4.2

F2RHFOG2 AVERAGE GRADE IN FOREIGN LANG. (HS+B)

Average grade in foreign languages (HS+B)

| RESPONSE                                       | CODES | FREQ  | PER-CENT     | WGTD PCT |
|--|-------|-------|--------------|----------|
| A = 01.00 TO 03.50.....                        | 01.00 | 2668  | 15.4%        | 19.3%    |
| B = 03.51 TO 06.50.....                        | 02.00 | 4051  | 23.4%        | 30.3%    |
| C = 06.51 TO 09.50.....                        | 03.00 | 3357  | 19.4%        | 28.8%    |
| D = 09.51 TO 12.00.....                        | 04.00 | 1613  | 9.3%         | 14.9%    |
| F = 12.01 TO 13.00.....                        | 05.00 | 641   | 3.7%         | 6.8%     |
| RESERVED CODES:<br>NO CREDIT/GRADES IN SUBJECT | 99.98 | 4955  | 28.7% (MISS) |          |
| TOTALS:  |       | 17285 | 100.0%       | 100.0%   |

NOTE: This composite is an average in which '01.00' represents the highest grade (comparable to 'A+') and '12.01 - 13.00' represents the lowest grade (comparable to 'F').

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RENG\_C

Tape Pos. 352-355  
Format: R4.2

F2RENG\_C UNITS IN ENGLISH (NAEP)

Total Carnegie units in English (NAEP)

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 469   | 2.7%     | 4.1%     |
| 00.01 TO 00.49..... | 02.00 | 8     | 0.0%     | 0.0%     |
| 00.50 TO 00.99..... | 03.00 | 243   | 1.4%     | 1.7%     |
| 01.00 TO 01.99..... | 04.00 | 862   | 5.0%     | 6.2%     |
| 02.00 TO 02.99..... | 05.00 | 1042  | 6.0%     | 7.3%     |
| 03.00 TO 03.99..... | 06.00 | 2863  | 16.6%    | 15.5%    |
| 04.00 TO 04.99..... | 07.00 | 9584  | 55.4%    | 52.6%    |
| 05.00 TO 13.00..... | 08.00 | 2214  | 12.8%    | 12.5%    |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RFOR\_C

Tape Pos. 356-359  
Format: R4.2

F2RFOR\_C UNITS IN FOREIGN LANGUAGES (NAEP)

Total Carnegie units in foreign languages (NAEP)

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 5460  | 31.6%    | 37.7%    |
| 00.01 TO 00.49..... | 02.00 | 16    | 0.1%     | 0.1%     |
| 00.50 TO 00.99..... | 03.00 | 528   | 3.1%     | 3.3%     |
| 01.00 TO 01.99..... | 04.00 | 2549  | 14.7%    | 15.2%    |
| 02.00 TO 02.99..... | 05.00 | 4533  | 26.2%    | 24.2%    |
| 03.00 TO 03.99..... | 06.00 | 2386  | 13.8%    | 11.8%    |
| 04.00 TO 04.99..... | 07.00 | 1362  | 7.9%     | 6.1%     |
| 05.00 TO 15.50..... | 08.00 | 451   | 2.6%     | 1.7%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RMAT\_C

Tape Pos. 360-363  
Format: R4.2

F2RMAT\_C UNITS IN MATHEMATICS (NAEP)

Total Carnegie units in mathematics (NAEP)

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 574   | 3.3%     | 4.6%     |
| 00.01 TO 00.49..... | 02.00 | 5     | 0.0%     | 0.0%     |
| 00.50 TO 00.99..... | 03.00 | 344   | 2.0%     | 2.7%     |
| 01.00 TO 01.99..... | 04.00 | 1550  | 9.0%     | 10.7%    |
| 02.00 TO 02.99..... | 05.00 | 3672  | 21.2%    | 23.7%    |
| 03.00 TO 03.99..... | 06.00 | 5525  | 32.0%    | 31.2%    |
| 04.00 TO 04.99..... | 07.00 | 4878  | 28.2%    | 23.2%    |
| 05.00 TO 08.33..... | 08.00 | 737   | 4.3%     | 3.9%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RAL1\_C

Tape Pos. 364-367  
Format: R4.2

F2RAL1\_C UNITS IN ALGEBRA I (NAEP)

Total Carnegie units in algebra I (NAEP)

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 4535  | 26.2%    | 28.1%    |
| 00.01 TO 00.49..... | 02.00 | 30    | 0.2%     | 0.2%     |
| 00.50 TO 00.99..... | 03.00 | 783   | 4.5%     | 4.7%     |
| 01.00 TO 01.99..... | 04.00 | 9300  | 53.8%    | 51.2%    |
| 02.00 TO 02.99..... | 05.00 | 2529  | 14.6%    | 15.2%    |
| 03.00 TO 03.50..... | 06.00 | 108   | 0.6%     | 0.6%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RAL2\_C

Tape Pos. 368-371  
Format: R4.2

F2RAL2\_C UNITS IN ALGEBRA II (NAEP)

Total Carnegie units in algebra II (NAEP)

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 9332  | 54.0%    | 58.4%    |
| 00.01 TO 00.49..... | 02.00 | 15    | 0.1%     | 0.1%     |
| 00.50 TO 00.99..... | 03.00 | 653   | 3.8%     | 4.0%     |
| 01.00 TO 01.99..... | 04.00 | 6802  | 39.4%    | 35.1%    |
| 02.00 TO 02.99..... | 05.00 | 472   | 2.7%     | 2.3%     |
| 03.00.....          | 06.00 | 11    | 0.1%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RGE0\_C

Tape Pos. 372-375  
Format: R4.2

F2RGE0\_C UNITS IN GEOMETRY (NAEP)

Total Carnegie units in geometry (NAEP)

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 6363  | 36.8%    | 43.1%    |
| 00.01 TO 00.49..... | 02.00 | 13    | 0.1%     | 0.1%     |
| 00.50 TO 00.99..... | 03.00 | 698   | 4.0%     | 3.7%     |
| 01.00 TO 01.99..... | 04.00 | 9965  | 57.7%    | 51.9%    |
| 02.00 TO 02.99..... | 05.00 | 237   | 1.4%     | 1.2%     |
| 03.00 TO 03.99..... | 06.00 | 7     | 0.0%     | 0.0%     |
| 04.00.....          | 07.00 | 2     | 0.0%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2ROMA\_C

Tape Pos. 388-391  
Format: R4.2

F2ROMA\_C UNITS IN OTHER MATH COURSES (NAEP)

Total Carnegie units in other mathematics courses (NAEP)

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 10706 | 61.9%    | 58.9%    |
| 00.01 TO 00.49..... | 02.00 | 68    | 0.4%     | 0.3%     |
| 00.50 TO 00.99..... | 03.00 | 1086  | 6.3%     | 6.4%     |
| 01.00 TO 01.99..... | 04.00 | 3663  | 21.2%    | 22.4%    |
| 02.00 TO 02.99..... | 05.00 | 1338  | 7.7%     | 9.2%     |
| 03.00 TO 03.99..... | 06.00 | 360   | 2.1%     | 2.2%     |
| 04.00 TO 04.99..... | 07.00 | 54    | 0.3%     | 0.4%     |
| 05.00 TO 07.33..... | 08.00 | 10    | 0.1%     | 0.1%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RTRI\_C

Tape Pos. 376-379  
Format: R4.2

F2RTRI\_C UNITS IN TRIGONOMETRY (NAEP)

Total Carnegie units in trigonometry (NAEP)

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 14089 | 81.5%    | 84.5%    |
| 00.01 TO 00.49..... | 02.00 | 20    | 0.1%     | 0.1%     |
| 00.50 TO 00.99..... | 03.00 | 1423  | 8.2%     | 6.3%     |
| 01.00 TO 01.99..... | 04.00 | 1726  | 10.0%    | 9.0%     |
| 02.00.....          | 05.00 | 27    | 0.2%     | 0.1%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RSCI\_C

Tape Pos. 392-395  
Format: R4.2

F2RSCI\_C UNITS IN SCIENCE (NAEP)

Total Carnegie units in science (NAEP)

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 692   | 4.0%     | 5.6%     |
| 00.01 TO 00.49..... | 02.00 | 14    | 0.1%     | 0.2%     |
| 00.50 TO 00.99..... | 03.00 | 344   | 2.0%     | 3.1%     |
| 01.00 TO 01.99..... | 04.00 | 1795  | 10.4%    | 11.9%    |
| 02.00 TO 02.99..... | 05.00 | 5387  | 31.2%    | 32.8%    |
| 03.00 TO 03.99..... | 06.00 | 5134  | 29.7%    | 27.7%    |
| 04.00 TO 04.99..... | 07.00 | 3078  | 17.8%    | 14.7%    |
| 05.00 TO 11.00..... | 08.00 | 841   | 4.9%     | 4.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RPRE\_C

Tape Pos. 380-383  
Format: R4.2

F2RPRE\_C UNITS IN PRE-CALCULUS (NAEP)

Total Carnegie units in pre-calculus (NAEP)

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 14431 | 83.5%    | 87.8%    |
| 00.01 TO 00.49..... | 02.00 | 27    | 0.2%     | 0.1%     |
| 00.50 TO 00.99..... | 03.00 | 645   | 3.7%     | 2.6%     |
| 01.00 TO 01.99..... | 04.00 | 2151  | 12.4%    | 9.4%     |
| 02.00 TO 02.99..... | 05.00 | 29    | 0.2%     | 0.1%     |
| 03.00 TO 03.06..... | 06.00 | 2     | 0.0%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2REAR\_C

Tape Pos. 396-399  
Format: R4.2

F2REAR\_C UNITS IN EARTH SCIENCE (NAEP)

Total Carnegie units in earth science (NAEP)

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 13641 | 78.9%    | 79.6%    |
| 00.01 TO 00.49..... | 02.00 | 31    | 0.2%     | 0.3%     |
| 00.50 TO 00.99..... | 03.00 | 664   | 3.8%     | 3.8%     |
| 01.00 TO 01.99..... | 04.00 | 2856  | 16.5%    | 15.7%    |
| 02.00 TO 02.50..... | 05.00 | 93    | 0.5%     | 0.5%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RCAL\_C

Tape Pos. 384-387  
Format: R4.2

F2RCAL\_C UNITS IN CALCULUS (NAEP)

Total Carnegie units in calculus (NAEP)

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 15361 | 88.9%    | 92.1%    |
| 00.01 TO 00.49..... | 02.00 | 1     | 0.0%     | 0.0%     |
| 00.50 TO 00.99..... | 03.00 | 211   | 1.2%     | 0.8%     |
| 01.00 TO 01.99..... | 04.00 | 1635  | 9.5%     | 6.9%     |
| 02.00 TO 02.99..... | 05.00 | 75    | 0.4%     | 0.2%     |
| 03.00 TO 03.99..... | 06.00 | 1     | 0.0%     | 0.0%     |
| 04.00.....          | 07.00 | 1     | 0.0%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RBIO\_C

Tape Pos. 400-403  
Format: R4.2

F2RBIO\_C UNITS IN BIOLOGY (NAEP)

Total Carnegie units in biology (NAEP)

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 2234  | 12.9%    | 15.6%    |
| 00.01 TO 00.49..... | 02.00 | 22    | 0.1%     | 0.3%     |
| 00.50 TO 00.99..... | 03.00 | 803   | 4.6%     | 5.3%     |
| 01.00 TO 01.99..... | 04.00 | 11184 | 64.7%    | 63.0%    |
| 02.00 TO 02.99..... | 05.00 | 2811  | 16.3%    | 14.6%    |
| 03.00 TO 03.99..... | 06.00 | 215   | 1.2%     | 1.1%     |
| 04.00 TO 04.99..... | 07.00 | 15    | 0.1%     | 0.1%     |
| 05.00.....          | 08.00 | 1     | 0.0%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RCHE\_C

Tape Pos. 404-407  
Format: R4.2

F2RCHE\_C UNITS IN CHEMISTRY (NAEP)

Total Carnegie units in chemistry (NAEP)

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 8683  | 50.2%    | 56.1%    |
| 00.01 TO 00.49 | 02.00 | 13    | 0.1%     | 0.1%     |
| 00.50 TO 00.99 | 03.00 | 515   | 3.0%     | 2.7%     |
| 01.00 TO 01.99 | 04.00 | 7435  | 43.0%    | 38.3%    |
| 02.00 TO 02.99 | 05.00 | 612   | 3.5%     | 2.7%     |
| 03.00 TO 03.99 | 06.00 | 26    | 0.2%     | 0.1%     |
| 05.00 TO 06.00 | 08.00 | 1     | 0.0%     | 0.0%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RHIS\_C

Tape Pos. 420-423  
Format: R4.2

F2RHIS\_C UNITS IN HISTORY (NAEP)

Total Carnegie units in history (NAEP)

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 1292  | 7.5%     | 9.8%     |
| 00.01 TO 00.49 | 02.00 | 17    | 0.1%     | 0.4%     |
| 00.50 TO 00.99 | 03.00 | 473   | 2.7%     | 3.6%     |
| 01.00 TO 01.99 | 04.00 | 4673  | 27.0%    | 27.8%    |
| 02.00 TO 02.99 | 05.00 | 8426  | 48.7%    | 46.4%    |
| 03.00 TO 03.99 | 06.00 | 2113  | 12.2%    | 11.8%    |
| 04.00 TO 04.99 | 07.00 | 255   | 1.5%     | 1.0%     |
| 05.00 TO 05.00 | 08.00 | 36    | 0.2%     | 0.1%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RPHY\_C

Tape Pos. 408-411  
Format: R4.2

F2RPHY\_C UNITS IN PHYSICS (NAEP)

Total Carnegie units in physics (NAEP)

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 13083 | 75.7%    | 80.3%    |
| 00.01 TO 00.49 | 02.00 | 15    | 0.1%     | 0.1%     |
| 00.50 TO 00.99 | 03.00 | 322   | 1.9%     | 1.7%     |
| 01.00 TO 01.99 | 04.00 | 3624  | 21.0%    | 17.0%    |
| 02.00 TO 02.99 | 05.00 | 231   | 1.3%     | 0.9%     |
| 03.00 TO 03.50 | 06.00 | 10    | 0.1%     | 0.0%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2ROSO\_C

Tape Pos. 424-427  
Format: R4.2

F2ROSO\_C UNITS IN OTHER SOC. STUDIES (NAEP)

Total Carnegie units in other social studies courses (NAEP)

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 2244  | 13.0%    | 15.6%    |
| 00.01 TO 00.49 | 02.00 | 97    | 0.6%     | 0.4%     |
| 00.50 TO 00.99 | 03.00 | 1496  | 8.7%     | 8.8%     |
| 01.00 TO 01.99 | 04.00 | 8260  | 47.8%    | 45.9%    |
| 02.00 TO 02.99 | 05.00 | 4191  | 24.2%    | 23.6%    |
| 03.00 TO 03.99 | 06.00 | 833   | 4.8%     | 5.0%     |
| 04.00 TO 04.99 | 07.00 | 138   | 0.8%     | 0.7%     |
| 05.00 TO 07.00 | 08.00 | 26    | 0.2%     | 0.1%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2ROSC\_C

Tape Pos. 412-415  
Format: R4.2

F2ROSC\_C UNITS IN OTHER SCIENCE COURSES (NAEP)

Total Carnegie units in other science courses (NAEP)

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 7031  | 40.7%    | 40.4%    |
| 00.01 TO 00.49 | 02.00 | 50    | 0.3%     | 0.3%     |
| 00.50 TO 00.99 | 03.00 | 1191  | 6.9%     | 7.7%     |
| 01.00 TO 01.99 | 04.00 | 8203  | 47.5%    | 46.8%    |
| 02.00 TO 02.99 | 05.00 | 758   | 4.4%     | 4.6%     |
| 03.00 TO 03.99 | 06.00 | 40    | 0.2%     | 0.2%     |
| 04.00 TO 04.99 | 07.00 | 9     | 0.1%     | 0.1%     |
| 05.00 TO 06.00 | 08.00 | 3     | 0.0%     | 0.0%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RCOM\_C

Tape Pos. 428-431  
Format: R4.2

F2RCOM\_C UNITS IN COMPUTER SCIENCE (NAEP)

Total Carnegie units in computer science/programming/data (NAEP)

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 8351  | 48.3%    | 50.1%    |
| 00.01 TO 00.49 | 02.00 | 245   | 1.4%     | 1.6%     |
| 00.50 TO 00.99 | 03.00 | 4044  | 23.4%    | 22.4%    |
| 01.00 TO 01.99 | 04.00 | 3851  | 22.3%    | 21.2%    |
| 02.00 TO 02.99 | 05.00 | 640   | 3.7%     | 3.7%     |
| 03.00 TO 03.99 | 06.00 | 103   | 0.6%     | 0.7%     |
| 04.00 TO 04.99 | 07.00 | 31    | 0.2%     | 0.2%     |
| 05.00 TO 09.50 | 08.00 | 20    | 0.1%     | 0.1%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RSOC\_C

Tape Pos. 416-419  
Format: R4.2

F2RSOC\_C UNITS IN SOCIAL STUDIES (NAEP)

Total Carnegie units in social studies (NAEP)

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 686   | 4.0%     | 5.7%     |
| 00.01 TO 00.49 | 02.00 | 10    | 0.1%     | 0.1%     |
| 00.50 TO 00.99 | 03.00 | 323   | 1.9%     | 2.5%     |
| 01.00 TO 01.99 | 04.00 | 1136  | 6.6%     | 8.1%     |
| 02.00 TO 02.99 | 05.00 | 2506  | 14.5%    | 14.9%    |
| 03.00 TO 03.99 | 06.00 | 7270  | 42.1%    | 39.6%    |
| 04.00 TO 04.99 | 07.00 | 4137  | 23.9%    | 22.7%    |
| 05.00 TO 13.50 | 08.00 | 1217  | 7.0%     | 6.4%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RVAG\_C

Tape Pos. 432-435  
Format: R4.2

F2RVAG\_C UNITS IN AGRICULTURE (NAEP)

Total Carnegie units in agriculture (NAEP)

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 15991 | 92.5%    | 92.4%    |
| 00.01 TO 00.49 | 02.00 | 23    | 0.1%     | 0.2%     |
| 00.50 TO 00.99 | 03.00 | 279   | 1.6%     | 1.6%     |
| 01.00 TO 01.99 | 04.00 | 469   | 2.7%     | 2.9%     |
| 02.00 TO 02.99 | 05.00 | 249   | 1.4%     | 1.5%     |
| 03.00 TO 03.99 | 06.00 | 121   | 0.7%     | 0.6%     |
| 04.00 TO 04.99 | 07.00 | 96    | 0.6%     | 0.5%     |
| 05.00 TO 13.50 | 08.00 | 57    | 0.3%     | 0.3%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RVBU\_C

Tape Pos. 436-439  
Format: R4.2

F2RVBU\_C UNITS IN BUSINESS (NAEP)

Total Carnegie units in business (NAEP)

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 12262 | 70.9%    | 71.2%    |
| 00.01 TO 00.49 | 02.00 | 77    | 0.4%     | 0.4%     |
| 00.50 TO 00.99 | 03.00 | 1262  | 7.3%     | 7.4%     |
| 01.00 TO 01.99 | 04.00 | 2413  | 14.0%    | 13.9%    |
| 02.00 TO 02.99 | 05.00 | 748   | 4.3%     | 4.3%     |
| 03.00 TO 03.99 | 06.00 | 301   | 1.7%     | 1.5%     |
| 04.00 TO 04.99 | 07.00 | 115   | 0.7%     | 0.7%     |
| 05.00 TO 10.00 | 08.00 | 107   | 0.6%     | 0.7%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RVMA\_C

Tape Pos. 452-455  
Format: R4.2

F2RVMA\_C UNITS IN MARKETING/DISTRIBUTION (NAEP)

Total Carnegie units in marketing and distribution (NAEP)

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 16507 | 95.5%    | 95.7%    |
| 00.01 TO 00.49 | 02.00 | 16    | 0.1%     | 0.1%     |
| 00.50 TO 00.99 | 03.00 | 262   | 1.5%     | 1.4%     |
| 01.00 TO 01.99 | 04.00 | 288   | 1.7%     | 1.7%     |
| 02.00 TO 02.99 | 05.00 | 94    | 0.5%     | 0.6%     |
| 03.00 TO 03.99 | 06.00 | 82    | 0.5%     | 0.4%     |
| 04.00 TO 04.99 | 07.00 | 20    | 0.1%     | 0.1%     |
| 05.00 TO 07.00 | 08.00 | 16    | 0.1%     | 0.1%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RVGN\_C

Tape Pos. 440-443  
Format: R4.2

F2RVGN\_C UNITS IN GENERAL INTRO. VOC. (NAEP)

Total Carnegie units in gen. introductory vocational courses (NAEP)

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 13334 | 77.1%    | 76.8%    |
| 00.01 TO 00.49 | 02.00 | 36    | 0.2%     | 0.4%     |
| 00.50 TO 00.99 | 03.00 | 1229  | 7.1%     | 7.2%     |
| 01.00 TO 01.99 | 04.00 | 1966  | 11.4%    | 11.1%    |
| 02.00 TO 02.99 | 05.00 | 412   | 2.4%     | 2.6%     |
| 03.00 TO 03.99 | 06.00 | 197   | 1.1%     | 1.3%     |
| 04.00 TO 04.99 | 07.00 | 46    | 0.3%     | 0.2%     |
| 05.00 TO 10.50 | 08.00 | 65    | 0.4%     | 0.4%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RVTE\_C

Tape Pos. 456-459  
Format: R4.2

F2RVTE\_C UNITS IN TECHNICAL (NAEP)

Total Carnegie units in technical (NAEP)

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 17014 | 98.4%    | 98.4%    |
| 00.01 TO 00.49 | 02.00 | 7     | 0.0%     | 0.2%     |
| 00.50 TO 00.99 | 03.00 | 99    | 0.6%     | 0.5%     |
| 01.00 TO 01.99 | 04.00 | 131   | 0.8%     | 0.6%     |
| 02.00 TO 02.99 | 05.00 | 21    | 0.1%     | 0.2%     |
| 03.00 TO 03.99 | 06.00 | 8     | 0.0%     | 0.0%     |
| 04.00 TO 04.99 | 07.00 | 4     | 0.0%     | 0.0%     |
| 05.00 TO 06.00 | 08.00 | 1     | 0.0%     | 0.0%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RVHE\_C

Tape Pos. 444-447  
Format: R4.2

F2RVHE\_C UNITS IN HEALTH/HUMAN RESOURCES (NAEP)

Total Carnegie units in health and human resources (NAEP)

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 16547 | 95.7%    | 96.1%    |
| 00.01 TO 00.49 | 02.00 | 117   | 0.7%     | 0.6%     |
| 00.50 TO 00.99 | 03.00 | 369   | 2.1%     | 1.7%     |
| 01.00 TO 01.99 | 04.00 | 140   | 0.8%     | 0.9%     |
| 02.00 TO 02.99 | 05.00 | 49    | 0.3%     | 0.4%     |
| 03.00 TO 03.99 | 06.00 | 40    | 0.2%     | 0.2%     |
| 04.00 TO 04.99 | 07.00 | 9     | 0.1%     | 0.0%     |
| 05.00 TO 10.80 | 08.00 | 14    | 0.1%     | 0.1%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RVTR\_C

Tape Pos. 460-463  
Format: R4.2

F2RVTR\_C UNITS IN TRADE AND INDUSTRY (NAEP)

Total Carnegie units in trade and industry (NAEP)

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 13526 | 78.3%    | 77.4%    |
| 00.01 TO 00.49 | 02.00 | 55    | 0.3%     | 0.3%     |
| 00.50 TO 00.99 | 03.00 | 942   | 5.4%     | 5.7%     |
| 01.00 TO 01.99 | 04.00 | 1336  | 7.7%     | 7.9%     |
| 02.00 TO 02.99 | 05.00 | 600   | 3.5%     | 3.6%     |
| 03.00 TO 03.99 | 06.00 | 344   | 2.0%     | 2.0%     |
| 04.00 TO 04.99 | 07.00 | 178   | 1.0%     | 1.1%     |
| 05.00 TO 21.99 | 08.00 | 304   | 1.8%     | 2.1%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2RVHO\_C

Tape Pos. 448-451  
Format: R4.2

F2RVHO\_C UNITS IN VOC. HOME ECONOMICS (NAEP)

Total Carnegie units in vocational home economics (NAEP)

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 15881 | 91.9%    | 91.3%    |
| 00.01 TO 00.49 | 02.00 | 39    | 0.2%     | 0.3%     |
| 00.50 TO 00.99 | 03.00 | 724   | 4.2%     | 4.3%     |
| 01.00 TO 01.99 | 04.00 | 375   | 2.2%     | 2.6%     |
| 02.00 TO 02.99 | 05.00 | 133   | 0.8%     | 0.8%     |
| 03.00 TO 03.99 | 06.00 | 62    | 0.4%     | 0.4%     |
| 04.00 TO 04.99 | 07.00 | 40    | 0.2%     | 0.3%     |
| 05.00 TO 10.00 | 08.00 | 31    | 0.2%     | 0.2%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R01\_C

Tape Pos. 464-467  
Format: R4.2

F2R01\_C UNITS IN AGRIBUSINESS/AG. PRODUCTION

Total Carnegie units in agribusiness and agricultural production

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 16348 | 94.6%    | 94.4%    |
| 00.01 TO 00.49 | 02.00 | 21    | 0.1%     | 0.1%     |
| 00.50 TO 00.99 | 03.00 | 199   | 1.2%     | 1.5%     |
| 01.00 TO 01.99 | 04.00 | 395   | 2.3%     | 2.2%     |
| 02.00 TO 02.99 | 05.00 | 153   | 0.9%     | 0.8%     |
| 03.00 TO 03.99 | 06.00 | 81    | 0.5%     | 0.5%     |
| 04.00 TO 04.99 | 07.00 | 51    | 0.3%     | 0.3%     |
| 05.00 TO 11.00 | 08.00 | 37    | 0.2%     | 0.2%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R02\_C

Tape Pos. 468-471  
Format: R4.2

F2R02\_C UNITS IN AGRICULTURAL SCIENCES

Total Carnegie units in agricultural sciences

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 16492 | 95.4%    | 95.1%    |
| 00.01 TO 00.49..... | 02.00 | 4     | 0.0%     | 0.0%     |
| 00.50 TO 00.99..... | 03.00 | 155   | 0.9%     | 1.2%     |
| 01.00 TO 01.99..... | 04.00 | 399   | 2.3%     | 2.3%     |
| 02.00 TO 02.99..... | 05.00 | 138   | 0.8%     | 0.8%     |
| 03.00 TO 03.99..... | 06.00 | 49    | 0.3%     | 0.4%     |
| 04.00 TO 04.99..... | 07.00 | 36    | 0.2%     | 0.2%     |
| 05.00 TO 06.75..... | 08.00 | 12    | 0.1%     | 0.1%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R06\_C

Tape Pos. 484-487  
Format: R4.2

F2R06\_C UNITS IN BUSINESS AND MANAGEMENT

Total Carnegie units in business and management

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 14455 | 83.6%    | 84.1%    |
| 00.01 TO 00.49..... | 02.00 | 39    | 0.2%     | 0.3%     |
| 00.50 TO 00.99..... | 03.00 | 1194  | 6.9%     | 6.6%     |
| 01.00 TO 01.99..... | 04.00 | 1400  | 8.1%     | 7.7%     |
| 02.00 TO 02.99..... | 05.00 | 144   | 0.8%     | 0.9%     |
| 03.00 TO 03.99..... | 06.00 | 27    | 0.2%     | 0.1%     |
| 04.00 TO 04.99..... | 07.00 | 19    | 0.1%     | 0.1%     |
| 05.00 TO 08.00..... | 08.00 | 7     | 0.0%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R03\_C

Tape Pos. 472-475  
Format: R4.2

F2R03\_C UNITS IN RENEWABLE NATURAL RESOURCES

Total Carnegie units in renewable natural resources

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 17023 | 98.5%    | 98.6%    |
| 00.01 TO 00.49..... | 02.00 | 2     | 0.0%     | 0.0%     |
| 00.50 TO 00.99..... | 03.00 | 173   | 1.0%     | 0.9%     |
| 01.00 TO 01.99..... | 04.00 | 70    | 0.4%     | 0.4%     |
| 02.00 TO 02.99..... | 05.00 | 11    | 0.1%     | 0.0%     |
| 03.00 TO 03.99..... | 06.00 | 1     | 0.0%     | 0.0%     |
| 04.00 TO 04.99..... | 07.00 | 3     | 0.0%     | 0.0%     |
| 05.00 TO 06.00..... | 08.00 | 2     | 0.0%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R07\_C

Tape Pos. 488-491  
Format: R4.2

F2R07\_C UNITS IN BUSINESS AND OFFICE

Total Carnegie units in business and office

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 6560  | 38.0%    | 38.5%    |
| 00.01 TO 00.49..... | 02.00 | 145   | 0.8%     | 0.6%     |
| 00.50 TO 00.99..... | 03.00 | 3208  | 18.6%    | 18.0%    |
| 01.00 TO 01.99..... | 04.00 | 4502  | 26.0%    | 26.2%    |
| 02.00 TO 02.99..... | 05.00 | 1644  | 9.5%     | 9.8%     |
| 03.00 TO 03.99..... | 06.00 | 676   | 3.9%     | 3.7%     |
| 04.00 TO 04.99..... | 07.00 | 290   | 1.7%     | 1.5%     |
| 05.00 TO 11.00..... | 08.00 | 260   | 1.5%     | 1.7%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R04\_C

Tape Pos. 476-479  
Format: R4.2

F2R04\_C UNITS IN ARCHITECTUR/ENV. DESIGN

Total Carnegie units in architecture and environmental design

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 17179 | 99.4%    | 99.4%    |
| 00.01 TO 00.49..... | 02.00 | 11    | 0.1%     | 0.1%     |
| 00.50 TO 00.99..... | 03.00 | 75    | 0.4%     | 0.5%     |
| 01.00 TO 01.99..... | 04.00 | 17    | 0.1%     | 0.1%     |
| 02.00 TO 02.50..... | 05.00 | 3     | 0.0%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R08\_C

Tape Pos. 492-495  
Format: R4.2

F2R08\_C UNITS IN MARKETING AND DISTRIBUTION

Total Carnegie units in marketing and distribution

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 16034 | 92.8%    | 92.9%    |
| 00.01 TO 00.49..... | 02.00 | 18    | 0.1%     | 0.1%     |
| 00.50 TO 00.99..... | 03.00 | 432   | 2.5%     | 2.5%     |
| 01.00 TO 01.99..... | 04.00 | 469   | 2.7%     | 2.7%     |
| 02.00 TO 02.99..... | 05.00 | 154   | 0.9%     | 0.7%     |
| 03.00 TO 03.99..... | 06.00 | 93    | 0.5%     | 0.6%     |
| 04.00 TO 04.99..... | 07.00 | 54    | 0.3%     | 0.3%     |
| 05.00 TO 08.50..... | 08.00 | 31    | 0.2%     | 0.2%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R05\_C

Tape Pos. 480-483  
Format: R4.2

F2R05\_C UNITS IN AREA AND ETHNIC STUDIES

Total Carnegie units in area and ethnic studies

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 13966 | 80.8%    | 81.9%    |
| 00.01 TO 00.49..... | 02.00 | 85    | 0.5%     | 0.6%     |
| 00.50 TO 00.99..... | 03.00 | 795   | 4.6%     | 4.1%     |
| 01.00 TO 01.99..... | 04.00 | 1658  | 9.6%     | 8.9%     |
| 02.00 TO 02.99..... | 05.00 | 626   | 3.6%     | 3.7%     |
| 03.00 TO 03.99..... | 06.00 | 134   | 0.8%     | 0.9%     |
| 04.00 TO 04.99..... | 07.00 | 4     | 0.0%     | 0.0%     |
| 05.00 TO 08.00..... | 08.00 | 17    | 0.1%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R09\_C

Tape Pos. 496-499  
Format: R4.2

F2R09\_C UNITS IN COMMUNICATIONS

Total Carnegie units in communications

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 15140 | 87.6%    | 88.6%    |
| 00.01 TO 00.49..... | 02.00 | 37    | 0.2%     | 0.3%     |
| 00.50 TO 00.99..... | 03.00 | 726   | 4.2%     | 4.1%     |
| 01.00 TO 01.99..... | 04.00 | 1021  | 5.9%     | 5.4%     |
| 02.00 TO 02.99..... | 05.00 | 272   | 1.6%     | 1.3%     |
| 03.00 TO 03.99..... | 06.00 | 72    | 0.4%     | 0.3%     |
| 04.00 TO 04.99..... | 07.00 | 15    | 0.1%     | 0.1%     |
| 05.00 TO 06.00..... | 08.00 | 2     | 0.0%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual



Question F2R10\_C

Tape Pos. 500-503  
Format: R4.2

F2R10\_C UNITS IN COMMUNICATION TECHNOLOGIES

Total Carnegie units in communication technologies

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 16642 | 96.3%    | 96.4%    |
| 00.01 TO 00.49..... | 02.00 | 23    | 0.1%     | 0.3%     |
| 00.50 TO 00.99..... | 03.00 | 310   | 1.8%     | 1.6%     |
| 01.00 TO 01.99..... | 04.00 | 256   | 1.5%     | 1.3%     |
| 02.00 TO 02.99..... | 05.00 | 35    | 0.2%     | 0.4%     |
| 03.00 TO 03.99..... | 06.00 | 12    | 0.1%     | 0.0%     |
| 04.00 TO 04.99..... | 07.00 | 4     | 0.0%     | 0.0%     |
| 05.00 TO 06.00..... | 08.00 | 3     | 0.0%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R14\_C

Tape Pos. 516-519  
Format: R4.2

F2R14\_C UNITS IN ENGINEERING

Total Carnegie units in engineering

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 17252 | 99.8%    | 99.8%    |
| 00.50 TO 00.99..... | 03.00 | 10    | 0.1%     | 0.0%     |
| 01.00 TO 01.99..... | 04.00 | 22    | 0.1%     | 0.1%     |
| 04.00.....          | 07.00 | 1     | 0.0%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R11\_C

Tape Pos. 504-507  
Format: R4.2

F2R11\_C UNITS IN COMPUTER/INFORMATION SCIENCES

Total Carnegie units in computer and information sciences

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 10389 | 60.1%    | 61.8%    |
| 00.01 TO 00.49..... | 02.00 | 247   | 1.4%     | 1.7%     |
| 00.50 TO 00.99..... | 03.00 | 3814  | 22.1%    | 20.6%    |
| 01.00 TO 01.99..... | 04.00 | 2459  | 14.2%    | 14.0%    |
| 02.00 TO 02.99..... | 05.00 | 311   | 1.8%     | 1.5%     |
| 03.00 TO 03.99..... | 06.00 | 43    | 0.2%     | 0.3%     |
| 04.00 TO 04.99..... | 07.00 | 12    | 0.1%     | 0.1%     |
| 05.00 TO 09.00..... | 08.00 | 10    | 0.1%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R15\_C

Tape Pos. 520-523  
Format: R4.2

F2R15\_C UNITS IN ENGINEERING TECHNOLOGIES

Total Carnegie units in engineering and engineering-related technologies

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 16734 | 96.8%    | 97.3%    |
| 00.01 TO 00.49..... | 02.00 | 16    | 0.1%     | 0.1%     |
| 00.50 TO 00.99..... | 03.00 | 207   | 1.2%     | 1.1%     |
| 01.00 TO 01.99..... | 04.00 | 236   | 1.4%     | 1.1%     |
| 02.00 TO 02.99..... | 05.00 | 49    | 0.3%     | 0.3%     |
| 03.00 TO 03.99..... | 06.00 | 20    | 0.1%     | 0.1%     |
| 04.00 TO 04.99..... | 07.00 | 9     | 0.1%     | 0.0%     |
| 05.00 TO 09.00..... | 08.00 | 14    | 0.1%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R12\_C

Tape Pos. 508-511  
Format: R4.2

F2R12\_C UNITS IN CONSUMER/PERSONAL SERVICES

Total Carnegie units in consumer/personal/miscellaneous services

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 17135 | 99.1%    | 98.6%    |
| 00.01 TO 00.49..... | 02.00 | 2     | 0.0%     | 0.0%     |
| 00.50 TO 00.99..... | 03.00 | 20    | 0.1%     | 0.1%     |
| 01.00 TO 01.99..... | 04.00 | 20    | 0.1%     | 0.5%     |
| 02.00 TO 02.99..... | 05.00 | 17    | 0.1%     | 0.1%     |
| 03.00 TO 03.99..... | 06.00 | 33    | 0.2%     | 0.2%     |
| 04.00 TO 04.99..... | 07.00 | 5     | 0.0%     | 0.0%     |
| 05.00 TO 13.50..... | 08.00 | 53    | 0.3%     | 0.4%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R16\_C

Tape Pos. 524-527  
Format: R4.2

F2R16\_C UNITS IN FOREIGN LANGUAGES

Total Carnegie units in foreign languages

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 5254  | 30.4%    | 36.4%    |
| 00.01 TO 00.49..... | 02.00 | 16    | 0.1%     | 0.1%     |
| 00.50 TO 00.99..... | 03.00 | 507   | 2.9%     | 3.2%     |
| 01.00 TO 01.99..... | 04.00 | 2526  | 14.6%    | 14.9%    |
| 02.00 TO 02.99..... | 05.00 | 4591  | 26.6%    | 24.8%    |
| 03.00 TO 03.99..... | 06.00 | 2451  | 14.2%    | 12.1%    |
| 04.00 TO 04.99..... | 07.00 | 1413  | 8.2%     | 6.3%     |
| 05.00 TO 15.50..... | 08.00 | 527   | 3.0%     | 2.1%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R13\_C

Tape Pos. 512-515  
Format: R4.2

F2R13\_C UNITS IN EDUCATION

Total Carnegie units in education

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 17252 | 99.8%    | 99.8%    |
| 00.01 TO 00.49..... | 02.00 | 19    | 0.1%     | 0.1%     |
| 00.50 TO 00.99..... | 03.00 | 6     | 0.0%     | 0.0%     |
| 01.00 TO 01.99..... | 04.00 | 7     | 0.0%     | 0.0%     |
| 03.00.....          | 06.00 | 1     | 0.0%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R17\_C

Tape Pos. 528-531  
Format: R4.2

F2R17\_C UNITS IN ALLIED HEALTH

Total Carnegie units in allied health

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 16592 | 96.0%    | 96.4%    |
| 00.01 TO 00.49..... | 02.00 | 126   | 0.7%     | 0.6%     |
| 00.50 TO 00.99..... | 03.00 | 271   | 1.6%     | 1.2%     |
| 01.00 TO 01.99..... | 04.00 | 141   | 0.8%     | 0.8%     |
| 02.00 TO 02.99..... | 05.00 | 70    | 0.4%     | 0.5%     |
| 03.00 TO 03.99..... | 06.00 | 42    | 0.2%     | 0.2%     |
| 04.00 TO 04.99..... | 07.00 | 16    | 0.1%     | 0.1%     |
| 05.00 TO 13.30..... | 08.00 | 27    | 0.2%     | 0.1%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R18\_C

Tape Pos. 532-535  
Format: R4.2

F2R18\_C UNITS IN HEALTH SCIENCES

Total Carnegie units in health sciences

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 17241 | 99.7%    | 99.8%    |
| 00.01 TO 00.49 | 02.00 | 7     | 0.0%     | 0.0%     |
| 00.50 TO 00.99 | 03.00 | 25    | 0.1%     | 0.1%     |
| 01.00 TO 01.99 | 04.00 | 10    | 0.1%     | 0.0%     |
| 02.00 TO 02.99 | 05.00 | 1     | 0.0%     | 0.0%     |
| 03.00          | 06.00 | 1     | 0.0%     | 0.0%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R22\_C

Tape Pos. 548-551  
Format: R4.2

F2R22\_C UNITS IN LAW

Total Carnegie units in law

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 16261 | 94.1%    | 94.1%    |
| 00.01 TO 00.49 | 02.00 | 43    | 0.2%     | 0.4%     |
| 00.50 TO 00.99 | 03.00 | 818   | 4.7%     | 4.6%     |
| 01.00 TO 01.99 | 04.00 | 161   | 0.9%     | 1.0%     |
| 02.00 TO 02.50 | 05.00 | 2     | 0.0%     | 0.0%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R19\_C

Tape Pos. 536-539  
Format: R4.2

F2R19\_C UNITS IN HOME ECONOMICS

Total Carnegie units in home economics

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 17229 | 99.7%    | 99.7%    |
| 00.01 TO 00.49 | 02.00 | 1     | 0.0%     | 0.0%     |
| 00.50 TO 00.99 | 03.00 | 39    | 0.2%     | 0.2%     |
| 01.00 TO 01.99 | 04.00 | 12    | 0.1%     | 0.1%     |
| 02.00 TO 02.50 | 05.00 | 4     | 0.0%     | 0.0%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R23\_C

Tape Pos. 552-555  
Format: R4.2

F2R23\_C UNITS IN LETTERS

Total Carnegie units in letters

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 491   | 2.8%     | 4.3%     |
| 00.01 TO 00.49 | 02.00 | 9     | 0.1%     | 0.0%     |
| 00.50 TO 00.99 | 03.00 | 262   | 1.5%     | 1.8%     |
| 01.00 TO 01.99 | 04.00 | 887   | 5.1%     | 6.4%     |
| 02.00 TO 02.99 | 05.00 | 1073  | 6.2%     | 7.5%     |
| 03.00 TO 03.99 | 06.00 | 2998  | 17.3%    | 16.2%    |
| 04.00 TO 04.99 | 07.00 | 9558  | 55.3%    | 52.2%    |
| 05.00 TO 13.00 | 08.00 | 2007  | 11.6%    | 11.5%    |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R20\_C

Tape Pos. 540-543  
Format: R4.2

F2R20\_C UNITS IN VOCATIONAL HOME ECONOMICS

Total Carnegie units in vocational home economics

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 10123 | 58.6%    | 56.9%    |
| 00.01 TO 00.49 | 02.00 | 172   | 1.0%     | 1.1%     |
| 00.50 TO 00.99 | 03.00 | 2483  | 14.4%    | 14.3%    |
| 01.00 TO 01.99 | 04.00 | 2931  | 17.0%    | 18.2%    |
| 02.00 TO 02.99 | 05.00 | 967   | 5.6%     | 5.9%     |
| 03.00 TO 03.99 | 06.00 | 342   | 2.0%     | 2.0%     |
| 04.00 TO 04.99 | 07.00 | 154   | 0.9%     | 0.9%     |
| 05.00 TO 11.00 | 08.00 | 113   | 0.7%     | 0.7%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R24\_C

Tape Pos. 556-559  
Format: R4.2

F2R24\_C UNITS IN LIBERAL/GENERAL STUDIES

Total Carnegie units in liberal/general studies

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 16858 | 97.5%    | 97.7%    |
| 00.01 TO 00.49 | 02.00 | 60    | 0.3%     | 0.4%     |
| 00.50 TO 00.99 | 03.00 | 185   | 1.1%     | 1.1%     |
| 01.00 TO 01.99 | 04.00 | 140   | 0.8%     | 0.6%     |
| 02.00 TO 02.99 | 05.00 | 27    | 0.2%     | 0.1%     |
| 03.00 TO 03.99 | 06.00 | 11    | 0.1%     | 0.0%     |
| 04.00 TO 04.99 | 07.00 | 3     | 0.0%     | 0.0%     |
| 05.00 TO 05.50 | 08.00 | 1     | 0.0%     | 0.0%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R21\_C

Tape Pos. 544-547  
Format: R4.2

F2R21\_C UNITS IN INDUSTRIAL ARTS

Total Carnegie units in industrial arts

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 15232 | 88.1%    | 87.6%    |
| 00.01 TO 00.49 | 02.00 | 49    | 0.3%     | 0.2%     |
| 00.50 TO 00.99 | 03.00 | 534   | 3.1%     | 3.3%     |
| 01.00 TO 01.99 | 04.00 | 1056  | 6.1%     | 6.5%     |
| 02.00 TO 02.99 | 05.00 | 202   | 1.2%     | 1.1%     |
| 03.00 TO 03.99 | 06.00 | 94    | 0.5%     | 0.6%     |
| 04.00 TO 04.99 | 07.00 | 50    | 0.3%     | 0.2%     |
| 05.00 TO 13.00 | 08.00 | 68    | 0.4%     | 0.5%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R25\_C

Tape Pos. 560-563  
Format: R4.2

F2R25\_C UNITS IN LIBRARY AND ARCHIVAL SCIENCES

Total Carnegie units in library and archival sciences

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 16986 | 98.3%    | 97.9%    |
| 00.01 TO 00.49 | 02.00 | 76    | 0.4%     | 0.5%     |
| 00.50 TO 00.99 | 03.00 | 110   | 0.6%     | 0.9%     |
| 01.00 TO 01.99 | 04.00 | 106   | 0.6%     | 0.6%     |
| 02.00 TO 02.99 | 05.00 | 5     | 0.0%     | 0.0%     |
| 03.00          | 06.00 | 2     | 0.0%     | 0.0%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R26\_C

Tape Pos. 564-567  
Format: R4.2

F2R26\_C UNITS IN LIFE SCIENCES

Total Carnegie units in life sciences

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 2234  | 12.9%    | 15.6%    |
| 00.01 TO 00.49..... | 02.00 | 22    | 0.1%     | 0.3%     |
| 00.50 TO 00.99..... | 03.00 | 803   | 4.6%     | 5.3%     |
| 01.00 TO 01.99..... | 04.00 | 11184 | 64.7%    | 63.0%    |
| 02.00 TO 02.99..... | 05.00 | 2815  | 16.3%    | 14.5%    |
| 03.00 TO 03.99..... | 06.00 | 215   | 1.2%     | 1.1%     |
| 04.00 TO 04.99..... | 07.00 | 15    | 0.1%     | 0.1%     |
| 05.00.....          | 08.00 | 1     | 0.0%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R30\_C

Tape Pos. 580-583  
Format: R4.2

F2R30\_C UNITS IN MULTI/INTERDISC. STUDIES

Total Carnegie units in multi/interdisciplinary studies

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 13198 | 76.4%    | 76.5%    |
| 00.01 TO 00.49..... | 02.00 | 58    | 0.3%     | 0.5%     |
| 00.50 TO 00.99..... | 03.00 | 957   | 5.5%     | 5.4%     |
| 01.00 TO 01.99..... | 04.00 | 2744  | 15.9%    | 15.3%    |
| 02.00 TO 02.99..... | 05.00 | 302   | 1.7%     | 1.5%     |
| 03.00 TO 03.99..... | 06.00 | 20    | 0.1%     | 0.1%     |
| 04.00 TO 04.99..... | 07.00 | 4     | 0.0%     | 0.0%     |
| 05.00 TO 06.00..... | 08.00 | 2     | 0.0%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R27\_C

Tape Pos. 568-571  
Format: R4.2

F2R27\_C UNITS IN MATHEMATICS

Total Carnegie units in mathematics

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 573   | 3.3%     | 4.6%     |
| 00.01 TO 00.49..... | 02.00 | 5     | 0.0%     | 0.0%     |
| 00.50 TO 00.99..... | 03.00 | 344   | 2.0%     | 2.7%     |
| 01.00 TO 01.99..... | 04.00 | 1550  | 9.0%     | 10.7%    |
| 02.00 TO 02.99..... | 05.00 | 3672  | 21.2%    | 23.7%    |
| 03.00 TO 03.99..... | 06.00 | 5525  | 32.0%    | 31.2%    |
| 04.00 TO 04.99..... | 07.00 | 4879  | 28.2%    | 23.2%    |
| 05.00 TO 08.33..... | 08.00 | 737   | 4.3%     | 3.9%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R31\_C

Tape Pos. 584-587  
Format: R4.2

F2R31\_C UNITS IN PARKS AND RECREATION

Total Carnegie units in parks and recreation

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 17274 | 99.9%    | 99.9%    |
| 00.50 TO 00.99..... | 03.00 | 9     | 0.1%     | 0.0%     |
| 01.00.....          | 04.00 | 2     | 0.0%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R28\_C

Tape Pos. 572-575  
Format: R4.2

F2R28\_C UNITS IN MILITARY SCIENCES

Total Carnegie units in military sciences

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 16907 | 97.8%    | 97.0%    |
| 00.01 TO 00.49..... | 02.00 | 1     | 0.0%     | 0.0%     |
| 00.50 TO 00.99..... | 03.00 | 72    | 0.4%     | 0.6%     |
| 01.00 TO 01.99..... | 04.00 | 140   | 0.8%     | 1.0%     |
| 02.00 TO 02.99..... | 05.00 | 73    | 0.4%     | 0.8%     |
| 03.00 TO 03.99..... | 06.00 | 39    | 0.2%     | 0.2%     |
| 04.00 TO 04.99..... | 07.00 | 40    | 0.2%     | 0.2%     |
| 05.00 TO 08.00..... | 08.00 | 13    | 0.1%     | 0.1%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R32\_C

Tape Pos. 588-591  
Format: R4.2

F2R32\_C UNITS IN BASIC SKILLS

Total Carnegie units in basic skills

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 13790 | 79.8%    | 78.9%    |
| 00.01 TO 00.49..... | 02.00 | 446   | 2.6%     | 3.0%     |
| 00.50 TO 00.99..... | 03.00 | 1412  | 8.2%     | 7.6%     |
| 01.00 TO 01.99..... | 04.00 | 975   | 5.6%     | 6.4%     |
| 02.00 TO 02.99..... | 05.00 | 300   | 1.7%     | 1.9%     |
| 03.00 TO 03.99..... | 06.00 | 202   | 1.2%     | 1.2%     |
| 04.00 TO 04.99..... | 07.00 | 61    | 0.4%     | 0.3%     |
| 05.00 TO 11.75..... | 08.00 | 99    | 0.6%     | 0.7%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R29\_C

Tape Pos. 576-579  
Format: R4.2

F2R29\_C UNITS IN MILITARY TECHNOLOGIES

Total Carnegie units in military technologies

| RESPONSE   | CODES | FREQ  | PER-CENT | WGTD PCT |
|------------|-------|-------|----------|----------|
| 00.00..... | 01.00 | 17284 | 100.0%   | 100.0%   |
| 00.50..... | 03.00 | 1     | 0.0%     | 0.0%     |
| TOTALS:    |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R33\_C

Tape Pos. 592-595  
Format: R4.2

F2R33\_C UNITS IN CITIZENSHIP/CIVIC ACTIVITIES

Total Carnegie units in citizenship/civic activities

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 14594 | 84.4%    | 84.8%    |
| 00.01 TO 00.49..... | 02.00 | 208   | 1.2%     | 1.1%     |
| 00.50 TO 00.99..... | 03.00 | 1104  | 6.4%     | 6.2%     |
| 01.00 TO 01.99..... | 04.00 | 1107  | 6.4%     | 6.3%     |
| 02.00 TO 02.99..... | 05.00 | 208   | 1.2%     | 1.1%     |
| 03.00 TO 03.99..... | 06.00 | 44    | 0.3%     | 0.4%     |
| 04.00 TO 04.99..... | 07.00 | 13    | 0.1%     | 0.1%     |
| 05.00 TO 10.00..... | 08.00 | 7     | 0.0%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R34\_C

Tape Pos. 596-599  
Format: R4.2

F2R34\_C UNITS IN HEALTH-RELATED ACTIVITIES

Total Carnegie units in health-related activities

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 1384  | 8.0%     | 7.6%     |
| 00.01 TO 00.49 | 02.00 | 196   | 1.1%     | 1.2%     |
| 00.50 TO 00.99 | 03.00 | 1780  | 10.3%    | 11.0%    |
| 01.00 TO 01.99 | 04.00 | 6696  | 38.7%    | 39.3%    |
| 02.00 TO 02.99 | 05.00 | 4865  | 28.1%    | 28.9%    |
| 03.00 TO 03.99 | 06.00 | 1707  | 9.9%     | 8.6%     |
| 04.00 TO 04.99 | 07.00 | 529   | 3.1%     | 2.8%     |
| 05.00 TO 15.25 | 08.00 | 128   | 0.7%     | 0.6%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R38\_C

Tape Pos. 612-615  
Format: R4.2

F2R38\_C UNITS IN PHILOSOPHY AND RELIGION

Total Carnegie units in philosophy and religion

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 15643 | 90.5%    | 91.8%    |
| 00.01 TO 00.49 | 02.00 | 75    | 0.4%     | 0.2%     |
| 00.50 TO 00.99 | 03.00 | 401   | 2.3%     | 1.3%     |
| 01.00 TO 01.99 | 04.00 | 312   | 1.8%     | 1.9%     |
| 02.00 TO 02.99 | 05.00 | 194   | 1.1%     | 1.1%     |
| 03.00 TO 03.99 | 06.00 | 272   | 1.6%     | 1.5%     |
| 04.00 TO 04.99 | 07.00 | 374   | 2.2%     | 2.0%     |
| 05.00 TO 13.00 | 08.00 | 14    | 0.1%     | 0.1%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R35\_C

Tape Pos. 600-603  
Format: R4.2

F2R35\_C UNITS IN INTERPERSONAL SKILLS

Total Carnegie units in interpersonal skills

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 16724 | 96.8%    | 97.0%    |
| 00.01 TO 00.49 | 02.00 | 74    | 0.4%     | 0.5%     |
| 00.50 TO 00.99 | 03.00 | 335   | 1.9%     | 1.7%     |
| 01.00 TO 01.99 | 04.00 | 132   | 0.8%     | 0.8%     |
| 02.00 TO 02.99 | 05.00 | 17    | 0.1%     | 0.1%     |
| 03.00 TO 03.99 | 06.00 | 2     | 0.0%     | 0.0%     |
| 04.00          | 07.00 | 1     | 0.0%     | 0.0%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R39\_C

Tape Pos. 616-619  
Format: R4.2

F2R39\_C UNITS IN THEOLOGY

Total Carnegie units in theology

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 17175 | 99.4%    | 99.1%    |
| 00.01 TO 00.49 | 02.00 | 40    | 0.2%     | 0.0%     |
| 00.50 TO 00.99 | 03.00 | 35    | 0.2%     | 0.3%     |
| 01.00 TO 01.99 | 04.00 | 20    | 0.1%     | 0.3%     |
| 02.00 TO 02.99 | 05.00 | 1     | 0.0%     | 0.0%     |
| 03.00 TO 03.99 | 06.00 | 2     | 0.0%     | 0.1%     |
| 04.00 TO 04.99 | 07.00 | 11    | 0.1%     | 0.0%     |
| 05.00 TO 07.25 | 08.00 | 1     | 0.0%     | 0.0%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R36\_C

Tape Pos. 604-607  
Format: R4.2

F2R36\_C UNITS IN LEISURE AND REC. ACTIVITIES

Total Carnegie units in leisure and recreational activities

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 13024 | 75.3%    | 76.3%    |
| 00.01 TO 00.49 | 02.00 | 256   | 1.5%     | 1.5%     |
| 00.50 TO 00.99 | 03.00 | 1194  | 6.9%     | 7.2%     |
| 01.00 TO 01.99 | 04.00 | 1695  | 9.8%     | 9.3%     |
| 02.00 TO 02.99 | 05.00 | 704   | 4.1%     | 3.6%     |
| 03.00 TO 03.99 | 06.00 | 279   | 1.6%     | 1.4%     |
| 04.00 TO 04.99 | 07.00 | 109   | 0.6%     | 0.5%     |
| 05.00 TO 14.00 | 08.00 | 24    | 0.1%     | 0.2%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R40\_C

Tape Pos. 620-623  
Format: R4.2

F2R40\_C UNITS IN PHYSICAL SCIENCES

Total Carnegie units in physical sciences

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 2774  | 16.0%    | 19.2%    |
| 00.01 TO 00.49 | 02.00 | 23    | 0.1%     | 0.1%     |
| 00.50 TO 00.99 | 03.00 | 755   | 4.4%     | 4.8%     |
| 01.00 TO 01.99 | 04.00 | 6787  | 39.3%    | 41.6%    |
| 02.00 TO 02.99 | 05.00 | 4747  | 27.5%    | 24.3%    |
| 03.00 TO 03.99 | 06.00 | 1937  | 11.2%    | 8.6%     |
| 04.00 TO 04.99 | 07.00 | 218   | 1.3%     | 1.1%     |
| 05.00 TO 08.00 | 08.00 | 34    | 0.2%     | 0.2%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R37\_C

Tape Pos. 608-611  
Format: R4.2

F2R37\_C UNITS IN PERSONAL AWARENESS

Total Carnegie units in personal awareness

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 16722 | 96.7%    | 96.3%    |
| 00.01 TO 00.49 | 02.00 | 44    | 0.3%     | 0.3%     |
| 00.50 TO 00.99 | 03.00 | 399   | 2.3%     | 2.8%     |
| 01.00 TO 01.99 | 04.00 | 113   | 0.7%     | 0.6%     |
| 02.00 TO 02.99 | 05.00 | 6     | 0.0%     | 0.0%     |
| 05.00 TO 06.00 | 08.00 | 1     | 0.0%     | 0.0%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R41\_C

Tape Pos. 624-627  
Format: R4.2

F2R41\_C UNITS IN SCIENCES TECHNOLOGY

Total Carnegie units in sciences technology

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 17218 | 99.6%    | 99.7%    |
| 00.01 TO 00.49 | 02.00 | 1     | 0.0%     | 0.0%     |
| 00.50 TO 00.99 | 03.00 | 26    | 0.2%     | 0.1%     |
| 01.00 TO 01.50 | 04.00 | 40    | 0.2%     | 0.2%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R42\_C

Tape Pos. 628-631  
Format: R4.2

F2R42\_C UNITS IN PSYCHOLOGY

Total Carnegie units in psychology

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 13614 | 78.8%    | 79.2%    |
| 00.01 TO 00.49 | 02.00 | 81    | 0.5%     | 0.6%     |
| 00.50 TO 00.99 | 03.00 | 2721  | 15.7%    | 15.2%    |
| 01.00 TO 01.99 | 04.00 | 857   | 5.0%     | 4.8%     |
| 02.00 TO 02.99 | 05.00 | 9     | 0.1%     | 0.0%     |
| 03.00 TO 03.99 | 06.00 | 1     | 0.0%     | 0.1%     |
| 04.00 TO 04.50 | 07.00 | 2     | 0.0%     | 0.0%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R46\_C

Tape Pos. 644-647  
Format: R4.2

F2R46\_C UNITS IN CONSTRUCTION TRADES

Total Carnegie units in construction trades

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 16623 | 96.2%    | 96.0%    |
| 00.01 TO 00.49 | 02.00 | 8     | 0.0%     | 0.1%     |
| 00.50 TO 00.99 | 03.00 | 243   | 1.4%     | 1.3%     |
| 01.00 TO 01.99 | 04.00 | 193   | 1.1%     | 1.2%     |
| 02.00 TO 02.99 | 05.00 | 81    | 0.5%     | 0.5%     |
| 03.00 TO 03.99 | 06.00 | 53    | 0.3%     | 0.3%     |
| 04.00 TO 04.99 | 07.00 | 22    | 0.1%     | 0.2%     |
| 05.00 TO 21.99 | 08.00 | 62    | 0.4%     | 0.4%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R43\_C

Tape Pos. 632-635  
Format: R4.2

F2R43\_C UNITS IN PROTECTIVE SERVICES

Total Carnegie units in protective services

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 17077 | 98.8%    | 98.9%    |
| 00.01 TO 00.49 | 02.00 | 5     | 0.0%     | 0.0%     |
| 00.50 TO 00.99 | 03.00 | 143   | 0.8%     | 0.7%     |
| 01.00 TO 01.99 | 04.00 | 46    | 0.3%     | 0.3%     |
| 02.00 TO 02.99 | 05.00 | 8     | 0.0%     | 0.0%     |
| 03.00 TO 03.99 | 06.00 | 3     | 0.0%     | 0.0%     |
| 04.00 TO 04.99 | 07.00 | 2     | 0.0%     | 0.0%     |
| 05.00 TO 10.00 | 08.00 | 1     | 0.0%     | 0.0%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R47\_C

Tape Pos. 648-651  
Format: R4.2

F2R47\_C UNITS IN MECHANICS AND REPAIRERS

Total Carnegie units in mechanics and repairers

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 15830 | 91.6%    | 91.6%    |
| 00.01 TO 00.49 | 02.00 | 26    | 0.2%     | 0.1%     |
| 00.50 TO 00.99 | 03.00 | 530   | 3.1%     | 3.0%     |
| 01.00 TO 01.99 | 04.00 | 452   | 2.6%     | 2.5%     |
| 02.00 TO 02.99 | 05.00 | 179   | 1.0%     | 1.1%     |
| 03.00 TO 03.99 | 06.00 | 116   | 0.7%     | 0.7%     |
| 04.00 TO 04.99 | 07.00 | 50    | 0.3%     | 0.3%     |
| 05.00 TO 21.99 | 08.00 | 102   | 0.6%     | 0.6%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R44\_C

Tape Pos. 636-639  
Format: R4.2

F2R44\_C UNITS IN PUBLIC AFFAIRS

Total Carnegie units in public affairs

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 17276 | 99.9%    | 99.9%    |
| 00.50 TO 00.99 | 03.00 | 4     | 0.0%     | 0.0%     |
| 01.00 TO 01.99 | 04.00 | 2     | 0.0%     | 0.0%     |
| 03.00 TO 03.99 | 06.00 | 2     | 0.0%     | 0.0%     |
| 05.00 TO 06.00 | 08.00 | 1     | 0.0%     | 0.0%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R48\_C

Tape Pos. 652-655  
Format: R4.2

F2R48\_C UNITS IN PRECISION PRODUCTION

Total Carnegie units in precision production

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 13383 | 77.4%    | 77.0%    |
| 00.01 TO 00.49 | 02.00 | 66    | 0.4%     | 0.4%     |
| 00.50 TO 00.99 | 03.00 | 1045  | 6.0%     | 5.9%     |
| 01.00 TO 01.99 | 04.00 | 1647  | 9.5%     | 10.1%    |
| 02.00 TO 02.99 | 05.00 | 614   | 3.6%     | 3.5%     |
| 03.00 TO 03.99 | 06.00 | 301   | 1.7%     | 1.6%     |
| 04.00 TO 04.99 | 07.00 | 112   | 0.6%     | 0.7%     |
| 05.00 TO 13.00 | 08.00 | 117   | 0.7%     | 0.9%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R45\_C

Tape Pos. 640-643  
Format: R4.2

F2R45\_C UNITS IN SOCIAL SCIENCES

Total Carnegie units in social sciences

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 794   | 4.6%     | 6.7%     |
| 00.01 TO 00.49 | 02.00 | 13    | 0.1%     | 0.1%     |
| 00.50 TO 00.99 | 03.00 | 378   | 2.2%     | 3.0%     |
| 01.00 TO 01.99 | 04.00 | 1708  | 9.9%     | 10.9%    |
| 02.00 TO 02.99 | 05.00 | 4396  | 25.4%    | 24.9%    |
| 03.00 TO 03.99 | 06.00 | 7712  | 44.6%    | 40.8%    |
| 04.00 TO 04.99 | 07.00 | 2001  | 11.6%    | 11.8%    |
| 05.00 TO 11.00 | 08.00 | 283   | 1.6%     | 1.7%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

Question F2R49\_C

Tape Pos. 656-659  
Format: R4.2

F2R49\_C UNITS IN TRANS./MATERIAL MOVING

Total Carnegie units in transportation and material moving

| RESPONSE       | CODES | FREQ  | PER-CENT | WGTD PCT |
|----------------|-------|-------|----------|----------|
| 00.00          | 01.00 | 17136 | 99.1%    | 99.0%    |
| 00.01 TO 00.49 | 02.00 | 7     | 0.0%     | 0.0%     |
| 00.50 TO 00.99 | 03.00 | 86    | 0.5%     | 0.5%     |
| 01.00 TO 01.99 | 04.00 | 44    | 0.3%     | 0.3%     |
| 02.00 TO 02.99 | 05.00 | 8     | 0.0%     | 0.0%     |
| 03.00 TO 03.99 | 06.00 | 2     | 0.0%     | 0.0%     |
| 04.00 TO 04.99 | 07.00 | 1     | 0.0%     | 0.0%     |
| 05.00          | 08.00 | 1     | 0.0%     | 0.0%     |
| TOTALS:        |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

-----  
 Question F2R50\_C Tape Pos. 660-663  
 Format: R4.2

F2R50\_C UNITS IN VISUAL AND PERFORMING ARTS

Total Carnegie units in visual and performing arts:

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 4771  | 27.6%    | 30.5%    |
| 00.01 TO 00.49..... | 02.00 | 117   | 0.7%     | 0.7%     |
| 00.50 TO 00.99..... | 03.00 | 1768  | 10.2%    | 10.3%    |
| 01.00 TO 01.99..... | 04.00 | 5000  | 28.9%    | 29.2%    |
| 02.00 TO 02.99..... | 05.00 | 2337  | 13.5%    | 12.8%    |
| 03.00 TO 03.99..... | 06.00 | 1326  | 7.7%     | 6.4%     |
| 04.00 TO 04.99..... | 07.00 | 1061  | 6.1%     | 5.5%     |
| 05.00 TO 16.00..... | 08.00 | 905   | 5.2%     | 4.6%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

-----  
 Question F2R56\_C Tape Pos. 676-679  
 Format: R4.2

F2R56\_C UNITS IN SUBJECT AREA SERVICES

Total Carnegie units in subject area services:

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 16112 | 93.2%    | 92.9%    |
| 00.01 TO 00.49..... | 02.00 | 139   | 0.8%     | 0.5%     |
| 00.50 TO 00.99..... | 03.00 | 351   | 2.0%     | 2.0%     |
| 01.00 TO 01.99..... | 04.00 | 371   | 2.1%     | 2.3%     |
| 02.00 TO 02.99..... | 05.00 | 97    | 0.6%     | 0.8%     |
| 03.00 TO 03.99..... | 06.00 | 62    | 0.4%     | 0.4%     |
| 04.00 TO 04.99..... | 07.00 | 61    | 0.4%     | 0.4%     |
| 05.00 TO 15.50..... | 08.00 | 92    | 0.5%     | 0.7%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

-----  
 Question F2R51\_C Tape Pos. 664-667  
 Format: R4.2

F2R51\_C UNITS IN INTERNSHIPS

Total Carnegie units in internships:

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 17272 | 99.9%    | 100.0%   |
| 00.50 TO 00.99..... | 03.00 | 8     | 0.0%     | 0.0%     |
| 01.00.....          | 04.00 | 5     | 0.0%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

-----  
 Question F2TRP1FL Tape Pos. 680-680  
 Format: I1

F2TRP1FL 8-12 GRADE PANEL MEMBER, AND TRANSCRIPT

Indicates whether or not a sample member was a part of the eighth-to twelfth-grade student panel and a transcript was collected for the sample member.

| RESPONSE   | CODES | FREQ  | PER-CENT | WGTD PCT |
|--|-------|-------|----------|----------|
| NOT IN 8-12 PANEL OR TRANSCRIPT NOT COLLECTED..... | 0     | 3002  | 17.4%    | 24.5%    |
| IN 8-12 PANEL AND TRANSCRIPT COLLECTED.....        | 1     | 14283 | 82.6%    | 75.5%    |
| TOTALS:  |       | 17285 | 100.0%   | 100.0%   |

-----  
 Question F2R54\_C Tape Pos. 668-671  
 Format: R4.2

F2R54\_C UNITS IN ACADEMIC LIFE SKILLS

Total Carnegie units in academic life skills/functional curriculum

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 17133 | 99.1%    | 99.2%    |
| 00.50 TO 00.99..... | 03.00 | 115   | 0.7%     | 0.5%     |
| 01.00 TO 01.99..... | 04.00 | 28    | 0.2%     | 0.2%     |
| 02.00 TO 02.99..... | 05.00 | 3     | 0.0%     | 0.0%     |
| 04.00 TO 04.99..... | 07.00 | 2     | 0.0%     | 0.0%     |
| 05.00 TO 09.00..... | 08.00 | 4     | 0.0%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

-----  
 Question F2TRP2FL Tape Pos. 681-681  
 Format: I1

F2TRP2FL 10-12 GRADE PANEL MEMBER, AND TRANSCRIPT

Indicates whether or not a sample member was a part of the tenth-to twelfth-grade student panel and a transcript was collected for the sample member.

| RESPONSE  | CODES | FREQ  | PER-CENT | WGTD PCT |
|---|-------|-------|----------|----------|
| NOT IN 10-12 PANEL, OR NO TRANSCRIPT COLLECTED.....                 | 0     | 1650  | 9.5%     | 16.1%    |
| IN 10-12 PANEL AND TRANSCRIPT COLLECTED, BUT NOT IN 10TH GRADE..... | 1     | 1010  | 5.8%     | 7.6%     |
| IN 10-12 PANEL, TRANSCRIPT COLLECTED, ENROLLED IN 10TH GRADE.....   | 2     | 14625 | 84.6%    | 76.3%    |
| TOTALS:   |       | 17285 | 100.0%   | 100.0%   |

-----  
 Question F2R55\_C Tape Pos. 672-675  
 Format: R4.2

F2R55\_C UNITS IN VOCATIONAL LIFE SKILLS

Total Carnegie units in vocational life skills/functional curriculum

| RESPONSE            | CODES | FREQ  | PER-CENT | WGTD PCT |
|---------------------|-------|-------|----------|----------|
| 00.00.....          | 01.00 | 17090 | 98.9%    | 98.9%    |
| 00.01 TO 00.49..... | 02.00 | 7     | 0.0%     | 0.0%     |
| 00.50 TO 00.99..... | 03.00 | 99    | 0.6%     | 0.6%     |
| 01.00 TO 01.99..... | 04.00 | 65    | 0.4%     | 0.4%     |
| 02.00 TO 02.99..... | 05.00 | 12    | 0.1%     | 0.1%     |
| 03.00 TO 03.99..... | 06.00 | 5     | 0.0%     | 0.0%     |
| 04.00 TO 04.99..... | 07.00 | 2     | 0.0%     | 0.0%     |
| 05.00 TO 08.00..... | 08.00 | 5     | 0.0%     | 0.0%     |
| TOTALS:             |       | 17285 | 100.0%   | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this users manual

-----  
 Question F2TRP1WT Tape Pos. 682-691  
 Format: R10.4

F2TRP1WT TRANSCRIPT PANEL WEIGHT, GRADES 8-12

Transcript panel weight, grades 8-12

| RESPONSE                  | CODES     | FREQ  | PER-CENT | WGTD PCT |
|---------------------------|-----------|-------|----------|----------|
| 2.4483 TO 13753.8942..... | 000001.00 | 14283 | 82.6%    | 100.0%   |
| RESERVED CODES:           |           |       |          |          |
| MISSING.....              | 000000.00 | 3002  | 17.4%    | (MISS)   |
| TOTALS:                   |           | 17285 | 100.0%   | 100.0%   |

-----  
 Question F2TRP2WT Tape Pos. 692-701  
 Format: R10.4

F2TRP2WT TRANSCRIPT PANEL WEIGHT, GRADES 10-12

Transcript panel weight, grades 10-12

| RESPONSE                  | CODES     | FREQ  | PER-CENT | WGTD PCT |
|---------------------------|-----------|-------|----------|----------|
| 2.4676 TO 13440.6231..... | 000001.00 | 15635 | 90.5%    | 100.0%   |
| RESERVED CODES:           |           |       |          |          |
| MISSING.....              | 000000.00 | 1650  | 9.5%     | (MISS)   |
| TOTALS:                   |           | 17285 | 100.0%   | 100.0%   |

**NELS:88 Second Follow-Up**  
**Transcript Component Course File Codebook**

-----  
 Question STU\_ID  
 -----  
 STU\_ID STUDENT ID  
 Public student ID

Tape Pos. 1-7  
 Format: I7

-----  
 Question F2CRSID  
 -----  
 F2CRSID COURSE ID  
 ID assigned to course by data entry program

Tape Pos. 22-23  
 Format: I2

-----  
 Question F2SCH\_ID  
 -----  
 F2SCH\_ID PUBLIC ID OF LAST ATTENDED SCHOOL  
 Public ID of last attended school

Tape Pos. 8-12  
 Format: I5

-----  
 Question F2RDIFSC  
 -----  
 F2RDIFSC SCHOOL AT WHICH COURSE WAS TAKEN  
 School at which course was taken

Tape Pos. 13-14  
 Format: I2

| RESPONSE                  | CODES | FREQ   | PER-CENT | WGTD PCT |
|---------------------------|-------|--------|----------|----------|
| LAST ATTENDED SCHOOL..... | 01    | 692447 | 96.9%    | 95.2%    |
| OTHER SCHOOL.....         | 02    | 22200  | 3.1%     | 4.8%     |
| TOTALS:                   |       | 714647 | 100.0%   | 100.0%   |

| RESPONSE | CODES | FREQ   | PER-CENT | WGTD PCT |
|----------|-------|--------|----------|----------|
| 01.....  | 01    | 68894  | 9.6%     | 9.8%     |
| 02.....  | 02    | 66558  | 9.3%     | 9.5%     |
| 03.....  | 03    | 65502  | 9.2%     | 9.4%     |
| 04.....  | 04    | 65192  | 9.1%     | 9.3%     |
| 05.....  | 05    | 64490  | 9.0%     | 9.2%     |
| 06.....  | 06    | 62822  | 8.8%     | 8.9%     |
| 07.....  | 07    | 57586  | 8.1%     | 8.1%     |
| 08.....  | 08    | 51750  | 7.2%     | 7.2%     |
| 09.....  | 09    | 45874  | 6.4%     | 6.3%     |
| 10.....  | 10    | 41634  | 5.8%     | 5.7%     |
| 11.....  | 11    | 37190  | 5.2%     | 5.0%     |
| 12.....  | 12    | 33517  | 4.7%     | 4.5%     |
| 13.....  | 13    | 19342  | 2.7%     | 2.5%     |
| 14.....  | 14    | 14301  | 2.0%     | 1.8%     |
| 15.....  | 15    | 6117   | 0.9%     | 0.8%     |
| 16.....  | 16    | 3877   | 0.5%     | 0.5%     |
| 17.....  | 17    | 2191   | 0.3%     | 0.3%     |
| 18.....  | 18    | 1620   | 0.2%     | 0.2%     |
| 19.....  | 19    | 1027   | 0.1%     | 0.1%     |
| 20.....  | 20    | 846    | 0.1%     | 0.1%     |
| 21.....  | 21    | 717    | 0.1%     | 0.1%     |
| 22.....  | 22    | 638    | 0.1%     | 0.1%     |
| 23.....  | 23    | 584    | 0.1%     | 0.1%     |
| 24.....  | 24    | 541    | 0.1%     | 0.1%     |
| 25.....  | 25    | 442    | 0.1%     | 0.1%     |
| 26.....  | 26    | 391    | 0.1%     | 0.1%     |
| 27.....  | 27    | 327    | 0.0%     | 0.1%     |
| 28.....  | 28    | 283    | 0.0%     | 0.0%     |
| 29.....  | 29    | 164    | 0.0%     | 0.0%     |
| 30.....  | 30    | 130    | 0.0%     | 0.0%     |
| TOTALS:  |       | 714647 | 100.0%   | 100.0%   |

-----  
 Question F2RTRMSC  
 -----  
 F2RTRMSC PUBLIC ID OF COURSE SCHOOL  
 Public ID of school at which course was taken

Tape Pos. 15-19  
 Format: I5

-----  
 Question F2RTRMID  
 -----  
 F2RTRMID TERM ID  
 ID assigned by data entry program to school year in which course was taken

Tape Pos. 20-21  
 Format: I2

| RESPONSE | CODES | FREQ   | PER-CENT | WGTD PCT |
|----------|-------|--------|----------|----------|
| 01.....  | 01    | 185453 | 26.0%    | 26.4%    |
| 02.....  | 02    | 183276 | 25.6%    | 25.7%    |
| 03.....  | 03    | 170631 | 23.9%    | 23.6%    |
| 04.....  | 04    | 152319 | 21.3%    | 20.6%    |
| 05.....  | 05    | 16105  | 2.3%     | 2.3%     |
| 06.....  | 06    | 4617   | 0.6%     | 0.7%     |
| 07.....  | 07    | 1583   | 0.2%     | 0.4%     |
| 08.....  | 08    | 491    | 0.1%     | 0.2%     |
| 09.....  | 09    | 114    | 0.0%     | 0.0%     |
| 10.....  | 10    | 41     | 0.0%     | 0.0%     |
| 11.....  | 11    | 12     | 0.0%     | 0.0%     |
| 12.....  | 12    | 5      | 0.0%     | 0.0%     |
| TOTALS:  |       | 714647 | 100.0%   | 100.0%   |

-----  
 Question F2RYEAR  
 -----  
 F2RYEAR SCHOOL YEAR IN WHICH COURSE WAS TAKEN  
 School year in which course was taken

Tape Pos. 24-25  
 Format: I2

| RESPONSE                             | CODES | FREQ   | PER-CENT    | WGTD PCT |
|--------------------------------------|-------|--------|-------------|----------|
| 1985.....                            | 85    | 24     | 0.0%        | 0.0%     |
| 1986.....                            | 86    | 724    | 0.1%        | 0.1%     |
| 1987.....                            | 87    | 5071   | 0.7%        | 0.8%     |
| 1988.....                            | 88    | 187126 | 26.2%       | 26.4%    |
| 1989.....                            | 89    | 188226 | 26.3%       | 26.6%    |
| 1990.....                            | 90    | 175008 | 24.5%       | 24.4%    |
| 1991.....                            | 91    | 157821 | 22.1%       | 21.6%    |
| 1992.....                            | 92    | 351    | 0.0%        | 0.1%     |
| RESERVED CODES:<br>MISSING DATA..... | 98    | 296    | 0.0% (MISS) |          |
| TOTALS:                              |       | 714647 | 100.0%      | 100.0%   |

-----  
 Question F2RGRLEV  
 -----  
 F2RGRLEV GRADE LEVEL IN WHICH COURSE WAS TAKEN  
 Grade level in which course was taken

Tape Pos. 26-27  
 Format: I2

| RESPONSE  | CODES | FREQ   | PER-CENT | WGTD PCT |
|---|-------|--------|----------|----------|
| GRADE 7.....  | 07    | 26     | 0.0%     | 0.0%     |
| GRADE 8.....  | 08    | 942    | 0.1%     | 0.1%     |
| GRADE 9.....  | 09    | 195588 | 27.4%    | 28.1%    |
| GRADE 10.....   | 10    | 190178 | 26.6%    | 27.1%    |
| GRADE 11.....   | 11    | 171348 | 24.0%    | 23.7%    |
| GRADE 12.....   | 12    | 154626 | 21.6%    | 21.0%    |
| NO GRADE LEVEL.....<br>RESERVED CODES:<br>MISSING DATA..... | 20    | 127    | 0.0%     | 0.0%     |
| TOTALS:   |       | 714647 | 100.0%   | 100.0%   |



Question F2RCRSDP Tape Pos. 28-47  
Format: A20

F2RCRSDP COURSE DEPARTMENT

Department under which course was offered

| RESPONSE          | CODES | FREQ   | PER-CENT     | WGTD PCT |
|-------------------|-------|--------|--------------|----------|
| DATA PRESENT..... | 1     | 51486  | 7.2%         | 100.0%   |
| RESERVED CODES:   |       |        |              |          |
| MISSING DATA..... | 8     | 663161 | 92.8% (MISS) |          |
| TOTALS:           |       | 714647 | 100.0%       | 100.0%   |

NOTE: The verbatim responses to this item are in the datafile but there are too many unique responses to display in this codebook. As with any other variable, users can select and extract this variable and subsequently review it. For example, PROC PRINT in SAS may be used for such a list either in hardcopy or electronic output.

Question F2RCRSE Tape Pos. 48-92  
Format: A45

F2RCRSE COURSE TITLE

Course title

| RESPONSE          | CODES | FREQ   | PER-CENT    | WGTD PCT |
|-------------------|-------|--------|-------------|----------|
| DATA PRESENT..... | 1     | 714604 | 100.0%      | 100.0%   |
| RESERVED CODES:   |       |        |             |          |
| MISSING DATA..... | 8     | 43     | 0.0% (MISS) |          |
| TOTALS:           |       | 714647 | 100.0%      | 100.0%   |

NOTE: The verbatim responses to this item are in the datafile but there are too many unique responses to display in this codebook. As with any other variable, users can select and extract this variable and subsequently review it. For example, PROC PRINT in SAS may be used for such a list either in hardcopy or electronic output.

Question F2RCRSNO Tape Pos. 93-99  
Format: A7

F2RCRSNO SCHOOL-ASSIGNED COURSE NUMBER

School-assigned course number

| RESPONSE          | CODES   | FREQ   | PER-CENT | WGTD PCT |
|-------------------|---------|--------|----------|----------|
| DATA PRESENT..... | 0000001 | 111335 | 15.6%    | 15.9%    |
| MISSING DATA..... | 0000008 | 603312 | 84.4%    | 84.1%    |
| TOTALS:           |         | 714647 | 100.0%   | 100.0%   |

NOTE: The verbatim responses to this item are in the datafile but there are too many unique responses to display in this codebook. As with any other variable, users can select and extract this variable and subsequently review it. For example, PROC PRINT in SAS may be used for such a list either in hardcopy or electronic output.

Question F2RT\_TYP Tape Pos. 100-101  
Format: I2

F2RT\_TYP TERM IN WHICH COURSE WAS TAKEN

Term in which course was taken

| RESPONSE          | CODES | FREQ   | PER-CENT    | WGTD PCT |
|-------------------|-------|--------|-------------|----------|
| YEAR-LONG.....    | 01    | 135616 | 19.0%       | 20.2%    |
| SEMESTER 1.....   | 02    | 260750 | 36.5%       | 36.6%    |
| SEMESTER 2.....   | 03    | 258320 | 36.1%       | 36.1%    |
| TRIMESTER 1.....  | 04    | 4167   | 0.6%        | 0.5%     |
| TRIMESTER 2.....  | 05    | 3993   | 0.6%        | 0.5%     |
| TRIMESTER 3.....  | 06    | 3958   | 0.6%        | 0.5%     |
| QUARTER 1.....    | 07    | 3866   | 0.5%        | 0.7%     |
| QUARTER 2.....    | 08    | 3652   | 0.5%        | 0.6%     |
| QUARTER 3.....    | 09    | 3522   | 0.5%        | 0.6%     |
| QUARTER 4.....    | 10    | 3453   | 0.5%        | 0.6%     |
| SEMESTER.....     | 12    | 17187  | 2.4%        | 2.9%     |
| TRIMESTER.....    | 13    | 435    | 0.1%        | 0.1%     |
| QUARTER.....      | 14    | 2279   | 0.3%        | 0.2%     |
| RESERVED CODES:   |       |        |             |          |
| MISSING DATA..... | 98    | 13449  | 1.9% (MISS) |          |
| TOTALS:           |       | 714647 | 100.0%      | 100.0%   |

Question F2RCRED Tape Pos. 102-105  
Format: R4.2

F2RCRED SCHOOL-ASSIGNED COURSE CREDITS

School-assigned course credits

| RESPONSE            | CODES | FREQ   | PER-CENT    | WGTD PCT |
|---------------------|-------|--------|-------------|----------|
| NONE.....           | 01.00 | 61598  | 8.6%        | 10.3%    |
| 00.01 TO 00.25..... | 02.00 | 32467  | 4.5%        | 4.3%     |
| 00.26 TO 00.50..... | 03.00 | 362250 | 50.7%       | 50.0%    |
| 00.51 TO 01.00..... | 04.00 | 140539 | 19.7%       | 19.0%    |
| 01.01 TO 02.00..... | 05.00 | 7764   | 1.1%        | 1.5%     |
| 02.01 TO 03.00..... | 06.00 | 13129  | 1.8%        | 1.9%     |
| 03.01 TO 04.00..... | 07.00 | 1417   | 0.2%        | 0.2%     |
| 04.01 TO 05.00..... | 08.00 | 89874  | 12.6%       | 12.3%    |
| 05.01 TO 06.00..... | 09.00 | 915    | 0.1%        | 0.1%     |
| 06.01 TO 07.00..... | 10.00 | 255    | 0.0%        | 0.0%     |
| 07.01 TO 08.00..... | 11.00 | 112    | 0.0%        | 0.1%     |
| 08.01 TO 09.00..... | 12.00 | 20     | 0.0%        | 0.0%     |
| 09.01 TO 10.00..... | 13.00 | 1310   | 0.2%        | 0.2%     |
| 10.01 TO 11.00..... | 14.00 | 5      | 0.0%        | 0.0%     |
| 11.01 TO 12.00..... | 15.00 | 4      | 0.0%        | 0.0%     |
| 12.01 TO 13.00..... | 16.00 | 6      | 0.0%        | 0.0%     |
| 13.01 TO 14.00..... | 17.00 | 18     | 0.0%        | 0.0%     |
| 14.01 TO 15.00..... | 18.00 | 221    | 0.0%        | 0.0%     |
| 15.01 TO 35.00..... | 19.00 | 56     | 0.0%        | 0.0%     |
| RESERVED CODES:     |       |        |             |          |
| MISSING DATA.....   | 99.98 | 2687   | 0.4% (MISS) |          |
| TOTALS:             |       | 714647 | 100.0%      | 100.0%   |

NOTE: This item is stored as a continuous variable in the data file. Values were temporarily collapsed for display in this user's manual.

Question F2RSCRED Tape Pos. 106-109  
Format: R4.2

F2RSCRED STANDARDIZED CREDITS, IN CARNEGIE UNITS

Standardized credits, in Carnegie units

| RESPONSE            | CODES | FREQ   | PER-CENT    | WGTD PCT |
|---------------------|-------|--------|-------------|----------|
| NONE.....           | 01.00 | 61602  | 8.6%        | 10.3%    |
| 00.01 TO 00.25..... | 02.00 | 45174  | 6.3%        | 6.4%     |
| 00.26 TO 00.50..... | 03.00 | 488127 | 68.3%       | 66.6%    |
| 00.51 TO 01.00..... | 04.00 | 112322 | 15.7%       | 15.9%    |
| 01.01 TO 02.00..... | 05.00 | 3945   | 0.5%        | 0.7%     |
| 02.01 TO 03.00..... | 06.00 | 731    | 0.1%        | 0.1%     |
| 03.01 TO 04.00..... | 07.00 | 103    | 0.0%        | 0.0%     |
| 04.01 TO 05.00..... | 08.00 | 46     | 0.0%        | 0.0%     |
| 05.01 TO 06.00..... | 09.00 | 2      | 0.0%        | 0.0%     |
| 06.01 TO 07.33..... | 10.00 | 8      | 0.0%        | 0.0%     |
| RESERVED CODES:     |       |        |             |          |
| MISSING DATA.....   | 99.98 | 2687   | 0.4% (MISS) |          |
| TOTALS:             |       | 714647 | 100.0%      | 100.0%   |

Question F2RGRADE Tape Pos. 110-111  
Format: I2

F2RGRADE STANDARDIZED COURSE GRADE

Standardized course grade

| RESPONSE            | CODES | FREQ   | PER-CENT    | WGTD PCT |
|---------------------|-------|--------|-------------|----------|
| A+.....             | 01    | 9933   | 1.4%        | 1.2%     |
| A.....              | 02    | 138258 | 19.3%       | 17.6%    |
| A-.....             | 03    | 34619  | 4.8%        | 4.1%     |
| B+.....             | 04    | 32500  | 4.5%        | 4.1%     |
| B.....              | 05    | 141266 | 19.8%       | 19.4%    |
| B-.....             | 06    | 30376  | 4.3%        | 3.9%     |
| C+.....             | 07    | 26487  | 3.7%        | 3.6%     |
| C.....              | 08    | 116469 | 16.3%       | 17.5%    |
| C-.....             | 09    | 20535  | 2.9%        | 2.9%     |
| D+.....             | 10    | 13519  | 1.9%        | 2.0%     |
| D.....              | 11    | 63598  | 8.9%        | 10.1%    |
| D-.....             | 12    | 12657  | 1.8%        | 1.9%     |
| F.....              | 13    | 45963  | 6.4%        | 7.9%     |
| PASS.....           | 14    | 16081  | 2.3%        | 2.0%     |
| UNSATISFACTORY..... | 15    | 507    | 0.1%        | 0.1%     |
| WITHDREW.....       | 16    | 2710   | 0.4%        | 0.5%     |
| INCOMPLETE.....     | 17    | 786    | 0.1%        | 0.1%     |
| NON-GRADED.....     | 18    | 3532   | 0.5%        | 0.5%     |
| BLANK.....          | 19    | 2860   | 0.4%        | 0.6%     |
| RESERVED CODES:     |       |        |             |          |
| MISSING DATA.....   | 98    | 2000   | 0.3% (MISS) |          |
| TOTALS:             |       | 714647 | 100.0%      | 100.0%   |



NELS:88 SECOND FOLLOW-UP TRANSCRIPT COMPONENT COURSE FILE - RESTRICTED USE ONLY

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|        |      |      |      |        |      |      |      |
|--------|------|------|------|--------|------|------|------|
| 070742 | 45   | 0.0% | 0.0% | 139900 | 5    | 0.0% | 0.0% |
| 079900 | 45   | 0.0% | 0.0% | 140111 | 10   | 0.0% | 0.0% |
| 080111 | 181  | 0.0% | 0.0% | 140221 | 8    | 0.0% | 0.0% |
| 080121 | 24   | 0.0% | 0.0% | 140300 | 2    | 0.0% | 0.0% |
| 080131 | 26   | 0.0% | 0.0% | 140411 | 2    | 0.0% | 0.0% |
| 080132 | 3    | 0.0% | 0.0% | 140500 | 1    | 0.0% | 0.0% |
| 080200 | 5    | 0.0% | 0.0% | 141211 | 7    | 0.0% | 0.0% |
| 080300 | 16   | 0.0% | 0.0% | 141214 | 2    | 0.0% | 0.0% |
| 080311 | 115  | 0.0% | 0.0% | 141300 | 1    | 0.0% | 0.0% |
| 080321 | 161  | 0.0% | 0.0% | 141911 | 7    | 0.0% | 0.0% |
| 080500 | 1    | 0.0% | 0.0% | 142011 | 2    | 0.0% | 0.0% |
| 080511 | 3    | 0.0% | 0.0% | 142200 | 1    | 0.0% | 0.0% |
| 080612 | 7    | 0.0% | 0.0% | 142600 | 3    | 0.0% | 0.0% |
| 080621 | 4    | 0.0% | 0.0% | 142611 | 7    | 0.0% | 0.0% |
| 080700 | 13   | 0.0% | 0.0% | 150111 | 4    | 0.0% | 0.0% |
| 080711 | 1139 | 0.2% | 0.2% | 150200 | 25   | 0.0% | 0.0% |
| 080712 | 212  | 0.0% | 0.0% | 150300 | 3    | 0.0% | 0.0% |
| 080713 | 33   | 0.0% | 0.0% | 150311 | 5    | 0.0% | 0.0% |
| 080721 | 508  | 0.1% | 0.1% | 150321 | 34   | 0.0% | 0.0% |
| 080722 | 83   | 0.0% | 0.0% | 150331 | 80   | 0.0% | 0.0% |
| 080731 | 93   | 0.0% | 0.0% | 150332 | 20   | 0.0% | 0.0% |
| 080741 | 58   | 0.0% | 0.0% | 150333 | 2    | 0.0% | 0.0% |
| 080751 | 5    | 0.0% | 0.0% | 150341 | 14   | 0.0% | 0.0% |
| 080761 | 1    | 0.0% | 0.0% | 150411 | 19   | 0.0% | 0.0% |
| 080771 | 1    | 0.0% | 0.0% | 150412 | 17   | 0.0% | 0.0% |
| 080782 | 2    | 0.0% | 0.0% | 150421 | 21   | 0.0% | 0.0% |
| 080900 | 2    | 0.0% | 0.0% | 150431 | 355  | 0.0% | 0.0% |
| 080911 | 16   | 0.0% | 0.0% | 150500 | 1    | 0.0% | 0.0% |
| 081100 | 5    | 0.0% | 0.0% | 150600 | 20   | 0.0% | 0.0% |
| 081111 | 16   | 0.0% | 0.0% | 150601 | 63   | 0.0% | 0.0% |
| 081121 | 2    | 0.0% | 0.0% | 150611 | 252  | 0.0% | 0.0% |
| 081211 | 1    | 0.0% | 0.0% | 150612 | 27   | 0.0% | 0.0% |
| 081221 | 12   | 0.0% | 0.0% | 150631 | 1    | 0.0% | 0.0% |
| 089900 | 14   | 0.0% | 0.0% | 150700 | 2    | 0.0% | 0.0% |
| 090100 | 17   | 0.0% | 0.0% | 150800 | 30   | 0.0% | 0.0% |
| 090111 | 347  | 0.0% | 0.0% | 150811 | 34   | 0.0% | 0.0% |
| 090121 | 22   | 0.0% | 0.0% | 150821 | 13   | 0.0% | 0.0% |
| 090211 | 49   | 0.0% | 0.0% | 159900 | 14   | 0.0% | 0.0% |
| 090400 | 18   | 0.0% | 0.0% | 160100 | 5    | 0.0% | 0.0% |
| 090411 | 1848 | 0.3% | 0.2% | 160111 | 25   | 0.0% | 0.0% |
| 090412 | 421  | 0.1% | 0.1% | 160121 | 566  | 0.1% | 0.1% |
| 090413 | 104  | 0.0% | 0.0% | 160122 | 417  | 0.1% | 0.1% |
| 090421 | 8    | 0.0% | 0.0% | 160123 | 354  | 0.0% | 0.1% |
| 090431 | 30   | 0.0% | 0.0% | 160124 | 56   | 0.0% | 0.0% |
| 090441 | 1314 | 0.2% | 0.2% | 160125 | 102  | 0.0% | 0.0% |
| 090442 | 274  | 0.0% | 0.0% | 160300 | 1    | 0.0% | 0.0% |
| 090611 | 10   | 0.0% | 0.0% | 160311 | 1    | 0.0% | 0.0% |
| 090612 | 12   | 0.0% | 0.0% | 160312 | 3    | 0.0% | 0.0% |
| 090700 | 3    | 0.0% | 0.0% | 160313 | 4    | 0.0% | 0.0% |
| 090711 | 32   | 0.0% | 0.0% | 160321 | 69   | 0.0% | 0.0% |
| 090721 | 3    | 0.0% | 0.0% | 160322 | 45   | 0.0% | 0.0% |
| 090811 | 30   | 0.0% | 0.0% | 160323 | 22   | 0.0% | 0.0% |
| 090812 | 1    | 0.0% | 0.0% | 160324 | 15   | 0.0% | 0.0% |
| 099900 | 21   | 0.0% | 0.0% | 160325 | 2    | 0.0% | 0.0% |
| 100100 | 48   | 0.0% | 0.0% | 160331 | 162  | 0.0% | 0.0% |
| 100111 | 249  | 0.0% | 0.0% | 160332 | 101  | 0.0% | 0.0% |
| 100121 | 149  | 0.0% | 0.0% | 160333 | 36   | 0.0% | 0.0% |
| 100131 | 140  | 0.0% | 0.0% | 160334 | 8    | 0.0% | 0.0% |
| 100132 | 23   | 0.0% | 0.0% | 160336 | 6    | 0.0% | 0.0% |
| 100141 | 2    | 0.0% | 0.0% | 160341 | 10   | 0.0% | 0.0% |
| 100142 | 2    | 0.0% | 0.0% | 160342 | 2    | 0.0% | 0.0% |
| 100151 | 74   | 0.0% | 0.0% | 160343 | 3    | 0.0% | 0.0% |
| 100152 | 8    | 0.0% | 0.0% | 160400 | 3    | 0.0% | 0.0% |
| 100161 | 57   | 0.0% | 0.0% | 160401 | 1    | 0.0% | 0.0% |
| 100171 | 201  | 0.0% | 0.0% | 160421 | 94   | 0.0% | 0.0% |
| 100172 | 35   | 0.0% | 0.0% | 160422 | 64   | 0.0% | 0.0% |
| 100173 | 5    | 0.0% | 0.0% | 160423 | 32   | 0.0% | 0.0% |
| 100174 | 2    | 0.0% | 0.0% | 160424 | 13   | 0.0% | 0.0% |
| 100181 | 3    | 0.0% | 0.0% | 160425 | 8    | 0.0% | 0.0% |
| 100191 | 82   | 0.0% | 0.0% | 160427 | 1    | 0.0% | 0.0% |
| 100192 | 11   | 0.0% | 0.0% | 160431 | 1    | 0.0% | 0.0% |
| 110100 | 51   | 0.0% | 0.0% | 160432 | 1    | 0.0% | 0.0% |
| 110111 | 6271 | 0.9% | 0.9% | 160433 | 3    | 0.0% | 0.0% |
| 110121 | 496  | 0.1% | 0.1% | 160441 | 5    | 0.0% | 0.0% |
| 110122 | 43   | 0.0% | 0.0% | 160442 | 4    | 0.0% | 0.0% |
| 110131 | 971  | 0.1% | 0.1% | 160451 | 2    | 0.0% | 0.0% |
| 110132 | 72   | 0.0% | 0.0% | 160452 | 1    | 0.0% | 0.0% |
| 110141 | 114  | 0.0% | 0.0% | 160503 | 1    | 0.0% | 0.0% |
| 110200 | 9    | 0.0% | 0.0% | 160512 | 4    | 0.0% | 0.0% |
| 110211 | 832  | 0.1% | 0.1% | 160513 | 1389 | 0.2% | 0.2% |
| 110212 | 155  | 0.0% | 0.0% | 160514 | 1040 | 0.1% | 0.1% |
| 110213 | 37   | 0.0% | 0.0% | 160515 | 517  | 0.1% | 0.1% |
| 110221 | 21   | 0.0% | 0.0% | 160516 | 197  | 0.0% | 0.0% |
| 110231 | 317  | 0.0% | 0.0% | 160517 | 54   | 0.0% | 0.0% |
| 110232 | 76   | 0.0% | 0.0% | 160518 | 5    | 0.0% | 0.0% |
| 110241 | 983  | 0.1% | 0.1% | 160519 | 4    | 0.0% | 0.0% |
| 110242 | 84   | 0.0% | 0.0% | 160521 | 1    | 0.0% | 0.0% |
| 110251 | 21   | 0.0% | 0.0% | 160522 | 2    | 0.0% | 0.0% |
| 110261 | 12   | 0.0% | 0.0% | 160531 | 1    | 0.0% | 0.0% |
| 110271 | 1    | 0.0% | 0.0% | 160532 | 1    | 0.0% | 0.0% |
| 110300 | 6    | 0.0% | 0.0% | 160541 | 20   | 0.0% | 0.0% |
| 110311 | 568  | 0.1% | 0.1% | 160600 | 3    | 0.0% | 0.0% |
| 110312 | 50   | 0.0% | 0.0% | 160621 | 9    | 0.0% | 0.0% |
| 110313 | 11   | 0.0% | 0.0% | 160622 | 9    | 0.0% | 0.0% |
| 110321 | 1    | 0.0% | 0.0% | 160623 | 6    | 0.0% | 0.0% |
| 110400 | 6    | 0.0% | 0.0% | 160624 | 3    | 0.0% | 0.0% |
| 110500 | 2    | 0.0% | 0.0% | 160631 | 10   | 0.0% | 0.0% |
| 119900 | 27   | 0.0% | 0.0% | 160632 | 4    | 0.0% | 0.0% |
| 120111 | 2    | 0.0% | 0.0% | 160633 | 1    | 0.0% | 0.0% |
| 120211 | 10   | 0.0% | 0.0% | 160700 | 4    | 0.0% | 0.0% |
| 120411 | 272  | 0.0% | 0.1% | 160900 | 11   | 0.0% | 0.0% |
| 120412 | 83   | 0.0% | 0.0% | 160902 | 10   | 0.0% | 0.0% |
| 120413 | 26   | 0.0% | 0.0% | 160903 | 4718 | 0.7% | 0.7% |
| 120414 | 23   | 0.0% | 0.0% | 160904 | 4032 | 0.6% | 0.5% |
| 120415 | 11   | 0.0% | 0.0% | 160905 | 2071 | 0.3% | 0.2% |
| 120421 | 1    | 0.0% | 0.0% | 160906 | 1007 | 0.1% | 0.1% |
| 120422 | 2    | 0.0% | 0.0% | 160907 | 415  | 0.1% | 0.0% |
| 120511 | 2    | 0.0% | 0.0% | 160908 | 7    | 0.0% | 0.0% |
| 120521 | 4    | 0.0% | 0.0% | 160909 | 23   | 0.0% | 0.0% |
| 120531 | 2    | 0.0% | 0.0% | 160910 | 11   | 0.0% | 0.0% |
| 120532 | 1    | 0.0% | 0.0% | 160913 | 162  | 0.0% | 0.0% |
| 129900 | 1    | 0.0% | 0.0% | 160914 | 104  | 0.0% | 0.0% |
| 130100 | 3    | 0.0% | 0.0% | 160915 | 69   | 0.0% | 0.0% |
| 130300 | 22   | 0.0% | 0.0% | 160916 | 24   | 0.0% | 0.0% |
| 130400 | 2    | 0.0% | 0.0% | 160917 | 6    | 0.0% | 0.0% |
| 131000 | 5    | 0.0% | 0.0% | 160920 | 1057 | 0.1% | 0.1% |
| 131100 | 21   | 0.0% | 0.0% | 160921 | 843  | 0.1% | 0.1% |
| 131200 | 6    | 0.0% | 0.0% | 160922 | 353  | 0.0% | 0.0% |
| 131300 | 1    | 0.0% | 0.0% | 160923 | 138  | 0.0% | 0.0% |

|        |        |       |      |      |        |        |       |      |      |
|--------|--------|-------|------|------|--------|--------|-------|------|------|
| 160924 | 160924 | 110   | 0.0% | 0.0% | 200181 | 200181 | 1     | 0.0% | 0.0% |
| 160925 | 160925 | 2     | 0.0% | 0.0% | 200182 | 200182 | 24    | 0.0% | 0.0% |
| 160926 | 160926 | 4     | 0.0% | 0.0% | 200183 | 200183 | 2459  | 0.3% | 0.4% |
| 160927 | 160927 | 2     | 0.0% | 0.0% | 200184 | 200184 | 538   | 0.1% | 0.1% |
| 160931 | 160931 | 5     | 0.0% | 0.0% | 200185 | 200185 | 253   | 0.0% | 0.0% |
| 160932 | 160932 | 19    | 0.0% | 0.0% | 200186 | 200186 | 34    | 0.0% | 0.0% |
| 160933 | 160933 | 12284 | 1.7% | 1.7% | 200187 | 200187 | 172   | 0.0% | 0.0% |
| 160934 | 160934 | 9264  | 1.3% | 1.2% | 200188 | 200188 | 410   | 0.1% | 0.1% |
| 160935 | 160935 | 3603  | 0.5% | 0.4% | 200191 | 200191 | 183   | 0.0% | 0.0% |
| 160936 | 160936 | 1301  | 0.2% | 0.1% | 200192 | 200192 | 23    | 0.0% | 0.0% |
| 160937 | 160937 | 619   | 0.1% | 0.1% | 200193 | 200193 | 175   | 0.0% | 0.0% |
| 160938 | 160938 | 10    | 0.0% | 0.0% | 200194 | 200194 | 29    | 0.0% | 0.0% |
| 160939 | 160939 | 14    | 0.0% | 0.0% | 200200 | 200200 | 36    | 0.0% | 0.0% |
| 160941 | 160941 | 14    | 0.0% | 0.0% | 200211 | 200211 | 345   | 0.0% | 0.1% |
| 160942 | 160942 | 10    | 0.0% | 0.0% | 200221 | 200221 | 107   | 0.0% | 0.0% |
| 161000 | 161000 | 6     | 0.0% | 0.0% | 200231 | 200231 | 33    | 0.0% | 0.0% |
| 161111 | 161111 | 66    | 0.0% | 0.0% | 200251 | 200251 | 140   | 0.0% | 0.0% |
| 161112 | 161112 | 48    | 0.0% | 0.0% | 200252 | 200252 | 139   | 0.0% | 0.0% |
| 161113 | 161113 | 128   | 0.0% | 0.0% | 200261 | 200261 | 72    | 0.0% | 0.0% |
| 161114 | 161114 | 35    | 0.0% | 0.0% | 200262 | 200262 | 4     | 0.0% | 0.0% |
| 161115 | 161115 | 6     | 0.0% | 0.0% | 200300 | 200300 | 2     | 0.0% | 0.0% |
| 161116 | 161116 | 7     | 0.0% | 0.0% | 200311 | 200311 | 43    | 0.0% | 0.0% |
| 161117 | 161117 | 1     | 0.0% | 0.0% | 200312 | 200312 | 1     | 0.0% | 0.0% |
| 161211 | 161211 | 1     | 0.0% | 0.0% | 200331 | 200331 | 29    | 0.0% | 0.0% |
| 161311 | 161311 | 224   | 0.0% | 0.0% | 200341 | 200341 | 3     | 0.0% | 0.0% |
| 161312 | 161312 | 186   | 0.0% | 0.0% | 200351 | 200351 | 2     | 0.0% | 0.0% |
| 161313 | 161313 | 73    | 0.0% | 0.0% | 200371 | 200371 | 88    | 0.0% | 0.0% |
| 161314 | 161314 | 11    | 0.0% | 0.0% | 200381 | 200381 | 1     | 0.0% | 0.0% |
| 161315 | 161315 | 10    | 0.0% | 0.0% | 200391 | 200391 | 13    | 0.0% | 0.0% |
| 161341 | 161341 | 3     | 0.0% | 0.0% | 200400 | 200400 | 1     | 0.0% | 0.0% |
| 161342 | 161342 | 1     | 0.0% | 0.0% | 200411 | 200411 | 294   | 0.0% | 0.0% |
| 161343 | 161343 | 4     | 0.0% | 0.0% | 200412 | 200412 | 40    | 0.0% | 0.0% |
| 161351 | 161351 | 12    | 0.0% | 0.0% | 200413 | 200413 | 29    | 0.0% | 0.0% |
| 161352 | 161352 | 9     | 0.0% | 0.0% | 200421 | 200421 | 57    | 0.0% | 0.0% |
| 161353 | 161353 | 1     | 0.0% | 0.0% | 200431 | 200431 | 54    | 0.0% | 0.0% |
| 161361 | 161361 | 1     | 0.0% | 0.0% | 200441 | 200441 | 20    | 0.0% | 0.0% |
| 161362 | 161362 | 1     | 0.0% | 0.0% | 200451 | 200451 | 3     | 0.0% | 0.0% |
| 161363 | 161363 | 2     | 0.0% | 0.0% | 200471 | 200471 | 11    | 0.0% | 0.0% |
| 169900 | 169900 | 24    | 0.0% | 0.0% | 200481 | 200481 | 40    | 0.0% | 0.0% |
| 170100 | 170100 | 5     | 0.0% | 0.0% | 200511 | 200511 | 441   | 0.1% | 0.1% |
| 170111 | 170111 | 18    | 0.0% | 0.0% | 200512 | 200512 | 31    | 0.0% | 0.0% |
| 170112 | 170112 | 2     | 0.0% | 0.0% | 200513 | 200513 | 10    | 0.0% | 0.0% |
| 170121 | 170121 | 1     | 0.0% | 0.0% | 200521 | 200521 | 47    | 0.0% | 0.0% |
| 170131 | 170131 | 1     | 0.0% | 0.0% | 200531 | 200531 | 17    | 0.0% | 0.0% |
| 170132 | 170132 | 1     | 0.0% | 0.0% | 200551 | 200551 | 5     | 0.0% | 0.0% |
| 170211 | 170211 | 385   | 0.1% | 0.0% | 200631 | 200631 | 1     | 0.0% | 0.0% |
| 170221 | 170221 | 1     | 0.0% | 0.0% | 200643 | 200643 | 1     | 0.0% | 0.0% |
| 170300 | 170300 | 2     | 0.0% | 0.0% | 200651 | 200651 | 4     | 0.0% | 0.0% |
| 170311 | 170311 | 29    | 0.0% | 0.0% | 209900 | 209900 | 11    | 0.0% | 0.0% |
| 170312 | 170312 | 4     | 0.0% | 0.0% | 210100 | 210100 | 20    | 0.0% | 0.0% |
| 170321 | 170321 | 19    | 0.0% | 0.0% | 210102 | 210102 | 4     | 0.0% | 0.0% |
| 170322 | 170322 | 1     | 0.0% | 0.0% | 210103 | 210103 | 1649  | 0.2% | 0.3% |
| 170411 | 170411 | 1     | 0.0% | 0.0% | 210104 | 210104 | 226   | 0.0% | 0.0% |
| 170421 | 170421 | 10    | 0.0% | 0.0% | 210105 | 210105 | 53    | 0.0% | 0.0% |
| 170431 | 170431 | 16    | 0.0% | 0.0% | 210106 | 210106 | 45    | 0.0% | 0.0% |
| 170500 | 170500 | 2     | 0.0% | 0.0% | 210107 | 210107 | 450   | 0.1% | 0.1% |
| 170511 | 170511 | 348   | 0.0% | 0.0% | 210108 | 210108 | 130   | 0.0% | 0.0% |
| 170521 | 170521 | 84    | 0.0% | 0.0% | 210109 | 210109 | 271   | 0.0% | 0.0% |
| 170531 | 170531 | 11    | 0.0% | 0.0% | 210110 | 210110 | 26    | 0.0% | 0.0% |
| 170541 | 170541 | 4     | 0.0% | 0.0% | 210111 | 210111 | 132   | 0.0% | 0.0% |
| 170551 | 170551 | 18    | 0.0% | 0.0% | 210112 | 210112 | 17    | 0.0% | 0.0% |
| 170561 | 170561 | 80    | 0.0% | 0.0% | 210113 | 210113 | 282   | 0.0% | 0.0% |
| 170581 | 170581 | 1     | 0.0% | 0.0% | 210114 | 210114 | 48    | 0.0% | 0.0% |
| 170591 | 170591 | 4     | 0.0% | 0.0% | 210115 | 210115 | 411   | 0.1% | 0.1% |
| 170592 | 170592 | 51    | 0.0% | 0.0% | 210116 | 210116 | 119   | 0.0% | 0.0% |
| 170593 | 170593 | 9     | 0.0% | 0.0% | 210117 | 210117 | 36    | 0.0% | 0.0% |
| 170600 | 170600 | 2     | 0.0% | 0.0% | 210118 | 210118 | 14    | 0.0% | 0.0% |
| 170611 | 170611 | 1     | 0.0% | 0.0% | 210119 | 210119 | 141   | 0.0% | 0.0% |
| 170621 | 170621 | 16    | 0.0% | 0.0% | 210120 | 210120 | 8     | 0.0% | 0.0% |
| 170631 | 170631 | 47    | 0.0% | 0.0% | 210121 | 210121 | 231   | 0.0% | 0.0% |
| 170641 | 170641 | 36    | 0.0% | 0.0% | 210122 | 210122 | 80    | 0.0% | 0.0% |
| 170651 | 170651 | 4     | 0.0% | 0.0% | 210123 | 210123 | 45    | 0.0% | 0.0% |
| 179900 | 179900 | 2     | 0.0% | 0.0% | 210124 | 210124 | 18    | 0.0% | 0.0% |
| 181100 | 181100 | 11    | 0.0% | 0.0% | 210126 | 210126 | 31    | 0.0% | 0.0% |
| 181400 | 181400 | 1     | 0.0% | 0.0% | 210130 | 210130 | 4     | 0.0% | 0.0% |
| 181600 | 181600 | 1     | 0.0% | 0.0% | 210131 | 210131 | 2     | 0.0% | 0.0% |
| 181800 | 181800 | 5     | 0.0% | 0.0% | 210140 | 210140 | 8     | 0.0% | 0.0% |
| 181801 | 181801 | 19    | 0.0% | 0.0% | 210141 | 210141 | 2     | 0.0% | 0.0% |
| 189900 | 189900 | 16    | 0.0% | 0.0% | 210150 | 210150 | 13    | 0.0% | 0.0% |
| 190100 | 190100 | 32    | 0.0% | 0.0% | 210151 | 210151 | 3     | 0.0% | 0.0% |
| 190200 | 190200 | 3     | 0.0% | 0.0% | 220100 | 220100 | 11    | 0.0% | 0.0% |
| 190400 | 190400 | 3     | 0.0% | 0.0% | 220111 | 220111 | 260   | 0.0% | 0.0% |
| 190500 | 190500 | 16    | 0.0% | 0.0% | 220121 | 220121 | 851   | 0.1% | 0.1% |
| 190600 | 190600 | 17    | 0.0% | 0.0% | 220131 | 220131 | 165   | 0.0% | 0.0% |
| 190700 | 190700 | 6     | 0.0% | 0.0% | 230100 | 230100 | 108   | 0.0% | 0.0% |
| 190900 | 190900 | 7     | 0.0% | 0.0% | 230101 | 230101 | 1     | 0.0% | 0.0% |
| 199900 | 199900 | 5     | 0.0% | 0.0% | 230103 | 230103 | 4     | 0.0% | 0.0% |
| 200100 | 200100 | 2     | 0.0% | 0.0% | 230104 | 230104 | 10    | 0.0% | 0.0% |
| 200111 | 200111 | 7     | 0.0% | 0.0% | 230106 | 230106 | 2055  | 0.3% | 0.3% |
| 200112 | 200112 | 16    | 0.0% | 0.0% | 230107 | 230107 | 2284  | 3.2% | 3.3% |
| 200113 | 200113 | 2554  | 0.4% | 0.4% | 230108 | 230108 | 2839  | 0.4% | 0.4% |
| 200114 | 200114 | 359   | 0.1% | 0.1% | 230109 | 230109 | 1659  | 0.2% | 0.2% |
| 200115 | 200115 | 74    | 0.0% | 0.0% | 230110 | 230110 | 2082  | 2.9% | 3.0% |
| 200116 | 200116 | 45    | 0.0% | 0.0% | 230111 | 230111 | 3425  | 0.5% | 0.5% |
| 200117 | 200117 | 1909  | 0.3% | 0.3% | 230112 | 230112 | 1154  | 0.2% | 0.2% |
| 200118 | 200118 | 14    | 0.0% | 0.0% | 230113 | 230113 | 1595  | 2.2% | 2.3% |
| 200121 | 200121 | 4     | 0.0% | 0.0% | 230114 | 230114 | 306   | 0.4% | 0.4% |
| 200122 | 200122 | 1235  | 0.2% | 0.2% | 230115 | 230115 | 76    | 0.1% | 0.1% |
| 200123 | 200123 | 123   | 0.0% | 0.0% | 230116 | 230116 | 11960 | 1.7% | 1.7% |
| 200124 | 200124 | 94    | 0.0% | 0.0% | 230117 | 230117 | 3561  | 0.5% | 0.5% |
| 200125 | 200125 | 93    | 0.0% | 0.0% | 230118 | 230118 | 1038  | 0.1% | 0.2% |
| 200126 | 200126 | 7     | 0.0% | 0.0% | 230119 | 230119 | 11    | 0.0% | 0.0% |
| 200131 | 200131 | 1     | 0.0% | 0.0% | 230120 | 230120 | 15    | 0.0% | 0.0% |
| 200133 | 200133 | 797   | 0.1% | 0.1% | 230121 | 230121 | 26    | 0.0% | 0.0% |
| 200134 | 200134 | 127   | 0.0% | 0.0% | 230122 | 230122 | 610   | 0.1% | 0.1% |
| 200135 | 200135 | 49    | 0.0% | 0.0% | 230123 | 230123 | 5     | 0.0% | 0.0% |
| 200136 | 200136 | 7     | 0.0% | 0.0% | 230124 | 230124 | 26    | 0.0% | 0.0% |
| 200137 | 200137 | 12    | 0.0% | 0.0% | 230125 | 230125 | 164   | 0.0% | 0.0% |
| 200141 | 200141 | 1223  | 0.2% | 0.2% | 230126 | 230126 | 297   | 0.0% | 0.0% |
| 200142 | 200142 | 16    | 0.0% | 0.0% | 230127 | 230127 | 489   | 0.1% | 0.1% |
| 200151 | 200151 | 155   | 0.0% | 0.0% | 230128 | 230128 | 85    | 0.0% | 0.0% |
| 200152 | 200152 | 15    | 0.0% | 0.0% | 230129 | 230129 | 12    | 0.0% | 0.0% |
| 200153 | 200153 | 4     | 0.0% | 0.0% | 230130 | 230130 | 256   | 0.0% | 0.0% |
| 200154 | 200154 | 7     | 0.0% | 0.0% | 230131 | 230131 | 394   | 0.1% | 0.1% |
| 200161 | 200161 | 71    | 0.0% | 0.0% | 230132 | 230132 | 60    | 0.0% | 0.0% |
| 200162 | 200162 | 3     | 0.0% | 0.0% | 230133 | 230133 | 131   | 0.0% | 0.0% |
| 200171 | 200171 | 1372  | 0.2% | 0.2% | 230134 | 230134 | 4     | 0.0% | 0.0% |
| 200172 | 200172 | 181   | 0.0% | 0.0% | 230135 | 230135 | 48    | 0.0% | 0.0% |
| 200173 | 200173 | 821   | 0.1% | 0.1% | 230136 | 230136 | 37    | 0.0% | 0.0% |

|        |        |      |      |      |        |        |       |      |      |
|--------|--------|------|------|------|--------|--------|-------|------|------|
| 230137 | 230137 | 75   | 0.0% | 0.0% | 260752 | 260752 | 75    | 0.0% | 0.0% |
| 230138 | 230138 | 241  | 0.0% | 0.0% | 260761 | 260761 | 7     | 0.0% | 0.0% |
| 230139 | 230139 | 555  | 0.1% | 0.0% | 269900 | 269900 | 126   | 0.0% | 0.0% |
| 230140 | 230140 | 36   | 0.0% | 0.0% | 270100 | 270100 | 130   | 0.0% | 0.0% |
| 230141 | 230141 | 40   | 0.0% | 0.0% | 270101 | 270101 | 15    | 0.0% | 0.0% |
| 230142 | 230142 | 33   | 0.0% | 0.0% | 270103 | 270103 | 23    | 0.0% | 0.0% |
| 230143 | 230143 | 22   | 0.0% | 0.0% | 270104 | 270104 | 13    | 0.0% | 0.0% |
| 230144 | 230144 | 14   | 0.0% | 0.0% | 270106 | 270106 | 5024  | 0.7% | 0.9% |
| 230145 | 230145 | 15   | 0.0% | 0.0% | 270107 | 270107 | 1914  | 0.3% | 0.4% |
| 230146 | 230146 | 49   | 0.0% | 0.0% | 270108 | 270108 | 31    | 0.0% | 0.0% |
| 230147 | 230147 | 23   | 0.0% | 0.0% | 270109 | 270109 | 59    | 0.0% | 0.0% |
| 230148 | 230148 | 8    | 0.0% | 0.0% | 270110 | 270110 | 588   | 0.1% | 0.1% |
| 230149 | 230149 | 15   | 0.0% | 0.0% | 270111 | 270111 | 165   | 0.0% | 0.0% |
| 230150 | 230150 | 11   | 0.0% | 0.0% | 270112 | 270112 | 208   | 0.0% | 0.0% |
| 230151 | 230151 | 35   | 0.0% | 0.0% | 270113 | 270113 | 18    | 0.0% | 0.0% |
| 230152 | 230152 | 6    | 0.0% | 0.0% | 270114 | 270114 | 2886  | 0.4% | 0.4% |
| 230153 | 230153 | 92   | 0.0% | 0.0% | 270300 | 270300 | 60    | 0.0% | 0.0% |
| 230154 | 230154 | 450  | 0.1% | 0.1% | 270400 | 270400 | 103   | 0.0% | 0.0% |
| 230155 | 230155 | 30   | 0.0% | 0.0% | 270401 | 270401 | 6881  | 1.0% | 1.1% |
| 230156 | 230156 | 142  | 0.0% | 0.0% | 270402 | 270402 | 1277  | 0.2% | 0.2% |
| 230200 | 230200 | 1    | 0.0% | 0.0% | 270403 | 270403 | 930   | 0.1% | 0.1% |
| 230211 | 230211 | 112  | 0.0% | 0.0% | 270404 | 270404 | 20128 | 2.8% | 2.8% |
| 230300 | 230300 | 42   | 0.0% | 0.0% | 270405 | 270405 | 13443 | 1.9% | 1.8% |
| 230311 | 230311 | 292  | 0.0% | 0.0% | 270406 | 270406 | 1036  | 0.1% | 0.1% |
| 230321 | 230321 | 15   | 0.0% | 0.0% | 270408 | 270408 | 15675 | 2.2% | 2.1% |
| 230400 | 230400 | 45   | 0.0% | 0.0% | 270409 | 270409 | 1244  | 0.2% | 0.2% |
| 230401 | 230401 | 2694 | 0.4% | 0.4% | 270410 | 270410 | 1373  | 0.2% | 0.2% |
| 230402 | 230402 | 1070 | 0.1% | 0.0% | 270411 | 270411 | 2095  | 0.3% | 0.2% |
| 230403 | 230403 | 272  | 0.0% | 0.0% | 270412 | 270412 | 585   | 0.1% | 0.1% |
| 230404 | 230404 | 127  | 0.0% | 0.0% | 270413 | 270413 | 98    | 0.0% | 0.0% |
| 230405 | 230405 | 25   | 0.0% | 0.0% | 270414 | 270414 | 2383  | 0.3% | 0.3% |
| 230406 | 230406 | 1    | 0.0% | 0.0% | 270415 | 270415 | 247   | 0.0% | 0.0% |
| 230407 | 230407 | 3    | 0.0% | 0.0% | 270416 | 270416 | 4320  | 0.6% | 0.5% |
| 230408 | 230408 | 73   | 0.0% | 0.0% | 270417 | 270417 | 72    | 0.0% | 0.0% |
| 230409 | 230409 | 132  | 0.0% | 0.0% | 270418 | 270418 | 93    | 0.0% | 0.0% |
| 230410 | 230410 | 133  | 0.0% | 0.0% | 270419 | 270419 | 1184  | 0.2% | 0.1% |
| 230411 | 230411 | 363  | 0.1% | 0.0% | 270420 | 270420 | 1835  | 0.3% | 0.2% |
| 230412 | 230412 | 41   | 0.0% | 0.0% | 270421 | 270421 | 1669  | 0.2% | 0.2% |
| 230413 | 230413 | 1    | 0.0% | 0.0% | 270422 | 270422 | 1049  | 0.1% | 0.1% |
| 230414 | 230414 | 140  | 0.0% | 0.0% | 270423 | 270423 | 896   | 0.1% | 0.1% |
| 230415 | 230415 | 8    | 0.0% | 0.0% | 270424 | 270424 | 355   | 0.0% | 0.0% |
| 230500 | 230500 | 11   | 0.0% | 0.0% | 270500 | 270500 | 1     | 0.0% | 0.0% |
| 230511 | 230511 | 877  | 0.1% | 0.1% | 270511 | 270511 | 179   | 0.0% | 0.0% |
| 230512 | 230512 | 205  | 0.0% | 0.0% | 270521 | 270521 | 274   | 0.0% | 0.0% |
| 230513 | 230513 | 233  | 0.0% | 0.0% | 270531 | 270531 | 3004  | 0.4% | 0.5% |
| 230521 | 230521 | 42   | 0.0% | 0.0% | 270601 | 270601 | 835   | 0.1% | 0.1% |
| 230611 | 230611 | 35   | 0.0% | 0.0% | 270602 | 270602 | 199   | 0.0% | 0.0% |
| 230700 | 230700 | 2847 | 0.4% | 0.4% | 270604 | 270604 | 124   | 0.0% | 0.0% |
| 230711 | 230711 | 45   | 0.0% | 0.0% | 279900 | 279900 | 272   | 0.0% | 0.1% |
| 230721 | 230721 | 20   | 0.0% | 0.0% | 280100 | 280100 | 6     | 0.0% | 0.0% |
| 230731 | 230731 | 6    | 0.0% | 0.0% | 280111 | 280111 | 102   | 0.0% | 0.0% |
| 230751 | 230751 | 21   | 0.0% | 0.0% | 280112 | 280112 | 65    | 0.0% | 0.0% |
| 230761 | 230761 | 27   | 0.0% | 0.0% | 280113 | 280113 | 33    | 0.0% | 0.0% |
| 230771 | 230771 | 2    | 0.0% | 0.0% | 280114 | 280114 | 13    | 0.0% | 0.0% |
| 230781 | 230781 | 71   | 0.0% | 0.0% | 280300 | 280300 | 3     | 0.0% | 0.0% |
| 230800 | 230800 | 1389 | 0.2% | 0.2% | 280311 | 280311 | 448   | 0.1% | 0.1% |
| 230811 | 230811 | 272  | 0.0% | 0.0% | 280312 | 280312 | 221   | 0.0% | 0.0% |
| 230821 | 230821 | 46   | 0.0% | 0.0% | 280313 | 280313 | 117   | 0.0% | 0.0% |
| 230831 | 230831 | 6    | 0.0% | 0.0% | 280314 | 280314 | 86    | 0.0% | 0.0% |
| 230851 | 230851 | 6    | 0.0% | 0.0% | 280400 | 280400 | 5     | 0.0% | 0.0% |
| 230861 | 230861 | 26   | 0.0% | 0.0% | 280411 | 280411 | 77    | 0.0% | 0.0% |
| 230871 | 230871 | 14   | 0.0% | 0.0% | 280412 | 280412 | 41    | 0.0% | 0.0% |
| 230900 | 230900 | 14   | 0.0% | 0.0% | 280413 | 280413 | 29    | 0.0% | 0.0% |
| 231000 | 231000 | 1497 | 0.2% | 0.2% | 280414 | 280414 | 19    | 0.0% | 0.0% |
| 231011 | 231011 | 2386 | 0.3% | 0.3% | 280421 | 280421 | 11    | 0.0% | 0.0% |
| 231021 | 231021 | 600  | 0.1% | 0.1% | 280422 | 280422 | 3     | 0.0% | 0.0% |
| 231022 | 231022 | 62   | 0.0% | 0.0% | 280423 | 280423 | 1     | 0.0% | 0.0% |
| 231023 | 231023 | 47   | 0.0% | 0.0% | 289900 | 289900 | 32    | 0.0% | 0.0% |
| 231031 | 231031 | 25   | 0.0% | 0.0% | 290100 | 290100 | 1     | 0.0% | 0.0% |
| 231100 | 231100 | 25   | 0.0% | 0.0% | 300100 | 300100 | 76    | 0.0% | 0.0% |
| 231111 | 231111 | 2253 | 0.3% | 0.4% | 300111 | 300111 | 5176  | 0.7% | 0.8% |
| 231211 | 231211 | 64   | 0.0% | 0.1% | 300112 | 300112 | 34    | 0.0% | 0.0% |
| 231212 | 231212 | 178  | 0.0% | 0.0% | 300121 | 300121 | 165   | 0.0% | 0.0% |
| 231213 | 231213 | 48   | 0.0% | 0.0% | 300131 | 300131 | 28    | 0.0% | 0.0% |
| 231214 | 231214 | 72   | 0.0% | 0.0% | 300300 | 300300 | 2     | 0.0% | 0.0% |
| 231215 | 231215 | 550  | 0.1% | 0.1% | 300311 | 300311 | 25    | 0.0% | 0.0% |
| 231216 | 231216 | 922  | 0.1% | 0.1% | 300400 | 300400 | 14    | 0.0% | 0.0% |
| 231311 | 231311 | 583  | 0.1% | 0.1% | 300411 | 300411 | 833   | 0.1% | 0.1% |
| 231312 | 231312 | 471  | 0.1% | 0.1% | 300421 | 300421 | 98    | 0.0% | 0.0% |
| 231313 | 231313 | 382  | 0.1% | 0.0% | 300431 | 300431 | 181   | 0.0% | 0.0% |
| 231314 | 231314 | 67   | 0.0% | 0.0% | 300441 | 300441 | 3     | 0.0% | 0.0% |
| 239900 | 239900 | 3    | 0.0% | 0.0% | 300451 | 300451 | 3     | 0.0% | 0.0% |
| 240100 | 240100 | 28   | 0.0% | 0.0% | 300500 | 300500 | 3     | 0.0% | 0.0% |
| 240111 | 240111 | 12   | 0.0% | 0.0% | 300611 | 300611 | 146   | 0.0% | 0.0% |
| 240121 | 240121 | 542  | 0.1% | 0.1% | 300621 | 300621 | 968   | 0.1% | 0.1% |
| 240131 | 240131 | 171  | 0.0% | 0.0% | 300631 | 300631 | 43    | 0.0% | 0.0% |
| 240141 | 240141 | 1    | 0.0% | 0.0% | 300700 | 300700 | 7     | 0.0% | 0.0% |
| 250100 | 250100 | 235  | 0.0% | 0.0% | 300711 | 300711 | 15    | 0.0% | 0.0% |
| 250111 | 250111 | 238  | 0.0% | 0.0% | 300721 | 300721 | 27    | 0.0% | 0.0% |
| 250311 | 250311 | 2    | 0.0% | 0.0% | 309900 | 309900 | 9     | 0.0% | 0.0% |
| 250400 | 250400 | 3    | 0.0% | 0.0% | 310100 | 310100 | 1     | 0.0% | 0.0% |
| 250500 | 250500 | 30   | 0.0% | 0.0% | 310111 | 310111 | 7     | 0.0% | 0.0% |
| 260100 | 260100 | 15   | 0.0% | 0.0% | 310121 | 310121 | 4     | 0.0% | 0.0% |
| 260111 | 260111 | 3219 | 0.5% | 0.6% | 310200 | 310200 | 5     | 0.0% | 0.0% |
| 260121 | 260121 | 44   | 0.0% | 0.0% | 310300 | 310300 | 2     | 0.0% | 0.0% |
| 260122 | 260122 | 2184 | 3.0% | 2.9% | 320100 | 320100 | 40    | 0.0% | 0.0% |
| 260131 | 260131 | 1610 | 0.2% | 0.2% | 320101 | 320101 | 1     | 0.0% | 0.0% |
| 260132 | 260132 | 2093 | 0.3% | 0.2% | 320102 | 320102 | 1304  | 0.2% | 0.2% |
| 260141 | 260141 | 1453 | 0.2% | 0.2% | 320103 | 320103 | 1405  | 0.2% | 0.2% |
| 260142 | 260142 | 94   | 0.0% | 0.0% | 320104 | 320104 | 1463  | 0.2% | 0.2% |
| 260151 | 260151 | 41   | 0.0% | 0.0% | 320105 | 320105 | 91    | 0.0% | 0.0% |
| 260161 | 260161 | 4    | 0.0% | 0.0% | 320106 | 320106 | 1610  | 0.2% | 0.3% |
| 260171 | 260171 | 67   | 0.0% | 0.0% | 320107 | 320107 | 200   | 0.0% | 0.0% |
| 260181 | 260181 | 10   | 0.0% | 0.0% | 320111 | 320111 | 11    | 0.0% | 0.0% |
| 260211 | 260211 | 1    | 0.0% | 0.0% | 320200 | 320200 | 101   | 0.0% | 0.0% |
| 260311 | 260311 | 60   | 0.0% | 0.0% | 320201 | 320201 | 358   | 0.1% | 0.1% |
| 260411 | 260411 | 45   | 0.0% | 0.0% | 320211 | 320211 | 733   | 0.1% | 0.1% |
| 260511 | 260511 | 7    | 0.0% | 0.0% | 320221 | 320221 | 573   | 0.1% | 0.1% |
| 260600 | 260600 | 483  | 0.1% | 0.1% | 330100 | 330100 | 47    | 0.0% | 0.0% |
| 260611 | 260611 | 623  | 0.1% | 0.1% | 330111 | 330111 | 4784  | 0.7% | 0.7% |
| 260621 | 260621 | 18   | 0.0% | 0.0% | 330121 | 330121 | 328   | 0.0% | 0.1% |
| 260622 | 260622 | 117  | 0.0% | 0.0% | 330131 | 330131 | 244   | 0.0% | 0.0% |
| 260631 | 260631 | 2    | 0.0% | 0.0% | 330141 | 330141 | 263   | 0.0% | 0.0% |
| 260700 | 260700 | 210  | 0.0% | 0.0% | 330151 | 330151 | 692   | 0.1% | 0.1% |
| 260711 | 260711 | 19   | 0.0% | 0.0% | 340100 | 340100 | 18    | 0.0% | 0.0% |
| 260721 | 260721 | 2    | 0.0% | 0.0% | 340111 | 340111 | 3     | 0.0% | 0.0% |
| 260731 | 260731 | 33   | 0.0% | 0.0% | 340112 | 340112 | 15    | 0.0% | 0.0% |
| 260741 | 260741 | 1811 | 0.3% | 0.2% | 340113 | 340113 | 21654 | 3.0% | 3.2% |

|        |        |       |      |      |        |        |       |      |      |
|--------|--------|-------|------|------|--------|--------|-------|------|------|
| 340114 | 340114 | 14104 | 2.0% | 2.0% | 421100 | 421100 | 2     | 0.0% | 0.0% |
| 340115 | 340115 | 7848  | 1.1% | 1.1% | 421411 | 421411 | 1     | 0.0% | 0.0% |
| 340116 | 340116 | 6206  | 0.9% | 0.8% | 421600 | 421600 | 6     | 0.0% | 0.0% |
| 340121 | 340121 | 106   | 0.0% | 0.0% | 421611 | 421611 | 208   | 0.0% | 0.0% |
| 340122 | 340122 | 156   | 0.0% | 0.0% | 429900 | 429900 | 7     | 0.0% | 0.0% |
| 340129 | 340129 | 17    | 0.0% | 0.0% | 430100 | 430100 | 5     | 0.0% | 0.0% |
| 340131 | 340131 | 3     | 0.0% | 0.0% | 430111 | 430111 | 230   | 0.0% | 0.0% |
| 340132 | 340132 | 9     | 0.0% | 0.0% | 430121 | 430121 | 65    | 0.0% | 0.0% |
| 340133 | 340133 | 7560  | 1.1% | 1.1% | 430211 | 430211 | 4     | 0.0% | 0.0% |
| 340134 | 340134 | 3828  | 0.5% | 0.6% | 430221 | 430221 | 2     | 0.0% | 0.0% |
| 340135 | 340135 | 1298  | 0.2% | 0.2% | 430311 | 430311 | 8     | 0.0% | 0.0% |
| 340136 | 340136 | 699   | 0.1% | 0.1% | 439900 | 439900 | 1     | 0.0% | 0.0% |
| 340137 | 340137 | 189   | 0.0% | 0.0% | 440711 | 440711 | 13    | 0.0% | 0.0% |
| 340138 | 340138 | 71    | 0.0% | 0.0% | 450100 | 450100 | 114   | 0.0% | 0.0% |
| 340141 | 340141 | 107   | 0.0% | 0.0% | 450111 | 450111 | 1746  | 0.2% | 0.3% |
| 340151 | 340151 | 2306  | 0.3% | 0.3% | 450121 | 450121 | 30    | 0.0% | 0.0% |
| 340152 | 340152 | 5614  | 0.8% | 0.8% | 450131 | 450131 | 95    | 0.0% | 0.0% |
| 340161 | 340161 | 211   | 0.0% | 0.0% | 450141 | 450141 | 98    | 0.0% | 0.0% |
| 340171 | 340171 | 98    | 0.0% | 0.0% | 450211 | 450211 | 203   | 0.0% | 0.0% |
| 340181 | 340181 | 285   | 0.0% | 0.0% | 450221 | 450221 | 28    | 0.0% | 0.0% |
| 340191 | 340191 | 138   | 0.0% | 0.0% | 450231 | 450231 | 2     | 0.0% | 0.0% |
| 350100 | 350100 | 13    | 0.0% | 0.0% | 450241 | 450241 | 2     | 0.0% | 0.0% |
| 350111 | 350111 | 115   | 0.0% | 0.0% | 450311 | 450311 | 22    | 0.0% | 0.0% |
| 350121 | 350121 | 323   | 0.0% | 0.0% | 450400 | 450400 | 3     | 0.0% | 0.0% |
| 350131 | 350131 | 410   | 0.1% | 0.1% | 450511 | 450511 | 3     | 0.0% | 0.0% |
| 360100 | 360100 | 8     | 0.0% | 0.0% | 450600 | 450600 | 47    | 0.0% | 0.0% |
| 360111 | 360111 | 1894  | 0.3% | 0.2% | 450601 | 450601 | 5530  | 0.8% | 0.8% |
| 360121 | 360121 | 4863  | 0.7% | 0.6% | 450602 | 450602 | 1697  | 0.2% | 0.2% |
| 360131 | 360131 | 156   | 0.0% | 0.0% | 450603 | 450603 | 620   | 0.1% | 0.1% |
| 360141 | 360141 | 385   | 0.1% | 0.1% | 450606 | 450606 | 5     | 0.0% | 0.0% |
| 360151 | 360151 | 237   | 0.0% | 0.0% | 450607 | 450607 | 1     | 0.0% | 0.0% |
| 360161 | 360161 | 638   | 0.1% | 0.1% | 450608 | 450608 | 34    | 0.0% | 0.0% |
| 360171 | 360171 | 5964  | 0.8% | 0.8% | 450609 | 450609 | 1     | 0.0% | 0.0% |
| 360191 | 360191 | 191   | 0.0% | 0.0% | 450610 | 450610 | 110   | 0.0% | 0.0% |
| 360192 | 360192 | 40    | 0.0% | 0.0% | 450611 | 450611 | 103   | 0.0% | 0.0% |
| 370100 | 370100 | 43    | 0.0% | 0.0% | 450612 | 450612 | 30    | 0.0% | 0.0% |
| 370111 | 370111 | 626   | 0.1% | 0.1% | 450700 | 450700 | 36    | 0.0% | 0.0% |
| 370121 | 370121 | 56    | 0.0% | 0.0% | 450701 | 450701 | 27    | 0.0% | 0.0% |
| 370131 | 370131 | 126   | 0.0% | 0.0% | 450702 | 450702 | 169   | 0.0% | 0.0% |
| 380100 | 380100 | 20    | 0.0% | 0.0% | 450703 | 450703 | 47    | 0.0% | 0.0% |
| 380111 | 380111 | 219   | 0.0% | 0.0% | 450704 | 450704 | 5443  | 0.8% | 0.8% |
| 380121 | 380121 | 255   | 0.0% | 0.0% | 450705 | 450705 | 38    | 0.0% | 0.0% |
| 380131 | 380131 | 130   | 0.0% | 0.0% | 450706 | 450706 | 19    | 0.0% | 0.0% |
| 380151 | 380151 | 75    | 0.0% | 0.0% | 450707 | 450707 | 179   | 0.0% | 0.0% |
| 380200 | 380200 | 491   | 0.1% | 0.1% | 450708 | 450708 | 32    | 0.0% | 0.0% |
| 380201 | 380201 | 576   | 0.1% | 0.1% | 450709 | 450709 | 68    | 0.0% | 0.0% |
| 380202 | 380202 | 338   | 0.0% | 0.0% | 450710 | 450710 | 3     | 0.0% | 0.0% |
| 380203 | 380203 | 1665  | 0.2% | 0.3% | 450800 | 450800 | 224   | 0.0% | 0.0% |
| 380204 | 380204 | 1009  | 0.1% | 0.1% | 450801 | 450801 | 7     | 0.0% | 0.0% |
| 380205 | 380205 | 558   | 0.1% | 0.1% | 450804 | 450804 | 3     | 0.0% | 0.0% |
| 380206 | 380206 | 212   | 0.0% | 0.0% | 450805 | 450805 | 13    | 0.0% | 0.0% |
| 380207 | 380207 | 311   | 0.0% | 0.0% | 450807 | 450807 | 1881  | 0.3% | 0.3% |
| 380208 | 380208 | 7     | 0.0% | 0.0% | 450808 | 450808 | 646   | 0.1% | 0.1% |
| 380209 | 380209 | 99    | 0.0% | 0.0% | 450809 | 450809 | 734   | 0.1% | 0.1% |
| 380210 | 380210 | 21    | 0.0% | 0.0% | 450810 | 450810 | 12278 | 1.7% | 1.7% |
| 380211 | 380211 | 24    | 0.0% | 0.0% | 450811 | 450811 | 5025  | 0.7% | 0.8% |
| 380212 | 380212 | 589   | 0.1% | 0.1% | 450812 | 450812 | 5451  | 0.8% | 0.8% |
| 380213 | 380213 | 55    | 0.0% | 0.0% | 450813 | 450813 | 1025  | 0.1% | 0.1% |
| 380214 | 380214 | 617   | 0.1% | 0.0% | 450814 | 450814 | 1147  | 0.2% | 0.1% |
| 380215 | 380215 | 10    | 0.0% | 0.0% | 450815 | 450815 | 46    | 0.0% | 0.0% |
| 380216 | 380216 | 17    | 0.0% | 0.0% | 450816 | 450816 | 998   | 0.1% | 0.1% |
| 380217 | 380217 | 18    | 0.0% | 0.0% | 450817 | 450817 | 5     | 0.0% | 0.0% |
| 389900 | 389900 | 33    | 0.0% | 0.0% | 450818 | 450818 | 205   | 0.0% | 0.0% |
| 390200 | 390200 | 113   | 0.0% | 0.0% | 450819 | 450819 | 32    | 0.0% | 0.0% |
| 390400 | 390400 | 37    | 0.0% | 0.0% | 450820 | 450820 | 1     | 0.0% | 0.0% |
| 390600 | 390600 | 2     | 0.0% | 0.0% | 450821 | 450821 | 1     | 0.0% | 0.0% |
| 390611 | 390611 | 67    | 0.0% | 0.0% | 450823 | 450823 | 8     | 0.0% | 0.0% |
| 399900 | 399900 | 26    | 0.0% | 0.0% | 450824 | 450824 | 66    | 0.0% | 0.0% |
| 400100 | 400100 | 40    | 0.0% | 0.0% | 450825 | 450825 | 87    | 0.0% | 0.0% |
| 400111 | 400111 | 63    | 0.0% | 0.0% | 450826 | 450826 | 102   | 0.0% | 0.0% |
| 400121 | 400121 | 12407 | 1.7% | 1.8% | 450827 | 450827 | 14    | 0.0% | 0.0% |
| 400131 | 400131 | 99    | 0.0% | 0.0% | 450828 | 450828 | 25    | 0.0% | 0.0% |
| 400141 | 400141 | 1080  | 0.2% | 0.2% | 450829 | 450829 | 15    | 0.0% | 0.0% |
| 400200 | 400200 | 1     | 0.0% | 0.0% | 450830 | 450830 | 6     | 0.0% | 0.0% |
| 400211 | 400211 | 358   | 0.1% | 0.0% | 450831 | 450831 | 1     | 0.0% | 0.0% |
| 400411 | 400411 | 60    | 0.0% | 0.0% | 450832 | 450832 | 1     | 0.0% | 0.0% |
| 400500 | 400500 | 7     | 0.0% | 0.0% | 450833 | 450833 | 1     | 0.0% | 0.0% |
| 400511 | 400511 | 2148  | 0.3% | 0.3% | 450834 | 450834 | 1     | 0.0% | 0.0% |
| 400521 | 400521 | 11755 | 1.6% | 1.5% | 450835 | 450835 | 14930 | 2.1% | 2.2% |
| 400522 | 400522 | 1280  | 0.2% | 0.1% | 450836 | 450836 | 229   | 0.0% | 0.0% |
| 400531 | 400531 | 42    | 0.0% | 0.0% | 450837 | 450837 | 1095  | 0.2% | 0.1% |
| 400541 | 400541 | 32    | 0.0% | 0.0% | 450838 | 450838 | 303   | 0.0% | 0.0% |
| 400551 | 400551 | 187   | 0.0% | 0.0% | 450839 | 450839 | 32    | 0.0% | 0.0% |
| 400561 | 400561 | 30    | 0.0% | 0.0% | 450840 | 450840 | 929   | 0.1% | 0.1% |
| 400600 | 400600 | 6     | 0.0% | 0.0% | 450841 | 450841 | 148   | 0.0% | 0.0% |
| 400611 | 400611 | 5010  | 0.7% | 0.7% | 450842 | 450842 | 330   | 0.0% | 0.1% |
| 400621 | 400621 | 279   | 0.0% | 0.0% | 450843 | 450843 | 108   | 0.0% | 0.0% |
| 400631 | 400631 | 325   | 0.0% | 0.0% | 450844 | 450844 | 97    | 0.0% | 0.0% |
| 400632 | 400632 | 20    | 0.0% | 0.0% | 450845 | 450845 | 101   | 0.0% | 0.0% |
| 400700 | 400700 | 6     | 0.0% | 0.0% | 450846 | 450846 | 11    | 0.0% | 0.0% |
| 400711 | 400711 | 224   | 0.0% | 0.0% | 450847 | 450847 | 2     | 0.0% | 0.0% |
| 400800 | 400800 | 16    | 0.0% | 0.0% | 450848 | 450848 | 696   | 0.1% | 0.1% |
| 400811 | 400811 | 1128  | 0.2% | 0.1% | 450849 | 450849 | 39    | 0.0% | 0.0% |
| 400821 | 400821 | 4963  | 0.7% | 0.6% | 450850 | 450850 | 8     | 0.0% | 0.0% |
| 400822 | 400822 | 1008  | 0.1% | 0.1% | 450851 | 450851 | 10    | 0.0% | 0.0% |
| 400831 | 400831 | 28    | 0.0% | 0.0% | 450852 | 450852 | 380   | 0.1% | 0.0% |
| 400841 | 400841 | 30    | 0.0% | 0.0% | 450853 | 450853 | 30    | 0.0% | 0.0% |
| 400851 | 400851 | 3     | 0.0% | 0.0% | 450854 | 450854 | 101   | 0.0% | 0.0% |
| 400911 | 400911 | 39    | 0.0% | 0.0% | 450855 | 450855 | 10    | 0.0% | 0.0% |
| 401011 | 401011 | 66    | 0.0% | 0.0% | 450856 | 450856 | 501   | 0.1% | 0.0% |
| 409900 | 409900 | 85    | 0.0% | 0.0% | 450857 | 450857 | 34    | 0.0% | 0.0% |
| 410200 | 410200 | 5     | 0.0% | 0.0% | 450858 | 450858 | 16    | 0.0% | 0.0% |
| 410211 | 410211 | 1     | 0.0% | 0.0% | 450859 | 450859 | 4     | 0.0% | 0.0% |
| 410300 | 410300 | 2     | 0.0% | 0.0% | 450860 | 450860 | 33    | 0.0% | 0.0% |
| 419900 | 419900 | 85    | 0.0% | 0.0% | 450861 | 450861 | 24    | 0.0% | 0.0% |
| 420100 | 420100 | 9     | 0.0% | 0.0% | 450862 | 450862 | 38    | 0.0% | 0.0% |
| 420111 | 420111 | 3930  | 0.5% | 0.6% | 450863 | 450863 | 86    | 0.0% | 0.0% |
| 420112 | 420112 | 198   | 0.0% | 0.0% | 450864 | 450864 | 4     | 0.0% | 0.0% |
| 420113 | 420113 | 17    | 0.0% | 0.0% | 450865 | 450865 | 27    | 0.0% | 0.0% |
| 420200 | 420200 | 5     | 0.0% | 0.0% | 450866 | 450866 | 3     | 0.0% | 0.0% |
| 420311 | 420311 | 6     | 0.0% | 0.0% | 450867 | 450867 | 53    | 0.0% | 0.0% |
| 420600 | 420600 | 4     | 0.0% | 0.0% | 450868 | 450868 | 19    | 0.0% | 0.0% |
| 420700 | 420700 | 5     | 0.0% | 0.0% | 450869 | 450869 | 17    | 0.0% | 0.0% |
| 420711 | 420711 | 53    | 0.0% | 0.0% | 450911 | 450911 | 203   | 0.0% | 0.0% |
| 420721 | 420721 | 29    | 0.0% | 0.0% | 450921 | 450921 | 3     | 0.0% | 0.0% |
| 420731 | 420731 | 6     | 0.0% | 0.0% | 450931 | 450931 | 11    | 0.0% | 0.0% |
| 421000 | 421000 | 4     | 0.0% | 0.0% | 450951 | 450951 | 7     | 0.0% | 0.0% |
| 421011 | 421011 | 20    | 0.0% | 0.0% | 450952 | 450952 | 46    | 0.0% | 0.0% |
| 421021 | 421021 | 119   | 0.0% | 0.0% | 451000 | 451000 | 26    | 0.0% | 0.0% |

|        |        |      |      |      |        |      |      |      |
|--------|--------|------|------|------|--------|------|------|------|
| 451001 | 451001 | 3349 | 0.5% | 0.5% | 480211 | 361  | 0.1% | 0.0% |
| 451002 | 451002 | 420  | 0.1% | 0.1% | 480212 | 112  | 0.0% | 0.0% |
| 451003 | 451003 | 321  | 0.0% | 0.0% | 480213 | 7    | 0.0% | 0.0% |
| 451004 | 451004 | 8833 | 1.2% | 1.2% | 480214 | 22   | 0.0% | 0.0% |
| 451005 | 451005 | 20   | 0.0% | 0.0% | 480221 | 961  | 0.1% | 0.1% |
| 451006 | 451006 | 141  | 0.0% | 0.0% | 480222 | 182  | 0.0% | 0.0% |
| 451007 | 451007 | 29   | 0.0% | 0.0% | 480223 | 56   | 0.0% | 0.0% |
| 451008 | 451008 | 69   | 0.0% | 0.0% | 480224 | 11   | 0.0% | 0.0% |
| 451009 | 451009 | 1    | 0.0% | 0.0% | 480231 | 29   | 0.0% | 0.0% |
| 451010 | 451010 | 853  | 0.1% | 0.1% | 480251 | 5    | 0.0% | 0.0% |
| 451011 | 451011 | 36   | 0.0% | 0.0% | 480311 | 4    | 0.0% | 0.0% |
| 451012 | 451012 | 5    | 0.0% | 0.0% | 480321 | 7    | 0.0% | 0.0% |
| 451013 | 451013 | 74   | 0.0% | 0.0% | 480411 | 2    | 0.0% | 0.0% |
| 451014 | 451014 | 668  | 0.1% | 0.1% | 480511 | 835  | 0.1% | 0.1% |
| 451015 | 451015 | 86   | 0.0% | 0.0% | 480512 | 168  | 0.0% | 0.0% |
| 451016 | 451016 | 122  | 0.0% | 0.0% | 480513 | 34   | 0.0% | 0.0% |
| 451017 | 451017 | 1738 | 0.2% | 0.2% | 480514 | 19   | 0.0% | 0.0% |
| 451018 | 451018 | 220  | 0.0% | 0.0% | 480521 | 357  | 0.0% | 0.1% |
| 451019 | 451019 | 7    | 0.0% | 0.0% | 480522 | 91   | 0.0% | 0.0% |
| 451020 | 451020 | 157  | 0.0% | 0.0% | 480523 | 35   | 0.0% | 0.0% |
| 451023 | 451023 | 11   | 0.0% | 0.0% | 480524 | 25   | 0.0% | 0.0% |
| 451024 | 451024 | 82   | 0.0% | 0.0% | 480531 | 27   | 0.0% | 0.0% |
| 451025 | 451025 | 4    | 0.0% | 0.0% | 480532 | 10   | 0.0% | 0.0% |
| 451026 | 451026 | 13   | 0.0% | 0.0% | 480541 | 1    | 0.0% | 0.0% |
| 451027 | 451027 | 5    | 0.0% | 0.0% | 480552 | 1    | 0.0% | 0.0% |
| 451028 | 451028 | 474  | 0.1% | 0.1% | 480600 | 6    | 0.0% | 0.0% |
| 451029 | 451029 | 264  | 0.0% | 0.0% | 480611 | 68   | 0.0% | 0.0% |
| 451030 | 451030 | 45   | 0.0% | 0.0% | 480612 | 2    | 0.0% | 0.0% |
| 451031 | 451031 | 19   | 0.0% | 0.0% | 480700 | 2    | 0.0% | 0.0% |
| 451032 | 451032 | 16   | 0.0% | 0.0% | 480711 | 1863 | 0.3% | 0.3% |
| 451033 | 451033 | 143  | 0.0% | 0.0% | 480712 | 508  | 0.1% | 0.1% |
| 451100 | 451100 | 13   | 0.0% | 0.0% | 480713 | 186  | 0.0% | 0.0% |
| 451111 | 451111 | 367  | 0.1% | 0.1% | 480714 | 33   | 0.0% | 0.0% |
| 451121 | 451121 | 1823 | 0.3% | 0.3% | 480721 | 20   | 0.0% | 0.0% |
| 451131 | 451131 | 285  | 0.0% | 0.0% | 480731 | 118  | 0.0% | 0.0% |
| 451132 | 451132 | 3    | 0.0% | 0.0% | 480732 | 58   | 0.0% | 0.0% |
| 451151 | 451151 | 8    | 0.0% | 0.0% | 489900 | 10   | 0.0% | 0.0% |
| 451161 | 451161 | 76   | 0.0% | 0.0% | 490111 | 30   | 0.0% | 0.0% |
| 451171 | 451171 | 32   | 0.0% | 0.0% | 490112 | 2    | 0.0% | 0.0% |
| 451181 | 451181 | 8    | 0.0% | 0.0% | 490121 | 26   | 0.0% | 0.0% |
| 451200 | 451200 | 5    | 0.0% | 0.0% | 490122 | 3    | 0.0% | 0.0% |
| 451211 | 451211 | 56   | 0.0% | 0.0% | 490123 | 1    | 0.0% | 0.0% |
| 451221 | 451221 | 6    | 0.0% | 0.0% | 490131 | 2    | 0.0% | 0.0% |
| 451231 | 451231 | 57   | 0.0% | 0.0% | 490212 | 6    | 0.0% | 0.0% |
| 459900 | 459900 | 23   | 0.0% | 0.0% | 490213 | 4    | 0.0% | 0.0% |
| 460111 | 460111 | 34   | 0.0% | 0.0% | 490214 | 4    | 0.0% | 0.0% |
| 460112 | 460112 | 23   | 0.0% | 0.0% | 490331 | 1    | 0.0% | 0.0% |
| 460113 | 460113 | 8    | 0.0% | 0.0% | 490341 | 5    | 0.0% | 0.0% |
| 460200 | 460200 | 3    | 0.0% | 0.0% | 490411 | 160  | 0.0% | 0.0% |
| 460211 | 460211 | 158  | 0.0% | 0.0% | 490412 | 16   | 0.0% | 0.0% |
| 460212 | 460212 | 59   | 0.0% | 0.0% | 490421 | 2    | 0.0% | 0.0% |
| 460213 | 460213 | 8    | 0.0% | 0.0% | 499900 | 5    | 0.0% | 0.0% |
| 460300 | 460300 | 1    | 0.0% | 0.0% | 500100 | 44   | 0.0% | 0.0% |
| 460311 | 460311 | 27   | 0.0% | 0.0% | 500111 | 185  | 0.0% | 0.0% |
| 460312 | 460312 | 5    | 0.0% | 0.0% | 500200 | 7    | 0.0% | 0.0% |
| 460400 | 460400 | 9    | 0.0% | 0.0% | 500212 | 7    | 0.0% | 0.0% |
| 460411 | 460411 | 643  | 0.1% | 0.1% | 500213 | 623  | 0.1% | 0.1% |
| 460412 | 460412 | 125  | 0.0% | 0.0% | 500214 | 127  | 0.0% | 0.0% |
| 460413 | 460413 | 35   | 0.0% | 0.0% | 500215 | 20   | 0.0% | 0.0% |
| 460421 | 460421 | 6    | 0.0% | 0.0% | 500216 | 19   | 0.0% | 0.0% |
| 460431 | 460431 | 36   | 0.0% | 0.0% | 500221 | 9    | 0.0% | 0.0% |
| 460441 | 460441 | 156  | 0.0% | 0.0% | 500231 | 24   | 0.0% | 0.0% |
| 460451 | 460451 | 34   | 0.0% | 0.0% | 500241 | 6    | 0.0% | 0.0% |
| 460452 | 460452 | 5    | 0.0% | 0.0% | 500251 | 301  | 0.0% | 0.0% |
| 460500 | 460500 | 2    | 0.0% | 0.0% | 500252 | 39   | 0.0% | 0.0% |
| 460511 | 460511 | 8    | 0.0% | 0.0% | 500253 | 6    | 0.0% | 0.0% |
| 460512 | 460512 | 4    | 0.0% | 0.0% | 500254 | 5    | 0.0% | 0.0% |
| 469900 | 469900 | 11   | 0.0% | 0.0% | 500261 | 2    | 0.0% | 0.0% |
| 470100 | 470100 | 6    | 0.0% | 0.0% | 500262 | 4    | 0.0% | 0.0% |
| 470121 | 470121 | 9    | 0.0% | 0.0% | 500263 | 1047 | 0.1% | 0.1% |
| 470124 | 470124 | 6    | 0.0% | 0.0% | 500264 | 586  | 0.1% | 0.1% |
| 470131 | 470131 | 6    | 0.0% | 0.0% | 500265 | 58   | 0.0% | 0.0% |
| 470151 | 470151 | 7    | 0.0% | 0.0% | 500266 | 93   | 0.0% | 0.0% |
| 470161 | 470161 | 3    | 0.0% | 0.0% | 500271 | 75   | 0.0% | 0.0% |
| 470171 | 470171 | 13   | 0.0% | 0.0% | 500281 | 3    | 0.0% | 0.0% |
| 470211 | 470211 | 38   | 0.0% | 0.0% | 500291 | 140  | 0.0% | 0.0% |
| 470212 | 470212 | 13   | 0.0% | 0.0% | 500292 | 6    | 0.0% | 0.0% |
| 470311 | 470311 | 18   | 0.0% | 0.0% | 500300 | 17   | 0.0% | 0.0% |
| 470312 | 470312 | 2    | 0.0% | 0.0% | 500311 | 514  | 0.1% | 0.1% |
| 470321 | 470321 | 28   | 0.0% | 0.0% | 500312 | 225  | 0.0% | 0.0% |
| 470331 | 470331 | 10   | 0.0% | 0.0% | 500313 | 111  | 0.0% | 0.0% |
| 470332 | 470332 | 6    | 0.0% | 0.0% | 500314 | 63   | 0.0% | 0.0% |
| 470341 | 470341 | 2    | 0.0% | 0.0% | 500321 | 23   | 0.0% | 0.0% |
| 470400 | 470400 | 4    | 0.0% | 0.0% | 500322 | 29   | 0.0% | 0.0% |
| 470411 | 470411 | 5    | 0.0% | 0.0% | 500323 | 30   | 0.0% | 0.0% |
| 470421 | 470421 | 4    | 0.0% | 0.0% | 500324 | 19   | 0.0% | 0.0% |
| 470431 | 470431 | 2    | 0.0% | 0.0% | 500331 | 39   | 0.0% | 0.0% |
| 470434 | 470434 | 1    | 0.0% | 0.0% | 500332 | 32   | 0.0% | 0.0% |
| 470511 | 470511 | 380  | 0.1% | 0.1% | 500333 | 28   | 0.0% | 0.0% |
| 470512 | 470512 | 54   | 0.0% | 0.0% | 500334 | 28   | 0.0% | 0.0% |
| 470513 | 470513 | 6    | 0.0% | 0.0% | 500341 | 55   | 0.0% | 0.0% |
| 470611 | 470611 | 315  | 0.0% | 0.0% | 500342 | 41   | 0.0% | 0.0% |
| 470612 | 470612 | 23   | 0.0% | 0.0% | 500343 | 18   | 0.0% | 0.0% |
| 470621 | 470621 | 1138 | 0.2% | 0.2% | 500344 | 17   | 0.0% | 0.0% |
| 470622 | 470622 | 472  | 0.1% | 0.1% | 500351 | 87   | 0.0% | 0.0% |
| 470623 | 470623 | 115  | 0.0% | 0.0% | 500352 | 27   | 0.0% | 0.0% |
| 470624 | 470624 | 39   | 0.0% | 0.0% | 500353 | 23   | 0.0% | 0.0% |
| 470625 | 470625 | 5    | 0.0% | 0.0% | 500354 | 10   | 0.0% | 0.0% |
| 470631 | 470631 | 249  | 0.0% | 0.0% | 500361 | 53   | 0.0% | 0.0% |
| 470632 | 470632 | 83   | 0.0% | 0.0% | 500381 | 530  | 0.1% | 0.1% |
| 470633 | 470633 | 7    | 0.0% | 0.0% | 500400 | 34   | 0.0% | 0.0% |
| 470641 | 470641 | 158  | 0.0% | 0.0% | 500411 | 68   | 0.0% | 0.0% |
| 470642 | 470642 | 15   | 0.0% | 0.0% | 500421 | 2    | 0.0% | 0.0% |
| 470651 | 470651 | 132  | 0.0% | 0.0% | 500431 | 3    | 0.0% | 0.0% |
| 480100 | 480100 | 55   | 0.0% | 0.0% | 500500 | 14   | 0.0% | 0.0% |
| 480111 | 480111 | 2426 | 0.3% | 0.3% | 500511 | 2033 | 0.3% | 0.3% |
| 480112 | 480112 | 480  | 0.1% | 0.1% | 500512 | 531  | 0.1% | 0.1% |
| 480113 | 480113 | 182  | 0.0% | 0.0% | 500513 | 345  | 0.0% | 0.1% |
| 480114 | 480114 | 27   | 0.0% | 0.0% | 500514 | 203  | 0.0% | 0.0% |
| 480121 | 480121 | 526  | 0.1% | 0.1% | 500521 | 42   | 0.0% | 0.0% |
| 480122 | 480122 | 88   | 0.0% | 0.0% | 500531 | 8    | 0.0% | 0.0% |
| 480123 | 480123 | 26   | 0.0% | 0.0% | 500541 | 57   | 0.0% | 0.0% |
| 480124 | 480124 | 5    | 0.0% | 0.0% | 500551 | 88   | 0.0% | 0.0% |
| 480131 | 480131 | 129  | 0.0% | 0.0% | 500561 | 37   | 0.0% | 0.0% |
| 480132 | 480132 | 20   | 0.0% | 0.0% | 500600 | 3    | 0.0% | 0.0% |
| 480141 | 480141 | 38   | 0.0% | 0.0% | 500611 | 179  | 0.0% | 0.0% |
| 480151 | 480151 | 58   | 0.0% | 0.0% | 500612 | 73   | 0.0% | 0.0% |
| 480152 | 480152 | 34   | 0.0% | 0.0% | 500621 | 1339 | 0.2% | 0.1% |
| 480200 | 480200 | 12   | 0.0% | 0.0% | 500622 | 315  | 0.0% | 0.0% |

|        |        |      |      |      |         |        |        |        |
|--------|--------|------|------|------|---------|--------|--------|--------|
| 500623 | 500623 | 170  | 0.0% | 0.0% | 550201  | 4      | 0.0%   | 0.0%   |
| 500631 | 500631 | 102  | 0.0% | 0.0% | 550301  | 36     | 0.0%   | 0.0%   |
| 500632 | 500632 | 61   | 0.0% | 0.0% | 550401  | 11     | 0.0%   | 0.0%   |
| 500700 | 500700 | 25   | 0.0% | 0.0% | 551011  | 20     | 0.0%   | 0.0%   |
| 500701 | 500701 | 4    | 0.0% | 0.0% | 551021  | 8      | 0.0%   | 0.0%   |
| 500702 | 500702 | 6    | 0.0% | 0.0% | 551031  | 14     | 0.0%   | 0.0%   |
| 500703 | 500703 | 2470 | 0.3% | 0.4% | 551211  | 2      | 0.0%   | 0.0%   |
| 500704 | 500704 | 5473 | 0.8% | 0.8% | 551311  | 4      | 0.0%   | 0.0%   |
| 500705 | 500705 | 1494 | 0.2% | 0.2% | 551411  | 2      | 0.0%   | 0.0%   |
| 500706 | 500706 | 541  | 0.1% | 0.1% | 552011  | 15     | 0.0%   | 0.0%   |
| 500707 | 500707 | 310  | 0.0% | 0.0% | 552021  | 4      | 0.0%   | 0.0%   |
| 500708 | 500708 | 264  | 0.0% | 0.0% | 552111  | 2      | 0.0%   | 0.0%   |
| 500709 | 500709 | 404  | 0.1% | 0.0% | 552311  | 3      | 0.0%   | 0.0%   |
| 500711 | 500711 | 16   | 0.0% | 0.0% | 553011  | 11     | 0.0%   | 0.0%   |
| 500713 | 500713 | 2    | 0.0% | 0.0% | 553021  | 2      | 0.0%   | 0.0%   |
| 500714 | 500714 | 2436 | 0.3% | 0.3% | 553031  | 2      | 0.0%   | 0.0%   |
| 500715 | 500715 | 433  | 0.1% | 0.1% | 553111  | 1      | 0.0%   | 0.0%   |
| 500716 | 500716 | 89   | 0.0% | 0.0% | 554011  | 33     | 0.0%   | 0.0%   |
| 500717 | 500717 | 42   | 0.0% | 0.0% | 554021  | 3      | 0.0%   | 0.0%   |
| 500718 | 500718 | 30   | 0.0% | 0.0% | 554031  | 1      | 0.0%   | 0.0%   |
| 500719 | 500719 | 13   | 0.0% | 0.0% | 554111  | 11     | 0.0%   | 0.0%   |
| 500720 | 500720 | 623  | 0.1% | 0.1% | 554121  | 4      | 0.0%   | 0.0%   |
| 500721 | 500721 | 57   | 0.0% | 0.0% | 554211  | 6      | 0.0%   | 0.0%   |
| 500722 | 500722 | 3    | 0.0% | 0.0% | 554311  | 62     | 0.0%   | 0.0%   |
| 500723 | 500723 | 103  | 0.0% | 0.0% | 554321  | 1      | 0.0%   | 0.0%   |
| 500724 | 500724 | 52   | 0.0% | 0.0% | 554411  | 2      | 0.0%   | 0.0%   |
| 500725 | 500725 | 62   | 0.0% | 0.0% | 555011  | 10     | 0.0%   | 0.0%   |
| 500726 | 500726 | 493  | 0.1% | 0.1% | 555029  | 1      | 0.0%   | 0.0%   |
| 500727 | 500727 | 1    | 0.0% | 0.0% | 556311  | 3      | 0.0%   | 0.0%   |
| 500731 | 500731 | 10   | 0.0% | 0.0% | 557111  | 9      | 0.0%   | 0.0%   |
| 500732 | 500732 | 11   | 0.0% | 0.0% | 557121  | 1      | 0.0%   | 0.0%   |
| 500800 | 500800 | 13   | 0.0% | 0.0% | 558011  | 17     | 0.0%   | 0.0%   |
| 500811 | 500811 | 158  | 0.0% | 0.0% | 558021  | 5      | 0.0%   | 0.0%   |
| 500900 | 500900 | 72   | 0.0% | 0.0% | 558211  | 9      | 0.0%   | 0.0%   |
| 500901 | 500901 | 1    | 0.0% | 0.0% | 558221  | 3      | 0.0%   | 0.0%   |
| 500903 | 500903 | 3    | 0.0% | 0.0% | 559011  | 2      | 0.0%   | 0.0%   |
| 500904 | 500904 | 9    | 0.0% | 0.0% | 562300  | 40     | 0.0%   | 0.0%   |
| 500905 | 500905 | 1    | 0.0% | 0.0% | 562301  | 258    | 0.0%   | 0.0%   |
| 500906 | 500906 | 2    | 0.0% | 0.0% | 562302  | 197    | 0.0%   | 0.0%   |
| 500907 | 500907 | 2041 | 0.3% | 0.3% | 562303  | 143    | 0.0%   | 0.0%   |
| 500908 | 500908 | 384  | 0.1% | 0.1% | 562304  | 100    | 0.0%   | 0.0%   |
| 500909 | 500909 | 3892 | 0.5% | 0.5% | 562309  | 7      | 0.0%   | 0.0%   |
| 500910 | 500910 | 1591 | 0.2% | 0.2% | 562310  | 4      | 0.0%   | 0.0%   |
| 500911 | 500911 | 1135 | 0.2% | 0.1% | 562311  | 97     | 0.0%   | 0.0%   |
| 500913 | 500913 | 1    | 0.0% | 0.0% | 562319  | 3      | 0.0%   | 0.0%   |
| 500916 | 500916 | 282  | 0.0% | 0.0% | 562321  | 10     | 0.0%   | 0.0%   |
| 500917 | 500917 | 43   | 0.0% | 0.0% | 562700  | 54     | 0.0%   | 0.0%   |
| 500918 | 500918 | 196  | 0.0% | 0.0% | 562701  | 481    | 0.1%   | 0.1%   |
| 500919 | 500919 | 184  | 0.0% | 0.0% | 562709  | 2      | 0.0%   | 0.0%   |
| 500920 | 500920 | 188  | 0.0% | 0.0% | 562711  | 11     | 0.0%   | 0.0%   |
| 500921 | 500921 | 70   | 0.0% | 0.0% | 562721  | 53     | 0.0%   | 0.0%   |
| 500922 | 500922 | 57   | 0.0% | 0.0% | 563201  | 105    | 0.0%   | 0.0%   |
| 500923 | 500923 | 277  | 0.0% | 0.0% | 563211  | 31     | 0.0%   | 0.0%   |
| 500924 | 500924 | 25   | 0.0% | 0.0% | 564000  | 9      | 0.0%   | 0.0%   |
| 500925 | 500925 | 36   | 0.0% | 0.0% | 564001  | 221    | 0.0%   | 0.0%   |
| 500926 | 500926 | 1042 | 0.1% | 0.1% | 564009  | 1      | 0.0%   | 0.0%   |
| 500927 | 500927 | 135  | 0.0% | 0.0% | 564500  | 12     | 0.0%   | 0.0%   |
| 500928 | 500928 | 2    | 0.0% | 0.0% | 564501  | 128    | 0.0%   | 0.0%   |
| 500929 | 500929 | 10   | 0.0% | 0.0% | 569001  | 392    | 0.1%   | 0.1%   |
| 500930 | 500930 | 103  | 0.0% | 0.0% | 569009  | 1      | 0.0%   | 0.0%   |
| 500931 | 500931 | 223  | 0.0% | 0.0% | 569101  | 275    | 0.0%   | 0.1%   |
| 500932 | 500932 | 25   | 0.0% | 0.0% | 569109  | 2      | 0.0%   | 0.0%   |
| 500934 | 500934 | 147  | 0.0% | 0.0% | 569201  | 14     | 0.0%   | 0.0%   |
| 500935 | 500935 | 13   | 0.0% | 0.0% | 569301  | 59     | 0.0%   | 0.0%   |
| 500939 | 500939 | 2763 | 0.4% | 0.4% | 569401  | 23     | 0.0%   | 0.0%   |
| 500940 | 500940 | 94   | 0.0% | 0.0% | 600000  | 1630   | 0.2%   | 0.2%   |
| 500941 | 500941 | 1286 | 0.2% | 0.2% | 600001  | 27     | 0.0%   | 0.0%   |
| 500942 | 500942 | 96   | 0.0% | 0.0% |         |        |        |        |
| 500943 | 500943 | 786  | 0.1% | 0.1% |         |        |        |        |
| 500944 | 500944 | 124  | 0.0% | 0.0% |         |        |        |        |
| 500945 | 500945 | 672  | 0.1% | 0.1% |         |        |        |        |
| 500946 | 500946 | 71   | 0.0% | 0.0% |         |        |        |        |
| 500947 | 500947 | 3540 | 0.5% | 0.4% |         |        |        |        |
| 500948 | 500948 | 106  | 0.0% | 0.0% |         |        |        |        |
| 500949 | 500949 | 42   | 0.0% | 0.0% |         |        |        |        |
| 500950 | 500950 | 1    | 0.0% | 0.0% |         |        |        |        |
| 500951 | 500951 | 2    | 0.0% | 0.0% |         |        |        |        |
| 500952 | 500952 | 337  | 0.0% | 0.1% |         |        |        |        |
| 500953 | 500953 | 2    | 0.0% | 0.0% |         |        |        |        |
| 500954 | 500954 | 2    | 0.0% | 0.0% |         |        |        |        |
| 500955 | 500955 | 98   | 0.0% | 0.0% |         |        |        |        |
| 500956 | 500956 | 31   | 0.0% | 0.0% |         |        |        |        |
| 500957 | 500957 | 3    | 0.0% | 0.0% |         |        |        |        |
| 500958 | 500958 | 17   | 0.0% | 0.0% |         |        |        |        |
| 500959 | 500959 | 26   | 0.0% | 0.0% |         |        |        |        |
| 500960 | 500960 | 7    | 0.0% | 0.0% |         |        |        |        |
| 500961 | 500961 | 7    | 0.0% | 0.0% |         |        |        |        |
| 500962 | 500962 | 8    | 0.0% | 0.0% |         |        |        |        |
| 500963 | 500963 | 503  | 0.1% | 0.1% |         |        |        |        |
| 500964 | 500964 | 9    | 0.0% | 0.0% |         |        |        |        |
| 500965 | 500965 | 288  | 0.0% | 0.0% |         |        |        |        |
| 500966 | 500966 | 156  | 0.0% | 0.0% |         |        |        |        |
| 500967 | 500967 | 346  | 0.0% | 0.0% |         |        |        |        |
| 509900 | 509900 | 11   | 0.0% | 0.0% |         |        |        |        |
| 510101 | 510101 | 11   | 0.0% | 0.0% |         |        |        |        |
| 510102 | 510102 | 2    | 0.0% | 0.0% |         |        |        |        |
| 510103 | 510103 | 2    | 0.0% | 0.0% |         |        |        |        |
| 541001 | 541001 | 33   | 0.0% | 0.0% |         |        |        |        |
| 541101 | 541101 | 3    | 0.0% | 0.0% |         |        |        |        |
| 541201 | 541201 | 6    | 0.0% | 0.0% |         |        |        |        |
| 542011 | 542011 | 18   | 0.0% | 0.0% |         |        |        |        |
| 542021 | 542021 | 7    | 0.0% | 0.0% |         |        |        |        |
| 542031 | 542031 | 4    | 0.0% | 0.0% |         |        |        |        |
| 542041 | 542041 | 2    | 0.0% | 0.0% |         |        |        |        |
| 542051 | 542051 | 5    | 0.0% | 0.0% |         |        |        |        |
| 542101 | 542101 | 6    | 0.0% | 0.0% |         |        |        |        |
| 542301 | 542301 | 14   | 0.0% | 0.0% |         |        |        |        |
| 542401 | 542401 | 11   | 0.0% | 0.0% |         |        |        |        |
| 543001 | 543001 | 7    | 0.0% | 0.0% |         |        |        |        |
| 543101 | 543101 | 1    | 0.0% | 0.0% |         |        |        |        |
| 543109 | 543109 | 1    | 0.0% | 0.0% |         |        |        |        |
| 543201 | 543201 | 2    | 0.0% | 0.0% |         |        |        |        |
| 543301 | 543301 | 100  | 0.0% | 0.0% |         |        |        |        |
| 543309 | 543309 | 1    | 0.0% | 0.0% |         |        |        |        |
| 543401 | 543401 | 6    | 0.0% | 0.0% |         |        |        |        |
| 544001 | 544001 | 53   | 0.0% | 0.0% |         |        |        |        |
| 544501 | 544501 | 6    | 0.0% | 0.0% |         |        |        |        |
| 550001 | 550001 | 18   | 0.0% | 0.0% |         |        |        |        |
| 550101 | 550101 | 19   | 0.0% | 0.0% |         |        |        |        |
|        |        |      |      |      | TOTALS: | 714647 | 100.0% | 100.0% |



## **Appendix J**

### **Classification of Secondary School Courses:**

#### **Subject and Program Areas**

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- 01. AGRIBUSINESS AND AGRICULTURAL PRODUCTION
    - 01.01 AGRICULTURAL BUSINESS AND MANAGEMENT
    - 01.02 AGRICULTURAL MECHANICS
    - 01.03 AGRICULTURAL PRODUCTION
    - 01.04 AGRICULTURAL PRODUCTS AND PROCESSING
    - 01.05 AGRICULTURAL SERVICES AND SUPPLIES
    - 01.06 HORTICULTURE
    - 01.07 INTERNATIONAL AGRICULTURE
    - 01.99 AGRIBUSINESS AND AGRICULTURAL PRODUCTION, OTHER
  
  - 02. AGRICULTURAL SCIENCES
    - 02.01 AGRICULTURAL SCIENCES, GENERAL
    - 02.02 ANIMAL SCIENCES
    - 02.03 FOOD SCIENCES
    - 02.04 PLANT SCIENCES
    - 02.05 SOIL SCIENCES
    - 02.99 AGRICULTURAL SCIENCES, OTHER
  
  - 03. RENEWABLE NATURAL RESOURCES
    - 03.01 RENEWABLE NATURAL RESOURCES, GENERAL
    - 03.02 CONSERVATION AND REGULATION
    - 03.03 FISHING AND FISHERIES
    - 03.04 FORESTRY PRODUCTION AND PROCESSING
    - 03.05 FORESTRY AND RELATED SCIENCES
    - 03.06 WILDLIFE MANAGEMENT
    - 03.07 MARINE MANAGEMENT AND OCEANOGRAPHY
    - 03.99 RENEWABLE NATURAL RESOURCES, OTHER
  
  - 04. ARCHITECTURE AND ENVIRONMENTAL DESIGN
    - 04.01 ARCHITECTURE AND ENVIRONMENTAL DESIGN, GENERAL
    - 04.02 ARCHITECTURE
    - 04.03 CITY, COMMUNITY, AND REGIONAL PLANNING
    - 04.04 ENVIRONMENTAL DESIGN
    - 04.05 INTERIOR DESIGN
    - 04.06 LANDSCAPE ARCHITECTURE
    - 04.07 URBAN DESIGN
    - 04.99 ARCHITECTURE AND ENVIRONMENTAL DESIGN, OTHER
  
  - 05. AREA AND ETHNIC STUDIES
    - 05.01 AREA STUDIES
    - 05.02 ETHNIC STUDIES
    - 05.99 AREA AND ETHNIC STUDIES, OTHER
-

06. BUSINESS AND MANAGEMENT

- 06.01 BUSINESS AND MANAGEMENT, GENERAL
- 06.02 ACCOUNTING
- 06.03 BANKING AND FINANCE
- 06.04 BUSINESS ADMINISTRATION AND MANAGEMENT
- 06.05 BUSINESS ECONOMICS
- 06.06 HUMAN RESOURCES DEVELOPMENT
- 06.07 INSTITUTIONAL MANAGEMENT
- 06.08 INSURANCE AND RISK MANAGEMENT
- 06.09 INTERNATIONAL BUSINESS MANAGEMENT
- 06.10 INVESTMENTS AND SECURITIES
- 06.11 LABOR INDUSTRIAL RELATIONS
- 06.12 MANAGEMENT INFORMATION SYSTEMS
- 06.13 MANAGEMENT SCIENCE
- 06.14 MARKETING MANAGEMENT AND RESEARCH
- 06.15 ORGANIZATIONAL BEHAVIOR
- 06.16 PERSONNEL MANAGEMENT
- 06.17 REAL ESTATE
- 06.18 SMALL BUSINESS MANAGEMENT AND OWNERSHIP
- 06.19 TAXATION
- 06.20 TRADE AND INDUSTRIAL SUPERVISION AND MANAGEMENT
- 06.99 BUSINESS AND MANAGEMENT, OTHER

07. BUSINESS AND OFFICE

- 07.01 ACCOUNTING, BOOKKEEPING, AND RELATED PROGRAMS
- 07.02 BANKING AND RELATED FINANCIAL PROGRAMS
- 07.03 BUSINESS DATA PROCESSING AND RELATED PROGRAMS
- 07.04 OFFICE SUPERVISION AND MANAGEMENT
- 07.05 PERSONNEL AND TRAINING PROGRAMS
- 07.06 SECRETARIAL AND RELATED PROGRAMS
- 07.07 TYPING, GENERAL OFFICE, AND RELATED PROGRAMS
- 07.99 BUSINESS AND OFFICE, OTHER

08. MARKETING AND DISTRIBUTION

- 08.01 APPAREL AND ACCESSORIES MARKETING
- 08.02 BUSINESS AND PERSONAL SERVICES MARKETING
- 08.03 ENTREPRENEURSHIP
- 08.04 FINANCIAL SERVICES MARKETING
- 08.05 FLORISTRY, FARM AND GARDEN SUPPLIES MARKETING
- 08.06 FOOD MARKETING
- 08.07 GENERAL MARKETING
- 08.08 HOME AND OFFICE PRODUCTS MARKETING
- 08.09 HOSPITALITY AND RECREATION MARKETING
- 08.10 INSURANCE MARKETING
- 08.11 TRANSPORTATION AND TRAVEL MARKETING
- 08.12 VEHICLES AND PETROLEUM MARKETING

- 08.99            MARKETING AND DISTRIBUTION, OTHER
  
  - 09.    COMMUNICATIONS
    - 09.01            COMMUNICATIONS, GENERAL
    - 09.02            ADVERTISING
    - 09.03            COMMUNICATIONS RESEARCH
    - 09.04            JOURNALISM (MASS COMMUNICATIONS)
    - 09.05            PUBLIC RELATIONS
    - 09.06            RADIO/TELEVISION NEWS BROADCAST
    - 09.07            RADIO/TELEVISION, GENERAL
    - 09.08            SPECIAL LANGUAGES
    - 09.99            COMMUNICATIONS, OTHER
  
  - 10.    COMMUNICATION TECHNOLOGIES
    - 10.01            COMMUNICATION TECHNOLOGIES
  
  - 11.    COMPUTER AND INFORMATION SCIENCES
    - 11.01            COMPUTER AND INFORMATION SCIENCES, GENERAL
    - 11.02            COMPUTER PROGRAMMING
    - 11.03            DATA PROCESSING
    - 11.04            INFORMATION SCIENCES AND SYSTEMS
    - 11.05            SYSTEMS ANALYSIS
    - 11.99            COMPUTER AND INFORMATION SCIENCES, OTHER
  
  - 12.    CONSUMER, PERSONAL, AND MISCELLANEOUS SERVICES
    - 12.01            DRYCLEANING AND LAUNDERING SERVICES
    - 12.02            ENTERTAINMENT SERVICES
    - 12.03            FUNERAL SERVICES
    - 12.04            PERSONAL SERVICES
    - 12.05            GENERAL SERVICES
    - 12.99            CONSUMER, PERSONAL, AND MISCELLANEOUS SERVICES, OTHER
  
  - 13.    EDUCATION
    - 13.01            EDUCATION, GENERAL
    - 13.02            BILINGUAL/BICULTURAL EDUCATION
    - 13.03            CURRICULUM AND INSTRUCTION
    - 13.04            EDUCATION ADMINISTRATION
    - 13.05            EDUCATIONAL MEDIA
    - 13.06            EVALUATION AND RESEARCH
    - 13.07            INTERNATIONAL AND COMPARATIVE EDUCATION
    - 13.08            SCHOOL PSYCHOLOGY
    - 13.09            SOCIAL FOUNDATIONS
    - 13.10            SPECIAL EDUCATION
    - 13.11            STUDENT COUNSELING AND PERSONNEL SERVICES
-

- 13.12 TEACHER EDUCATION, GENERAL PROGRAMS
- 13.13 TEACHER EDUCATION, SPECIFIC SUBJECT AREAS
- 13.14 TEACHING ENGLISH AS A SECOND LANGUAGE/FOREIGN  
LANGUAGE
- 13.99 EDUCATION, OTHER

14. ENGINEERING

- 14.01 ENGINEERING, GENERAL
- 14.02 AEROSPACE, AERONAUTICAL, AND ASTRONAUTICAL
- 14.03 AGRICULTURAL ENGINEERING
- 14.04 ARCHITECTURAL ENGINEERING
- 14.05 BIOENGINEERING AND BIOMEDICAL ENGINEERING
- 14.06 CERAMIC ENGINEERING
- 14.07 CHEMICAL ENGINEERING
- 14.08 CIVIL ENGINEERING
- 14.09 COMPUTER ENGINEERING
- 14.10 ELECTRICAL, ELECTRONICS, AND COMMUNICATIONS
- 14.11 ENGINEERING MECHANICS
- 14.12 ENGINEERING RELATED (formerly ENGINEERING PHYSICS)
- 14.13 ENGINEERING SCIENCE
- 14.14 ENVIRONMENTAL HEALTH ENGINEERING
- 14.15 GEOLOGICAL ENGINEERING
- 14.16 GEOPHYSICAL ENGINEERING
- 14.17 INDUSTRIAL ENGINEERING
- 14.18 MATERIALS ENGINEERING
- 14.19 MECHANICAL ENGINEERING
- 14.20 METALLURGICAL ENGINEERING
- 14.21 MINING AND MINERAL ENGINEERING
- 14.22 NAVAL ARCHITECTURE AND MARINE ENGINEERING
- 14.23 NUCLEAR ENGINEERING
- 14.24 OCEAN ENGINEERING
- 14.25 PETROLEUM ENGINEERING
- 14.26 SURVEYING AND MAPPING SCIENCES
- 14.27 SYSTEMS ENGINEERING
- 14.28 TEXTILE ENGINEERING
- 14.99 ENGINEERING, OTHER

15. ENGINEERING AND ENGINEERING-RELATED TECHNOLOGIES

- 15.01 ARCHITECTURAL TECHNOLOGIES
- 15.02 CIVIL TECHNOLOGIES
- 15.03 ELECTRICAL AND ELECTRONIC TECHNOLOGIES
- 15.04 ELECTROMECHANICAL INSTRUMENTATION AND MAINTENANCE
- 15.05 ENVIRONMENTAL CONTROL TECHNOLOGIES
- 15.06 INDUSTRIAL PRODUCTION TECHNOLOGIES
- 15.07 QUALITY CONTROL AND SAC TECHNIQUES
- 15.08 MECHANICAL AND RELATED TECHNOLOGIES
- 15.09 MINING AND PETROLEUM TECHNOLOGIES

- 15.99           ENGINEERING AND ENGINEERING-RELATED TECHNOLOGIES,  
                  OTHER
  
  - 16.   FOREIGN LANGUAGES
    - 16.01           FOREIGN LANGUAGES, MULTIPLE EMPHASIS
    - 16.02           AFRICAN (NON-SEMITIC) LANGUAGES
    - 16.03           ASIATIC LANGUAGES
    - 16.04           BALTO-SLAVIC LANGUAGES
    - 16.05           GERMANIC LANGUAGES
    - 16.06           GREEK
    - 16.07           INDIC LANGUAGES
    - 16.08           IRANIAN LANGUAGES
    - 16.09           ITALIC LANGUAGES
    - 16.10           NATIVE AMERICAN LANGUAGES
    - 16.11           SEMITIC LANGUAGES
    - 16.12           INDO-EUROPEAN LANGUAGES, OTHER
    - 16.13           NON-ENGLISH LANGUAGES FOR NATIVE SPEAKERS
    - 16.99           FOREIGN LANGUAGES, OTHER
  
  - 17.   ALLIED HEALTH
    - 17.01           DENTAL SERVICES
    - 17.02           DIAGNOSTIC AND TREATMENT SERVICES
    - 17.03           MEDICAL LABORATORY TECHNOLOGIES
    - 17.04           MENTAL HEALTH/HUMAN SERVICES
    - 17.05           MISCELLANEOUS ALLIED HEALTH-SERVICES
    - 17.06           NURSING-RELATED SERVICES
    - 17.07           OPHTHALMIC SERVICES
    - 17.08           REHABILITATION SERVICES
    - 17.99           ALLIED HEALTH, OTHER
  
  - 18.   HEALTH SCIENCES
    - 18.01           AUDIOLOGY AND SPEECH PATHOLOGY
    - 18.02           BASIC CLINICAL HEALTH SCIENCES
    - 18.03           CHIROPRACTIC
    - 18.04           DENTISTRY
    - 18.05           EMERGENCY/DISASTER SCIENCE
    - 18.06           EPIDEMIOLOGY
    - 18.07           HEALTH SCIENCES ADMINISTRATION
    - 18.08           HEMATOLOGY
    - 18.09           MEDICAL LABORATORY
    - 18.10           MEDICINE
    - 18.11           NURSING
    - 18.12           OPTOMETRY
    - 18.13           OSTEOPATHIC MEDICINE
    - 18.14           PHARMACY
    - 18.15           PODIATRY
-

- 18.16 POPULATION AND FAMILY PLANNING
  - 18.17 PRE-DENTISTRY
  - 18.18 PRE-MEDICINE
  - 18.19 PRE-PHARMACY
  - 18.20 PRE-VETERINARY
  - 18.21 PROSECTORIAL SCIENCE
  - 18.22 PUBLIC HEALTH LABORATORY SCIENCE
  - 18.23 TOXICOLOGY (CLINICAL)
  - 18.24 VETERINARY MEDICINE
  - 18.99 HEALTH SCIENCES, OTHER
19. HOME ECONOMICS
- 19.01 HOME ECONOMICS, GENERAL
  - 19.02 BUSINESS HOME ECONOMICS
  - 19.03 FAMILY AND COMMUNITY SERVICES
  - 19.04 FAMILY/CONSUMER RESOURCE MANAGEMENT
  - 19.05 FOOD SCIENCES AND HUMAN NUTRITION
  - 19.06 HUMAN ENVIRONMENT AND HOUSING
  - 19.07 INDIVIDUAL AND FAMILY DEVELOPMENT
  - 19.08 INTERNATIONAL/COMPARATIVE HOME ECONOMICS
  - 19.09 TEXTILES AND CLOTHING
  - 19.99 HOME ECONOMICS, OTHER
20. VOCATIONAL HOME ECONOMICS
- 20.01 CONSUMER AND HOMEMAKING HOME ECONOMICS
  - 20.02 CHILD CARE AND GUIDANCE MANAGEMENT AND SERVICES
  - 20.03 CLOTHING, APPAREL, AND TEXTILES MANAGEMENT,  
PRODUCTION, AND SERVICES
  - 20.04 FOOD PRODUCTION, MANAGEMENT, AND SERVICES
  - 20.05 HOME FURNISHING AND EQUIPMENT MANAGEMENT,
  - 20.06 INSTITUTIONAL, HOME MANAGEMENT, AND SUPPORTING
  - 20.99 VOCATIONAL HOME ECONOMICS, OTHER
21. INDUSTRIAL ARTS
- 21.01 INDUSTRIAL ARTS
22. LAW
- 22.01 LAW
23. LETTERS
- 23.01 ENGLISH, GENERAL
  - 23.02 CLASSICS
  - 23.03 COMPARATIVE LITERATURE
  - 23.04 COMPOSITION

- 23.05 CREATIVE WRITING
  - 23.06 LINGUISTICS (INCLUDES PHONETICS, SEMANTICS, AND
  - 23.07 LITERATURE, AMERICAN
  - 23.08 LITERATURE, ENGLISH
  - 23.09 RHETORIC
  - 23.10 SPEECH, DEBATE, AND FORENSICS
  - 23.11 TECHNICAL AND BUSINESS WRITING
  - 23.12 LANGUAGE ARTS, READING
  - 23.13 LANGUAGE ARTS, BASIC SKILLS
  - 23.99 LETTERS, OTHER
  
  - 24. LIBERAL/GENERAL STUDIES
    - 24.01 LIBERAL/GENERAL STUDIES
  
  - 25. LIBRARY AND ARCHIVAL SCIENCES
    - 25.01 LIBRARY AND ARCHIVAL SCIENCES, GENERAL
    - 25.02 ARCHIVAL SCIENCE
    - 25.03 LIBRARY ASSISTING
    - 25.04 LIBRARY SCIENCE
    - 25.05 MUSEOLOGY
    - 25.99 LIBRARY AND ARCHIVAL SCIENCES, OTHER
  
  - 26. LIFE SCIENCES
    - 26.01 BIOLOGY, GENERAL
    - 26.02 BIOCHEMISTRY AND BIOPHYSICS
    - 26.03 BOTANY
    - 26.04 CELL AND MOLECULAR BIOLOGY
    - 26.05 MICROBIOLOGY
    - 26.06 MISCELLANEOUS SPECIALIZED AREAS, LIFE SCIENCES
    - 26.07 ZOOLOGY
    - 26.99 LIFE SCIENCES, OTHER
  
  - 27. MATHEMATICS
    - 27.01 MATHEMATICS, GENERAL
    - 27.02 ACTUARIAL SCIENCES
    - 27.03 APPLIED MATHEMATICS
    - 27.04 PURE MATHEMATICS
    - 27.05 STATISTICS
    - 27.06 BASIC SKILLS MATH
    - 27.99 MATHEMATICS, OTHER
  
  - 28. MILITARY SCIENCES
    - 28.01 AEROSPACE SCIENCE (AIR FORCE)
    - 28.02 COAST GUARD SCIENCE
-



- 28.03 MILITARY SCIENCE (ARMY)
  - 28.04 NAVAL SCIENCE (NAVY, MARINES)
  - 28.99 MILITARY SCIENCES, OTHER
  
  - 29. MILITARY TECHNOLOGIES
    - 29.01 MILITARY TECHNOLOGIES
  
  - 30. MULTI/INTERDISCIPLINARY STUDIES
    - 30.01 BIOLOGICAL AND PHYSICAL SCIENCES
    - 30.02 CLINICAL PASTORAL CARE
    - 30.03 ENGINEERING AND OTHER DISCIPLINES
    - 30.04 HUMANITIES AND SOCIAL SCIENCES
    - 30.05 PEACE STUDIES
    - 30.06 SYSTEMS SCIENCE
    - 30.07 WOMEN'S STUDIES
    - 30.99 MULTIDISCIPLINARY STUDIES, OTHER
  
  - 31. PARKS AND RECREATION
    - 31.01 PARKS AND RECREATION, GENERAL
    - 31.02 OUTDOOR RECREATION
    - 31.03 PARKS AND RECREATION MANAGEMENT
    - 31.04 WATER RESOURCES
    - 31.99 PARKS AND RECREATION, OTHER
  
  - 32. BASIC SKILLS
    - 32.01 BASIC SKILLS, CAREERS & EMPLOYMENT.
    - 32.02 BASIC SKILLS, GENERAL
  
  - 33. CITIZENSHIP/CIVIC ACTIVITIES
    - 33.01 CITIZENSHIP/CIVIC ACTIVITIES
  
  - 34. HEALTH RELATED ACTIVITIES
    - 34.01 HEALTH RELATED ACTIVITIES
  
  - 35. INTERPERSONAL SKILLS
    - 35.01 INTERPERSONAL SKILLS
  
  - 36. LEISURE AND RECREATIONAL ACTIVITIES
    - 36.01 LEISURE AND RECREATIONAL ACTIVITIES
-

- 37. PERSONAL AWARENESS
    - 37.01 PERSONAL AWARENESS
  - 38. PHILOSOPHY AND RELIGION
    - 38.01 PHILOSOPHY
    - 38.02 RELIGION
    - 38.99 PHILOSOPHY AND RELIGION, OTHER
  - 39. THEOLOGY
    - 39.01 BIBLICAL LANGUAGES
    - 39.02 BIBLE STUDIES
    - 39.03 MISSIONARY STUDIES
    - 39.04 RELIGIOUS EDUCATION
    - 39.05 RELIGIOUS MUSIC
    - 39.06 THEOLOGICAL STUDIES
    - 39.99 THEOLOGY, OTHER
  - 40. PHYSICAL SCIENCES
    - 40.01 PHYSICAL SCIENCES, GENERAL
    - 40.02 ASTRONOMY
    - 40.03 ASTROPHYSICS
    - 40.04 ATMOSPHERIC SCIENCES AND METEOROLOGY
    - 40.05 CHEMISTRY
    - 40.06 GEOLOGICAL SCIENCES
    - 40.07 MISCELLANEOUS PHYSICAL SCIENCES
    - 40.08 PHYSICS
    - 40.09 PLANETARY SCIENCE
    - 40.10 AEROSPACE SCIENCE
    - 40.99 PHYSICAL SCIENCES, OTHER
  - 41. SCIENCE TECHNOLOGIES
    - 41.01 BIOLOGICAL TECHNOLOGIES
    - 41.02 NUCLEAR TECHNOLOGIES
    - 41.03 PHYSICAL SCIENCE TECHNOLOGIES
    - 41.99 SCIENCE TECHNOLOGIES, OTHER
  - 42. PSYCHOLOGY
    - 42.01 PSYCHOLOGY, GENERAL
    - 42.02 CLINICAL PSYCHOLOGY
    - 42.03 COGNITIVE PSYCHOLOGY
    - 42.04 COMMUNITY PSYCHOLOGY
    - 42.05 COMPARATIVE PSYCHOLOGY
    - 42.06 COUNSELING PSYCHOLOGY
-

- 42.07 DEVELOPMENTAL PSYCHOLOGY
  - 42.08 EXPERIMENTAL PSYCHOLOGY
  - 42.09 INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY
  - 42.10 PERSONALITY PSYCHOLOGY
  - 42.11 PHYSIOLOGICAL PSYCHOLOGY
  - 42.12 PSYCHOLINGUISTICS
  - 42.13 PSYCHOMETRICS
  - 42.14 PSYCHOPHARMACOLOGY
  - 42.15 QUANTITATIVE PSYCHOLOGY
  - 42.16 SOCIAL PSYCHOLOGY
  - 42.99 PSYCHOLOGY, OTHER
43. PROTECTIVE SERVICES
- 43.01 CRIMINAL JUSTICE
  - 43.02 FIRE PROTECTION
  - 43.03 SECURITY SERVICES
  - 43.99 PROTECTIVE SERVICES, OTHER
44. PUBLIC AFFAIRS
- 44.01 PUBLIC AFFAIRS, GENERAL
  - 44.02 COMMUNITY SERVICES
  - 44.03 INTERNATIONAL PUBLIC SERVICE
  - 44.04 PUBLIC ADMINISTRATION
  - 44.05 PUBLIC POLICY STUDIES
  - 44.06 PUBLIC WORKS
  - 44.07 SOCIAL WORK
  - 44.99 PUBLIC AFFAIRS, OTHER
45. SOCIAL SCIENCES
- 45.01 SOCIAL SCIENCES, GENERAL
  - 45.02 ANTHROPOLOGY
  - 45.03 ARCHAEOLOGY
  - 45.04 CRIMINOLOGY
  - 45.05 DEMOGRAPHY
  - 45.06 ECONOMICS
  - 45.07 GEOGRAPHY
  - 45.08 HISTORY
  - 45.09 INTERNATIONAL RELATIONS
  - 45.10 POLITICAL SCIENCE AND GOVERNMENT
  - 45.11 SOCIOLOGY
  - 45.12 URBAN STUDIES
  - 45.99 SOCIAL SCIENCES, OTHER

46. CONSTRUCTION TRADES

- 46.01 BRICKMASONRY, STONEMASONRY, AND TILE SETTING
- 46.02 CARPENTRY
- 46.03 ELECTRICAL AND POWER TRANSMISSION INSTALLATION
- 46.04 MISCELLANEOUS CONSTRUCTION TRADES
- 46.05 PLUMBING, PIPEFITTING, AND STEAMFITTING
- 46.99 CONSTRUCTION TRADES, OTHER

47. MECHANICS AND REPAIRERS

- 47.01 ELECTRICAL AND ELECTRONICS EQUIPMENT REPAIR
- 47.02 HEATING, AIR CONDITIONING, AND REFRIGERATION
- 47.03 INDUSTRIAL EQUIPMENT MAINTENANCE AND REPAIR
- 47.04 MISCELLANEOUS MECHANICS AND REPAIRERS
- 47.05 STATIONARY ENERGY SOURCES
- 47.06 VEHICLE AND MOBILE EQUIPMENT MECHANICS AND
- 47.99 MECHANICS AND REPAIRERS, OTHER

48. PRECISION PRODUCTION

- 48.01 DRAFTING
- 48.02 GRAPHIC AND PRINTING COMMUNICATIONS
- 48.03 LEATHERWORKING AND UPHOLSTERING
- 48.04 PRECISION FOOD PRODUCTION
- 48.05 PRECISION METAL WORK
- 48.06 PRECISION WORK, ASSORTED MATERIALS
- 48.07 WOODWORKING
- 48.99 PRECISION PRODUCTION, OTHER

49. TRANSPORTATION AND MATERIAL MOVING

- 49.01 AIR TRANSPORTATION
- 49.02 VEHICLE AND EQUIPMENT OPERATION
- 49.03 WATER TRANSPORTATION
- 49.04 TRANSPORTATION, GENERAL
- 49.99 TRANSPORTATION AND MATERIAL MOVING, OTHER

50. VISUAL AND PERFORMING ARTS

- 50.01 VISUAL AND PERFORMING ARTS, GENERAL
- 50.02 CRAFTS
- 50.03 DANCE
- 50.04 DESIGN
- 50.05 DRAMATIC ARTS
- 50.06 FILM ARTS
- 50.07 FINE ARTS
- 50.08 GRAPHIC ARTS TECHNOLOGY
- 50.09 MUSIC

- 50.99 VISUAL AND PERFORMING ARTS, OTHER
- 51. INTERNSHIPS
- 54. ACADEMIC LIFE SKILLS/FUNCTIONAL CURRICULUM
  - 54.1 FUNCTIONAL MATH
  - 54.2 FUNCTIONAL ENGLISH
  - 54.3 FUNCTIONAL LIFE SKILLS
- 55. VOCATIONAL LIFE SKILLS/FUNCTIONAL CURRICULUM
  - 55.0 CAREER PREPARATION/EXPLORATION
  - 55.1 AGRICULTURE
  - 55.2 BUSINESS AND OFFICE
  - 55.3 HEALTH OCCUPATIONS
  - 55.4 HOME ECONOMICS
  - 55.5 INDUSTRIAL ARTS
  - 55.6 SERVICE OCCUPATIONS
  - 55.7 PRECISION PRODUCTION
  - 55.8 TRADES AND INDUSTRIAL CONSTRUCTION
  - 55.9 MECHANICS AND REPAIRERS
- 56. SUBJECT AREA SERVICES

## **Appendix K**

### **Classification of Secondary School Courses, in Code Order**

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|        |   |
|--------|---|
| 010100 | Agricultural Business and Management, Other     |
| 010111 | Agribusiness, Introduction                      |
| 010121 | Agricultural Business Operation                 |
| 010131 | Farm and Ranch Management                       |
| 010141 | State and Community Agriculture                 |
| 010151 | Agricultural Mathematics                        |
| 010161 | Agricultural Microprocessing                    |
| 010171 | Agriculture Cooperatives                        |
| 010172 | Agricultural Cooperative Education II           |
| 010181 | Agriculture, Independent Study                  |
| 010182 | SOEP - Supervised Occupational                  |
| 010200 | Agricultural Mechanics, Other                   |
| 010211 | Agricultural Mechanics, General                 |
| 010212 | Agricultural Mechanics 2                        |
| 010213 | Agricultural Mechanics 3                        |
| 010214 | Agricultural Mechanics 4                        |
| 010221 | Welding, Agricultural                           |
| 010231 | Power and Machinery, Agricultural               |
| 010241 | Farm Construction                               |
| 010251 | Electricity and Electronics, Agricultural       |
| 010261 | Soil and Water Mechanical Practices             |
| 010271 | Surveying, Agricultural                         |
| 010300 | Agricultural Production, Other                  |
| 010311 | Agricultural Production, General                |
| 010312 | Agriculture Technology 1                        |
| 010313 | Agriculture Technology 2                        |
| 010321 | Animal Production                               |
| 010331 | Crop Production                                 |
| 010400 | Agricultural Products and Processing, Other     |
| 010411 | Agricultural Products and Processing I          |
| 010412 | Agricultural Products and Processing II         |
| 010421 | Agricultural Products and Processing -          |
| 010500 | Agricultural Services and Supplies, Other       |
| 010511 | Agricultural Supplies Marketing                 |
| 010521 | Animal Grooming                                 |
| 010600 | Horticulture, Other                             |
| 010611 | Horticulture                                    |
| 010621 | Floriculture                                    |
| 010631 | Landscaping                                     |
| 010632 | Landscaping, Advanced                           |
| 010641 | Greenhouse Management                           |
| 010651 | Nursery Operations and Management               |
| 010661 | Horticultural Mechanics I                       |
| 010662 | Horticultural Mechanics II                      |
| 010671 | Turf Management                                 |
| 010681 | Fruit and Vegetable Production                  |
| 010700 | International Agriculture, Other                |
| 019900 | Agribusiness and Agricultural Production, Other |
| 020100 | Agricultural Sciences, Other General            |

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| 020111 | Agricultural Sciences, General               |
| 020121 | Agricultural Occupations 1                   |
| 020122 | Agricultural Occupations 2                   |
| 020123 | Agricultural Occupations 3                   |
| 020124 | Agricultural Occupations 4                   |
| 020200 | Animal Sciences, Other                       |
| 020211 | Animal Sciences 1                            |
| 020212 | Animal Sciences 2                            |
| 020221 | Livestock 9                                  |
| 020222 | Livestock 10                                 |
| 020231 | Poultry                                      |
| 020241 | Dairy Production                             |
| 020251 | Nutrition and Feeds                          |
| 020261 | Horse Production                             |
| 020262 | Horseshoeing/Farrier Training                |
| 020271 | Small Animal Production 1                    |
| 020272 | Small Animal Production 2                    |
| 020281 | Fish Production                              |
| 020300 | Food Sciences, Other                         |
| 020400 | Plant Sciences, Other                        |
| 020411 | Agronomy                                     |
| 020421 | Ornamental Horticulture 1                    |
| 020422 | Ornamental Horticulture 2                    |
| 020423 | Ornamental Horticulture 3                    |
| 020500 | Soil Sciences, Other                         |
| 020511 | Soil Sciences, General                       |
| 020521 | Fertilizers and Chemicals                    |
| 029900 | Agricultural Sciences, Other                 |
| 030100 | Renewable Natural Resources, Other General   |
| 030200 | Conservation and Regulation, Other           |
| 030211 | Conservation and Regulation                  |
| 030212 | Environmental Management 1                   |
| 030213 | Environmental Management 2                   |
| 030221 | Environmental Management - Cooperative       |
| 030300 | Fishing and Fisheries, Other                 |
| 030311 | Waterman Occupations                         |
| 030400 | Forestry Production and Processing, Other    |
| 030500 | Forestry and Related Sciences, Other         |
| 030511 | Forestry Science 1                           |
| 030512 | Forestry Science 2                           |
| 030521 | Forestry Occupations - Work Experience       |
| 030600 | Wildlife Management, Other                   |
| 030611 | Wildlife Management                          |
| 030621 | Rural Recreation                             |
| 030711 | Marine Management/Oceanography 1             |
| 030712 | Marine Management/Oceanography 2             |
| 039900 | Renewable Natural Resources, Other           |
| 040100 | Architecture and Environmental Design, Other |
| 040200 | Architecture, Other                          |



040211 Architecture, Introduction  
040212 Architecture, Advanced  
040221 Architectural Theory  
040300 City, Community, and Regional Planning, Other  
040400 Environmental Design, Other  
040500 Interior Design, Other  
040511 Interior Design  
040600 Landscape Architecture, Other  
040700 Urban Design, Other  
049900 Architecture and Environmental Design, Other  
050100 Area Studies, Other  
050101 Area Studies  
050102 American Studies, Basic  
050103 American Studies, General  
050104 America's People and Problems  
050105 American Studies, Honors  
050106 New England Studies  
050107 Old South  
050108 American West  
050109 Southwest United States  
050110 Anglo America  
050111 North America and Current Events  
050112 North and South America  
050113 Latin America  
050114 World Studies 1  
050115 World Studies 2  
050116 World Studies, Honors  
050117 Comparative World Cultures  
050118 European Culture Studies, Basic  
050119 European Culture Studies, General  
050120 European Culture Studies, Honors  
050121 Developing Nations  
050122 African Area Studies  
050123 Africa and South America  
050124 Asian and African Cultural Studies, Basic  
050125 Asian and African Cultural Studies, General  
050126 Asian and African Cultural Studies, Honors  
050127 Asian Studies  
050128 History of China  
050129 Asia, Africa and Mideast  
050130 Africa and Middle East  
050131 Middle Eastern Studies  
050132 Middle East, War for Survival  
050133 U S S R  
050134 Soviet Union and China  
050135 Soviet Union and Afro American Developing Nations  
050136 History of Russia  
050137 Neglected World  
050138 Global Education

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| 050139 | Pacific Rim Nations                            |
| 050140 | Canadian Area Studies                          |
| 050200 | Ethnic Studies, Other                          |
| 050211 | Minorities in America                          |
| 050221 | Ethnic and Family Heritage                     |
| 050231 | Afro American Studies                          |
| 050241 | Economics of Afro Americans                    |
| 050251 | Indians of North America                       |
| 050261 | Jewish Historical Significance                 |
| 050271 | Mexican American Heritage                      |
| 050281 | Hawaiian                                       |
| 050291 | Hawaiian Culture Studies, Modern               |
| 059900 | Area and Ethnic Studies, Other                 |
| 060100 | Business and Management, Other General         |
| 060111 | Business Introduction                          |
| 060121 | Business Law                                   |
| 060131 | Business, Independent Study                    |
| 060141 | Business Education, Cooperative                |
| 060200 | Accounting, Other                              |
| 060211 | Accounting/Business Management Careers -       |
| 060300 | Banking and Finance, Other                     |
| 060311 | Financial Careers                              |
| 060321 | Real Estate Finance                            |
| 060331 | Consumer Lending                               |
| 060400 | Business Administration and Management, Other  |
| 060411 | Business Organization and Management           |
| 060500 | Business Economics, Other                      |
| 060511 | Business Economics                             |
| 060600 | Human Resources Development, Other             |
| 060700 | Institutional Management, Other                |
| 060711 | Hotel and Motel Management                     |
| 060712 | Hotel and Motel Training                       |
| 060800 | Insurance and Risk Management, Other           |
| 060811 | Insurance Careers                              |
| 060900 | International Business Management, Other       |
| 061000 | Investments and Securities, Other              |
| 061011 | Investments and Taxation                       |
| 061100 | Labor Industrial Relations, Other              |
| 061200 | Management Information Systems, Other          |
| 061300 | Management Science, Other                      |
| 061400 | Marketing Management and Research, Other       |
| 061411 | Marketing Management and Decision Making       |
| 061500 | Organizational Behavior, Other                 |
| 061600 | Personnel Management, Other                    |
| 061700 | Real Estate, Other                             |
| 061711 | Real Estate Marketing                          |
| 061800 | Small Business Management and Ownership, Other |
| 061811 | Small Business Management                      |
| 061900 | Taxation, Other                                |

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| 062000 | Trade and Industrial Supervision and Management, Other |
| 069900 | Business and Management, Other                         |
| 070100 | Accounting, Bookkeeping, and Related Programs, Other   |
| 070111 | Bookkeeping 1  |
| 070112 | Bookkeeping 2  |
| 070121 | Accounting 1   |
| 070122 | Accounting 2   |
| 070131 | Accounting, College                                    |
| 070141 | Bookkeeping and Accounting 1                           |
| 070142 | Bookkeeping and Accounting 2                           |
| 070151 | Recordkeeping 1  |
| 070152 | Recordkeeping 2  |
| 070153 | Personal Recordkeeping                                 |
| 070161 | Office Machines  |
| 070162 | Office Machines, Vocational                            |
| 070171 | Business Mathematics 1                                 |
| 070172 | Business Mathematics 2                                 |
| 070200 | Banking and Related Financial Programs, Other          |
| 070201 | Banking & Financial Careers                            |
| 070211 | Bank Teller  |
| 070221 | Financial Mathematics                                  |
| 070231 | Bank Proof Operator                                    |
| 070241 | Bank Data Entry Occupations                            |
| 070251 | Banking and Financial Careers - Cooperative            |
| 070300 | Business Data Processing and Related Programs, Other   |
| 070311 | Computers In Business                                  |
| 070321 | Business Data Processing 1                             |
| 070322 | Business Data Processing 2                             |
| 070331 | Business Computer Programming 1                        |
| 070332 | Business Computer Programming 2                        |
| 070341 | Key Punch Operator                                     |
| 070351 | Data Entry Operator 1                                  |
| 070352 | Data Entry Operator 2                                  |
| 070361 | Keyboarding  |
| 070371 | Peripheral Computer Operator                           |
| 070400 | Office Supervision and Management, Other               |
| 070411 | Business English 1                                     |
| 070412 | Business English 2                                     |
| 070413 | Business English 3                                     |
| 070414 | Business English 4                                     |
| 070500 | Personnel and Training Programs, Other                 |
| 070600 | Secretarial and Related Programs, Other                |
| 070611 | Shorthand 1  |
| 070612 | Shorthand 2  |
| 070613 | Speed Writing  |
| 070621 | Transcription  |
| 070631 | Secretarial Administration 1                           |
| 070632 | Secretarial Administration 2                           |
| 070641 | Word Processing 1                                      |

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| 070642 | Word Processing 2                                    |
| 070643 | Word Processing 3                                    |
| 070651 | Reprographics  |
| 070661 | Legal Office Procedures                              |
| 070662 | Court Reporter                                       |
| 070671 | Medical Office Procedures                            |
| 070681 | Legal/Medical Office Procedures                      |
| 070700 | Typing, General Office, and Related Programs, Other  |
| 070711 | Typewriting 1  |
| 070712 | Typewriting 2  |
| 070713 | Typewriting 3  |
| 070721 | Typewriting, Personal                                |
| 070731 | Office Procedures 1                                  |
| 070732 | Office Procedures 2                                  |
| 070733 | Simulated Office                                     |
| 070741 | Office Education 1, Cooperative                      |
| 070742 | Office Education 2, Cooperative                      |
| 079900 | Business and Office, Other                           |
| 080100 | Apparel and Accessories Marketing, Other             |
| 080111 | Fashion Merchandising                                |
| 080121 | Fashion Design and Illustration                      |
| 080131 | Fashion Merchandising - Cooperative                  |
| 080132 | Fashion Merchandising - Cooperative                  |
| 080200 | Business and Personal Services Marketing, Other      |
| 080300 | Entrepreneurship, Other                              |
| 080311 | Starting Your Own Business                           |
| 080321 | Junior Achievement                                   |
| 080400 | Financial Services Marketing, Other                  |
| 080500 | Floristry, Farm and Garden Supplies Marketing, Other |
| 080511 | Floral Sales   |
| 080600 | Food Marketing, Other                                |
| 080611 | Food Marketing/Distribution - Overview               |
| 080612 | Grocery Management                                   |
| 080621 | Food Marketing - Cooperative Education 1             |
| 080622 | Food Marketing - Cooperative Education 2             |
| 080700 | General Marketing, Other                             |
| 080711 | Distributive Education 1                             |
| 080712 | Distributive Education 2                             |
| 080713 | Distributive Education 3                             |
| 080721 | Distributive Education 1, Cooperative                |
| 080722 | Distributive Education 2, Cooperative                |
| 080731 | Salesmanship   |
| 080741 | Retail Learning Laboratory                           |
| 080751 | Cashier Checker Training                             |
| 080761 | Warehousing Industrial and Wholesale Material        |
| 080771 | Distributive Education, Independent Study            |
| 080781 | Telephone Service Representative                     |
| 080782 | Telephone Directory Assistant                        |
| 080800 | Home and Office Products Marketing, Other            |

080811 Computer Sales Representative  
080900 Hospitality and Recreation Marketing, Other  
080911 Orientation to Hospitality Careers  
080921 Hospitality Sales 1  
080922 Hospitality Sales 2  
081000 Insurance Marketing, Other  
081100 Transportation and Travel Marketing, Other  
081111 Tourism Services  
081121 Entertainment Park/Tourism - Cooperative  
081200 Vehicles and Petroleum Marketing, Other  
081211 Auto Parts Merchandising  
081221 Automotive Professional Training  
089900 Marketing and Distribution, Other  
090100 Communications, Other General  
090111 Mass Media  
090121 Intercultural Communications  
090200 Advertising, Other  
090211 Advertising  
090300 Communications Research, Other  
090400 Journalism (Mass Communications), Other  
090411 Journalism 1  
090412 Journalism 2  
090413 Journalism 3  
090421 Journalism Investigations  
090431 Literary Magazine  
090441 Yearbook Production 1  
090442 Yearbook Production 2  
090500 Public Relations, Other  
090600 Radio/Television News Broadcast, Other  
090611 Broadcast Journalism  
090612 Careers in Radio/Television Broadcasting  
090700 Radio/Television, Other General  
090711 Broadcasting, Introduction  
090721 Television and Taste  
090811 Sign Language 1  
090812 Sign Language 2  
090821 Braille Communications  
090831 Cryptography  
099900 Communications, Other  
100100 Communication Technologies, Other  
100111 World of Communications  
100121 Communications Media Production  
100131 Photography, Commercial  
100132 Photography, Advanced Commercial  
100141 Broadcast Management 1  
100142 Broadcast Management 2  
100143 Broadcasting Practicum  
100151 Film Making and Production 1  
100152 Film Making and Production 2

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| 100161 | Radio Production                                 |
| 100171 | Television Production 1                          |
| 100172 | Television Production 2                          |
| 100173 | Television Production 3                          |
| 100174 | Television Production 4                          |
| 100181 | Cable Television                                 |
| 100191 | Radio/Television Production 1                    |
| 100192 | Radio/Television Production 2                    |
| 110100 | Computer and Information Sciences, Other General |
| 110111 | Computer Appreciation                            |
| 110121 | Computer Mathematics 1                           |
| 110122 | Computer Mathematics 2                           |
| 110131 | Computer Applications                            |
| 110132 | Computer Applications, Independent Study         |
| 110141 | Computer Science, Advanced Placement             |
| 110151 | Artificial Intelligence                          |
| 110200 | Computer Programming, Other                      |
| 110211 | Computer Programming 1                           |
| 110212 | Computer Programming 2                           |
| 110213 | Computer Programming 3                           |
| 110221 | FORTRAN, Introduction                            |
| 110231 | PASCAL, Introduction                             |
| 110232 | Advanced PASCAL                                  |
| 110241 | BASIC, Introduction                              |
| 110242 | Advanced BASIC                                   |
| 110251 | COBOL, Introduction                              |
| 110252 | Advanced COBOL                                   |
| 110261 | LOGO, Introduction                               |
| 110271 | RPG Programming, Introduction                    |
| 110300 | Data Processing, Other                           |
| 110311 | Data Processing, Introduction                    |
| 110312 | Data Processing, Intermediate                    |
| 110313 | Data Processing, Advanced                        |
| 110321 | Computer Programming - Cooperative Education     |
| 110400 | Information Sciences and Systems, Other          |
| 110500 | Systems Analysis, Other                          |
| 119900 | Computer and Information Sciences, Other         |
| 120100 | Drycleaning and Laundering Services, Other       |
| 120111 | Dry Cleaning 1                                   |
| 120112 | Dry Cleaning 2                                   |
| 120200 | Entertainment Services, Other                    |
| 120211 | Sports Officiating                               |
| 120300 | Funeral Services, Other                          |
| 120400 | Personal Services, Other                         |
| 120411 | Cosmetology                                      |
| 120412 | Cosmetology 2                                    |
| 120413 | Cosmetology 3                                    |
| 120414 | Cosmetology - Cooperative Education 2            |
| 120415 | Cosmetology - Cooperative Education 2            |

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| 120421 | Barbering 1   |
| 120422 | Barbering 2   |
| 120423 | Barbering 3   |
| 120431 | Personal Services Occupations                         |
| 120511 | General Services Occupations 1                        |
| 120512 | General Services Occupations 2                        |
| 120513 | General Services Occupations 3                        |
| 120514 | General Services Occupations 4                        |
| 120521 | Building & Grounds Maintenance                        |
| 120522 | Building & Grounds Maintenance                        |
| 120523 | Building & Grounds Maintenance                        |
| 120531 | Industrial Maintenance/Mechanics 1                    |
| 120532 | Industrial Maintenance/Mechanics 2                    |
| 129900 | Consumer, Personal, and Miscellaneous Services, Other |
| 130100 | Education, Other General                              |
| 130200 | Bilingual/Bicultural Education, Other                 |
| 130300 | Curriculum and Instruction, Other                     |
| 130400 | Education Administration, Other                       |
| 130500 | Educational Media, Other                              |
| 130600 | Evaluation and Research, Other                        |
| 130700 | International and Comparative Education, Other        |
| 130800 | School Psychology, Other                              |
| 130900 | Social Foundations, Other                             |
| 131000 | Special Education, Other                              |
| 131100 | Student Counseling and Personnel Services, Other      |
| 131200 | Teacher Education, General Programs, Other            |
| 131300 | Teacher Education, Specific Subject Areas, Other      |
| 131400 | Teaching English as a Second Language/Foreign         |
| 139900 | Education, Other                                      |
| 140100 | Engineering, Other General                            |
| 140111 | Orientation to Engineering                            |
| 140200 | Aerospace, Aeronautical, and Astronautical            |
| 140211 | Aerospace Materials                                   |
| 140221 | Aerospace Engineering Design                          |
| 140300 | Agricultural Engineering, Other                       |
| 140400 | Architectural Engineering, Other                      |
| 140411 | Strength of Materials - Architectural                 |
| 140500 | Bioengineering and Biomedical Engineering, Other      |
| 140600 | Ceramic Engineering, Other                            |
| 140700 | Chemical Engineering, Other                           |
| 140800 | Civil Engineering, Other                              |
| 140900 | Computer Engineering, Other                           |
| 141000 | Electrical, Electronics, and Communications           |
| 141100 | Engineering Mechanics, Other                          |
| 141200 | Engineering Related, Other                            |
| 141211 | Instrumentation Physics 1                             |
| 141212 | Instrumentation Physics 2                             |
| 141213 | Instrumentation Physics 3                             |
| 141214 | Instrumentation Physics 4 /Advanced Placement         |

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| 141300 | Engineering Science, Other                        |
| 141400 | Environmental Health Engineering, Other           |
| 141500 | Geological Engineering, Other                     |
| 141600 | Geophysical Engineering, Other                    |
| 141700 | Industrial Engineering, Other                     |
| 141800 | Materials, Engineering, Other                     |
| 141900 | Mechanical Engineering, Other                     |
| 141911 | Strength of Materials - Mechanical Technology     |
| 142000 | Metallurgical Engineering, Other                  |
| 142011 | Metallurgy/Powder Metal Basics                    |
| 142100 | Mining and Mineral Engineering, Other             |
| 142200 | Naval Architecture and Marine Engineering, Other  |
| 142300 | Nuclear Engineering, Other                        |
| 142400 | Ocean Engineering, Other                          |
| 142500 | Petroleum Engineering, Other                      |
| 142600 | Surveying and Mapping Sciences, Other             |
| 142611 | Cartography                                       |
| 142700 | Systems Engineering, Other                        |
| 142800 | Textile Engineering, Other                        |
| 149900 | Engineering, Other                                |
| 150100 | Architectural Technologies, Other                 |
| 150111 | Structural Engineering Technician                 |
| 150200 | Civil Technologies, Other                         |
| 150211 | Surveying   |
| 150221 | Civil Engineering Technician                      |
| 150300 | Electrical and Electronic Technologies, Other     |
| 150311 | Audio Electronics                                 |
| 150321 | Electrical Technology                             |
| 150331 | Electronic Technology 1                           |
| 150332 | Electronic Technology 2                           |
| 150333 | Electronics Fabrication                           |
| 150341 | Electrical/Electronics Engineering Technician     |
| 150400 | Electromechanical Instrumentation and Maintenance |
| 150411 | Electromechanical Technology 1                    |
| 150412 | Electromechanical Technology 2                    |
| 150421 | Instrumentation Technology                        |
| 150431 | Computer-Assisted Design/Drafting (CAD)           |
| 150500 | Environmental Control Technologies, Other         |
| 150511 | Environmental Control Technologies                |
| 150600 | Industrial Production Technologies, Other         |
| 150601 | Industrial Research & Development                 |
| 150611 | Industrial Production Technology 1                |
| 150612 | Industrial Production Technology 2                |
| 150621 | Chemical Manufacturing Technology                 |
| 150631 | Optics Technology                                 |
| 150700 | Quality Control and Safety Technologies, Other    |
| 150711 | Quality Control Technology                        |
| 150800 | Mechanical and Related Technologies, Other        |
| 150811 | Automotive Design & Technology                    |



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| 150821 | Mechanical Engineering Technology                       |
| 150900 | Mining and Petroleum Technologies, Other                |
| 150911 | Mining Technology                                       |
| 150921 | Petroleum Technology                                    |
| 159900 | Engineering and Engineering-Related Technologies, Other |
| 160100 | Foreign Languages, Multiple Emphasis, Other             |
| 160111 | Foreign Language, Exploratory                           |
| 160121 | English as a Second Language 1                          |
| 160122 | English as a Second Language 2                          |
| 160123 | English as a Second Language 3                          |
| 160124 | English as a Second Language, Skills Lab                |
| 160125 | Transitional English                                    |
| 160200 | African (Non-Semitic) Languages, Other                  |
| 160211 | Swahili 1   |
| 160212 | Swahili 2   |
| 160221 | Amharic 1 (Ethiopian)                                   |
| 160222 | Amharic 2 (Ethiopian)                                   |
| 160300 | Asiatic Languages, Other                                |
| 160311 | Cantonese 1   |
| 160312 | Cantonese 2   |
| 160313 | Cantonese 3   |
| 160314 | Cantonese 4   |
| 160321 | Mandarin 1  |
| 160322 | Mandarin 2  |
| 160323 | Mandarin 3  |
| 160324 | Mandarin 4  |
| 160325 | Mandarin 5  |
| 160331 | Japanese 1  |
| 160332 | Japanese 2  |
| 160333 | Japanese 3  |
| 160334 | Japanese 4  |
| 160335 | Japanese 5  |
| 160336 | Foreign Language Contract, Japanese                     |
| 160341 | Hawaiian 1  |
| 160342 | Hawaiian 2  |
| 160343 | Hawaiian 3  |
| 160344 | Hawaiian 4  |
| 160345 | Hawaiian Language and Culture                           |
| 160351 | Korean 1  |
| 160352 | Korean 2  |
| 160353 | Korean 3  |
| 160354 | Korean 4  |
| 160355 | Korean 5  |
| 160400 | Balto-Slavic Languages, Other                           |
| 160411 | Ukrainian 1   |
| 160421 | Russian 1   |
| 160422 | Russian 2   |
| 160423 | Russian 3   |
| 160424 | Russian 4   |

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| 160425 | Russian 5                          |
| 160426 | Russian 6                          |
| 160427 | Foreign Language Contract, Russian |
| 160431 | Czech 1                            |
| 160432 | Czech 2                            |
| 160433 | Czech 3                            |
| 160441 | Polish 1                           |
| 160442 | Polish 2                           |
| 160443 | Polish 3                           |
| 160444 | Polish 4                           |
| 160451 | Finnish 1                          |
| 160452 | Finnish 2                          |
| 160453 | Finnish 3                          |
| 160454 | Finnish 4                          |
| 160500 | Germanic Languages, Other          |
| 160501 | Dutch 1                            |
| 160502 | Dutch 2                            |
| 160503 | Dutch 3                            |
| 160511 | German 7                           |
| 160512 | German 8                           |
| 160513 | German 1                           |
| 160514 | German 2                           |
| 160515 | German 3                           |
| 160516 | German 4                           |
| 160517 | German, Advanced Placement         |
| 160518 | German Field-Based Experience      |
| 160519 | Foreign Language Contract, German  |
| 160521 | Norwegian 1                        |
| 160522 | Norwegian 2                        |
| 160531 | Swedish 1                          |
| 160532 | Swedish 2                          |
| 160533 | Swedish 3                          |
| 160541 | Yiddish 1                          |
| 160542 | Yiddish 2                          |
| 160543 | Yiddish 3                          |
| 160600 | Greek, Other                       |
| 160611 | Modern Greek for Survival          |
| 160621 | Modern Greek                       |
| 160622 | Modern Greek 2                     |
| 160623 | Modern Greek 3                     |
| 160624 | Modern Greek 4                     |
| 160631 | Classical Greek 1                  |
| 160632 | Classical Greek 2                  |
| 160633 | Classical Greek 3                  |
| 160634 | Classical Greek 4                  |
| 160700 | Indic Languages, Other             |
| 160800 | Iranian Languages, Other           |
| 160900 | Italic Languages, Other            |
| 160901 | French 7                           |

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| 160902 | French 8                           |
| 160903 | French 1                           |
| 160904 | French 2                           |
| 160905 | French 3                           |
| 160906 | French 4                           |
| 160907 | French, Advanced Placement         |
| 160908 | French Field-Based Experience      |
| 160909 | Foreign Language Contract, French  |
| 160910 | French, Conversational             |
| 160911 | Italian 7                          |
| 160912 | Italian 8                          |
| 160913 | Italian 1                          |
| 160914 | Italian 2                          |
| 160915 | Italian 3                          |
| 160916 | Italian 4                          |
| 160917 | Italian, Advanced Placement        |
| 160918 | Italian Field-Based Experience     |
| 160919 | Foreign Language Contract, Italian |
| 160920 | Latin 1                            |
| 160921 | Latin 2                            |
| 160922 | Latin 3                            |
| 160923 | Latin 4                            |
| 160924 | Latin, Advanced Placement          |
| 160925 | Foreign Language Contract, Latin   |
| 160926 | Portuguese 1                       |
| 160927 | Portuguese 2                       |
| 160928 | Portuguese 3                       |
| 160929 | Portuguese 4                       |
| 160930 | Portuguese 5                       |
| 160931 | Spanish 7                          |
| 160932 | Spanish 8                          |
| 160933 | Spanish 1                          |
| 160934 | Spanish 2                          |
| 160935 | Spanish 3                          |
| 160936 | Spanish 4                          |
| 160937 | Spanish, Advanced Placement        |
| 160938 | Spanish Field-Based Experience     |
| 160939 | Foreign Language Contract, Spanish |
| 160940 | Unused Code                        |
| 160941 | Spanish for Travelers              |
| 160942 | Spanish, Commercial                |
| 161000 | Native American Languages, Other   |
| 161100 | Semitic Languages, Other           |
| 161111 | Hebrew 1                           |
| 161112 | Hebrew 2                           |
| 161113 | Hebrew 3                           |
| 161114 | Hebrew 4                           |
| 161115 | Arabic 1                           |
| 161116 | Arabic 2                           |

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| 161117 | Arabic 3   |
| 161118 | Arabic 4   |
| 161119 | Foreign Language Contract - Arabic               |
| 161211 | Turkish 1  |
| 161212 | Turkish 2  |
| 161311 | Spanish for Native Speakers 1                    |
| 161312 | Spanish for Native Speakers 2                    |
| 161313 | Spanish for Native Speakers 3                    |
| 161314 | Spanish for Native Speakers 4                    |
| 161315 | Spanish for Native Speakers 5/Advanced Placement |
| 161321 | Portuguese for Native Speakers 1                 |
| 161322 | Portuguese for Native Speakers 2                 |
| 161323 | Portuguese for Native Speakers 3                 |
| 161324 | Portuguese for Native Speakers 4                 |
| 161331 | Italian for Native Speakers 1                    |
| 161332 | Italian for Native Speakers 2                    |
| 161333 | Italian for Native Speakers 3                    |
| 161341 | Japanese for Native Speakers 1                   |
| 161342 | Japanese for Native Speakers 2                   |
| 161343 | Japanese for Native Speakers 3                   |
| 161351 | Chinese for Native Speakers 1                    |
| 161352 | Chinese for Native Speakers 2                    |
| 161353 | Chinese for Native Speakers 3                    |
| 161361 | French for Native Speakers 1                     |
| 161362 | French for Native Speakers 2                     |
| 161363 | French for Native Speakers 3                     |
| 161364 | French for Native Speakers 4                     |
| 169900 | Foreign Languages, Other                         |
| 170100 | Dental Services, Other                           |
| 170111 | Dental Assistant 1                               |
| 170112 | Dental Assistant 2                               |
| 170121 | Dental Assistant, Cooperative                    |
| 170131 | Dental Technology 1                              |
| 170132 | Dental Technology 2                              |
| 170200 | Diagnostic and Treatment Services, Other         |
| 170211 | First Aid  |
| 170221 | EKG Technician                                   |
| 170300 | Medical Laboratory Technologies, Other           |
| 170311 | Laboratory Program 1                             |
| 170312 | Laboratory Program 2                             |
| 170321 | Chemical Technology 1                            |
| 170322 | Chemical Technology 2                            |
| 170400 | Mental Health/Human Services, Other              |
| 170411 | Home Health Aide                                 |
| 170421 | Community Health                                 |
| 170431 | Mental Health Worker                             |
| 170500 | Miscellaneous Allied Health Services, Other      |
| 170511 | Health Occupations 1                             |
| 170521 | Health Occupations 2                             |

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| 170522 | Central Service Technician                   |
| 170531 | Medical Terminology                          |
| 170541 | Medical Records Secretary                    |
| 170551 | Medical Assisting                            |
| 170561 | Sports Medicine                              |
| 170571 | Veterinary Science                           |
| 170581 | Chemistry for Health Science                 |
| 170591 | Health Occupations, Independent Study        |
| 170592 | Health Occupations - Cooperative Education 1 |
| 170593 | Health Occupations - Cooperative Education 2 |
| 170600 | Nursing-Related Services, Other              |
| 170611 | Student Assessment of Child Health           |
| 170621 | Nursing, Practical                           |
| 170631 | Nurse's Aide and Orderly                     |
| 170641 | Nurse's Aide, Cooperative                    |
| 170651 | Nurse's Mathematics                          |
| 170700 | Ophthalmic Services, Other                   |
| 170711 | Optical Services Assistant                   |
| 170800 | Rehabilitation Services, Other               |
| 179900 | Allied Health, Other                         |
| 180100 | Audiology and Speech Pathology, Other        |
| 180200 | Basic Clinical Health Sciences, Other        |
| 180300 | Chiropractic, Other                          |
| 180400 | Dentistry, Other                             |
| 180500 | Emergency/Disaster Science, Other            |
| 180600 | Epidemiology, Other                          |
| 180700 | Health Sciences Administration, Other        |
| 180800 | Hematology, Other                            |
| 180900 | Medical Laboratory, Other                    |
| 181000 | Medicine, Other                              |
| 181100 | Nursing, Other                               |
| 181200 | Optometry, Other                             |
| 181300 | Osteopathic Medicine, Other                  |
| 181400 | Pharmacy, Other                              |
| 181411 | Pharmacy Technician                          |
| 181500 | Podiatry, Other                              |
| 181600 | Population and Family Planning, Other        |
| 181700 | Pre-Dentistry, Other                         |
| 181800 | Pre-Medicine, Other                          |
| 181801 | Medical Ethics                               |
| 181900 | Pre-Pharmacy, Other                          |
| 182000 | Pre-Veterinary, Other                        |
| 182100 | Prosectorial Science, Other                  |
| 182200 | Public Health Laboratory Science, Other      |
| 182300 | Toxicology (Clinical), Other                 |
| 182400 | Veterinary Medicine, Other                   |
| 189900 | Health Sciences, Other                       |
| 190100 | Home Economics, Other General                |
| 190200 | Business Home Economics, Other               |

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| 190300 | Family and Community Services, Other            |
| 190400 | Family/Consumer Resource Management, Other      |
| 190500 | Food Sciences and Human Nutrition, Other        |
| 190600 | Human Environment and Housing, Other            |
| 190700 | Individual and Family Development, Other        |
| 190800 | International/Comparative Home Economics, Other |
| 190900 | Textiles and Clothing, Other                    |
| 199900 | Home Economics, Other                           |
| 200100 | Consumer and Homemaking Home Economics, Other   |
| 200111 | Home Economics 7                                |
| 200112 | Home Economics 8                                |
| 200113 | Home Economics 1                                |
| 200114 | Home Economics 2                                |
| 200115 | Home Economics 3                                |
| 200116 | Home Economics 4                                |
| 200117 | Adult Roles and Functions                       |
| 200118 | Comprehensive Consumer and Homemaking Home      |
| 200121 | Child Development 8                             |
| 200122 | Child Development 1                             |
| 200123 | Child Development 2                             |
| 200124 | Child Development 3                             |
| 200125 | Child Development 4                             |
| 200126 | Current Issues in Child Development             |
| 200131 | Clothing 7                                      |
| 200132 | Clothing 8                                      |
| 200133 | Clothing 1                                      |
| 200134 | Clothing 2                                      |
| 200135 | Clothing 3                                      |
| 200136 | Clothing 4                                      |
| 200137 | Tailoring                                       |
| 200141 | Consumer Education                              |
| 200142 | Consumer Education 2                            |
| 200151 | Home Economics Occupations 1, Exploratory       |
| 200152 | Home Economics Occupations 2, Exploratory       |
| 200153 | Home Economics Laboratory Assistant             |
| 200154 | Home Economics Leadership                       |
| 200161 | Family Health 1                                 |
| 200162 | Family Health 2                                 |
| 200171 | Family Relations                                |
| 200172 | Marriage Society and Change                     |
| 200173 | Parenthood                                      |
| 200181 | Foods and Nutrition 7                           |
| 200182 | Foods and Nutrition 8                           |
| 200183 | Foods 1   |
| 200184 | Foods 2   |
| 200185 | Foods 3   |
| 200186 | Foods 4   |
| 200187 | International Foods                             |
| 200188 | Nutrition                                       |

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| 200191 | Home Management 1   |
| 200192 | Home Management 2   |
| 200193 | Home Economics - Cooperative Education 1                              |
| 200194 | Home Economics - Cooperative Education 2                              |
| 200200 | Child Care and Guidance Management and Services, Other                |
| 200211 | Child Care Services   |
| 200221 | Child Care Aide   |
| 200231 | Child Care Management   |
| 200241 | Foster Care and Family Care   |
| 200251 | Teacher Aide/Elementary   |
| 200252 | Teacher Aide/Secondary  |
| 200261 | Child Care - Cooperative Education 1                                  |
| 200262 | Child Care - Cooperative Education 2                                  |
| 200300 | Clothing, Apparel, and Textiles Management, Production, and Services, |
| 200311 | Clothing Occupations 1  |
| 200312 | Clothing Occupations 2  |
| 200313 | Clothing Occupations 3  |
| 200314 | Clothing Occupations - Cooperative Education I                        |
| 200315 | Clothing Occupations - Cooperative Education 2                        |
| 200321 | Clothing Maintenance Aide   |
| 200331 | Commercial Garment and Apparel Construction                           |
| 200341 | Custom Apparel Construction   |
| 200351 | Custom Tailoring and Alteration                                       |
| 200361 | Wedding and Specialty Consulting                                      |
| 200371 | Fashion and Fabric Coordination                                       |
| 200381 | Textiles Testing  |
| 200391 | Clothing Production Management  |
| 200400 | Food Production, Management and Services, Other                       |
| 200411 | Food Service Training   |
| 200412 | Food Service Training 2   |
| 200413 | Food Services/Restaurant Management                                   |
| 200421 | Food Service Cooperative Training                                     |
| 200431 | Baking  |
| 200441 | Chef  |
| 200451 | Catering  |
| 200461 | Dietetic Aide   |
| 200471 | Food Testing  |
| 200481 | School Food Service   |
| 200500 | Home Furnishings and Equipment Management, Production, and Services,  |
| 200511 | Housing and Interior Design 1   |
| 200512 | Housing and Interior Design 2   |
| 200513 | Interior Design Occupations   |
| 200521 | Floral Design   |
| 200531 | Home Decorating   |
| 200541 | Home Furnishings Aide   |
| 200551 | Custom Drapery and Window Treatment Design                            |
| 200561 | Custom Slipcovering and Upholstering                                  |
| 200571 | Home-Service Assisting 1  |
| 200572 | Home Service Assisting 2  |

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| 200573 | Home Service Asst - Cooperative Education 1       |
| 200574 | Home Service Asst - Cooperative Education 2       |
| 200600 | Institutional, Home Management, and Supporting    |
| 200611 | Custodial Services                                |
| 200621 | Executive Housekeeping                            |
| 200631 | Homemaker's Aide                                  |
| 200641 | Companion to the Aged                             |
| 200642 | Geriatrics 2                                      |
| 200643 | Geriatrics - Cooperative Education 1              |
| 200644 | Geriatrics - Cooperative Education 2              |
| 200651 | Consumer Aide                                     |
| 200661 | Therapeutic Recreation Aide                       |
| 200671 | Institutional, Home Management Support Services - |
| 209900 | Vocational Home Economics, Other                  |
| 210100 | Industrial Arts, Other                            |
| 210101 | Industrial Arts 7                                 |
| 210102 | Industrial Arts 8                                 |
| 210103 | Industrial Arts 1                                 |
| 210104 | Industrial Arts 2                                 |
| 210105 | Industrial Arts 3                                 |
| 210106 | Industrial Arts 4                                 |
| 210107 | Industry and Technology                           |
| 210108 | Industrial Production                             |
| 210109 | Industrial Occupations 1                          |
| 210110 | Industrial Occupations 2                          |
| 210111 | Industrial Cooperative Work Experience            |
| 210112 | Industrial Cooperative Work Experience, Advanced  |
| 210113 | Electricity 1                                     |
| 210114 | Electricity 2                                     |
| 210115 | Electronics 1                                     |
| 210116 | Electronics 2                                     |
| 210117 | Electronics 3                                     |
| 210118 | Electronics 4                                     |
| 210119 | Electricity and Electronics, Introduction         |
| 210120 | Electricity and Electronics, Advanced             |
| 210121 | Machine Shop 1                                    |
| 210122 | Machine Shop 2                                    |
| 210123 | Machine Shop 3                                    |
| 210124 | Machine Shop 4                                    |
| 210125 | Industrial Education Management Trainee           |
| 210126 | Industrial Arts Research                          |
| 210130 | Electricity - Cooperative Education 1             |
| 210131 | Electricity - Cooperative Education 2             |
| 210140 | Electronics - Cooperative Education 1             |
| 210141 | Electronics - Cooperative Education 2             |
| 210150 | Electricity/Electronics - Cooperative             |
| 210151 | Electricity/Electronics - Cooperative             |
| 220100 | Law, Other  |
| 220111 | Law Fundamentals                                  |



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| 220121 | Law and You                  |
| 220131 | Street Law                   |
| 230100 | English, Other General       |
| 230101 | English 7                    |
| 230102 | English 7, Honors            |
| 230103 | English 8, Below Grade Level |
| 230104 | English 8                    |
| 230105 | English 8, Honors            |
| 230106 | English 1, Below Grade Level |
| 230107 | English 1                    |
| 230108 | English 1, Honors            |
| 230109 | English 2, Below Grade Level |
| 230110 | English 2                    |
| 230111 | English 2, Honors            |
| 230112 | English 3, Below Grade Level |
| 230113 | English 3                    |
| 230114 | English 3, Honors            |
| 230115 | English 4, Below Grade Level |
| 230116 | English 4                    |
| 230117 | English 4, Honors            |
| 230118 | World Literature             |
| 230119 | Renaissance Literature       |
| 230120 | Romanticism                  |
| 230121 | Realism                      |
| 230122 | Literature, Contemporary     |
| 230123 | Irish Literature             |
| 230124 | Russian Literature           |
| 230125 | Bible as Literature          |
| 230126 | Mythology and Fable          |
| 230127 | Drama, Introduction          |
| 230128 | World Drama                  |
| 230129 | Plays, Modern Survey         |
| 230130 | Novels                       |
| 230131 | Short Story                  |
| 230132 | Mysteries                    |
| 230133 | Poetry                       |
| 230134 | Rock Poetry                  |
| 230135 | Humor                        |
| 230136 | Biography                    |
| 230137 | Non Fiction                  |
| 230138 | Science Fiction              |
| 230139 | Themes in Literature         |
| 230140 | Literature of Human Values   |
| 230141 | Ethnic Literature            |
| 230142 | Women in Literature          |
| 230143 | Sports through Literature    |
| 230144 | Occult Literature            |
| 230145 | Protest Literature           |
| 230146 | Youth and Literature         |

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| 230147  | Heroes   |
| 230148  | Utopias  |
| 230149  | Death  |
| 230150  | Nobel Prize Authors  |
| 230151  | Seminar on an Author                                       |
| 230152  | English, Real Life Problem Solving                         |
| 230153  | Reading, Independent Study                                 |
| 230154  | Research Technique   |
| 230155  | Children's Literature & Fantasy                            |
| 230156  | Vocational English   |
| 2301610 | English Skills 1 for Visually Impaired                     |
| 2301620 | English Skills 2 for Visually Impaired                     |
| 2301630 | English Skills 3 for Visually Impaired                     |
| 2301640 | English Skills 4 for Visually Impaired                     |
| 230200  | Classics, Other  |
| 230211  | Mythological Literature, Greek and Roman                   |
| 230300  | Comparative Literature, Other                              |
| 230311  | Comparative Literature                                     |
| 230321  | Latin American Authors/Literature                          |
| 230400  | Composition, Other   |
| 230401  | Composition, Expository                                    |
| 230402  | Writing Laboratory   |
| 230403  | Writing About Literature                                   |
| 230404  | Vocabulary   |
| 230405  | Spelling   |
| 230406  | Grammar 7  |
| 230407  | Grammar 8  |
| 230408  | Grammar 9  |
| 230409  | Grammar 10   |
| 230410  | Grammar 11   |
| 230411  | Grammar 12   |
| 230412  | Etymology  |
| 230413  | Handwriting  |
| 230414  | Interpersonal Communication                                |
| 230415  | Word Study - Remedial                                      |
| 230500  | Creative Writing, Other                                    |
| 230511  | Creative Writing 10  |
| 230512  | Creative Writing 11  |
| 230513  | Creative Writing 12  |
| 230521  | Creative Writing, Independent Study                        |
| 230600  | Linguistics (includes Phonetics, Semantics, and Philology) |
| 230611  | Linguistics  |
| 230700  | Literature, American, Other                                |
| 230711  | American Literature  |
| 230721  | Black Literature   |
| 230741  | Folklore, American   |
| 230751  | Indian Literature  |
| 230761  | State Writers  |
| 230771  | Western Literature   |

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| 230781 | Mexican American Literature                  |
| 230800 | Literature, English, Other                   |
| 230811 | British Literature Survey                    |
| 230821 | Shakespeare                                  |
| 230831 | Modern British Writers                       |
| 230841 | Victorian Literature                         |
| 230851 | Satire, Modern British                       |
| 230861 | Arthurian Legend                             |
| 230871 | Medieval Literature                          |
| 230900 | Rhetoric, Other                              |
| 231000 | Speech, Debate, and Forensics, Other         |
| 231011 | Public Speaking                              |
| 231021 | Speech 1                                     |
| 231022 | Speech 2                                     |
| 231023 | Speech 3                                     |
| 231031 | Debate Practicum Contract                    |
| 231100 | Technical and Business Writing, Other        |
| 231111 | Technical English                            |
| 231211 | Reading Development 1                        |
| 231212 | Reading Development 2                        |
| 231213 | Reading Development 3                        |
| 231214 | Reading Development 4                        |
| 231215 | Speed Reading                                |
| 231216 | Advanced Reading & Study Skills              |
| 231311 | Functional English 1                         |
| 231312 | Functional English 2                         |
| 231313 | Functional English 3                         |
| 231314 | Functional English 4                         |
| 239900 | Letters, Other                               |
| 240100 | Liberal/General Studies, Other               |
| 240111 | Liberal Studies                              |
| 240121 | Summer Abroad                                |
| 240131 | Independent Study                            |
| 240141 | Gifted and Talented Program                  |
| 250100 | Library and Archival Sciences, Other General |
| 250111 | Library Science                              |
| 250200 | Archival Science, Other                      |
| 250300 | Library Assisting, Other                     |
| 250311 | Library Assistant                            |
| 250400 | Library Science, Other                       |
| 250500 | Museology, Other                             |
| 259900 | Library and Archival Sciences, Other         |
| 260100 | Biology, Other General                       |
| 260111 | Science 7                                    |
| 260121 | Biology, Basic 1                             |
| 260122 | Biology, Basic 2                             |
| 260131 | Biology, General 1                           |
| 260132 | Biology, General 2                           |
| 260141 | Biology, Honors 1                            |

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| 260142 | Biology, Advanced                                     |
| 260151 | Field Biology   |
| 260161 | Genetics  |
| 260171 | Biopsychology   |
| 260181 | Biology Seminar                                       |
| 260200 | Biochemistry and Biophysics, Other                    |
| 260211 | Biochemistry  |
| 260300 | Botany, Other   |
| 260311 | Botany  |
| 260400 | Cell and Molecular Biology, Other                     |
| 260411 | Cell Biology  |
| 260500 | Microbiology, Other                                   |
| 260511 | Microbiology  |
| 260600 | Miscellaneous Specialized Areas, Life Sciences, Other |
| 260611 | Ecology   |
| 260621 | Marine Biology  |
| 260622 | Marine Biology, Advanced                              |
| 260631 | Anatomy   |
| 260700 | Zoology, Other  |
| 260711 | Zoology   |
| 260721 | Zoology, Vertebrate                                   |
| 260731 | Zoology, Invertebrate                                 |
| 260741 | Animal Behavior                                       |
| 260751 | Physiology, Human                                     |
| 260752 | Physiology, Advanced                                  |
| 260761 | Pathology   |
| 260771 | Comparative Embryology                                |
| 269900 | Life Sciences, Other                                  |
| 270100 | Mathematics, Other General                            |
| 270101 | Mathematics 7   |
| 270102 | Mathematics 7, Accelerated                            |
| 270103 | Mathematics 8   |
| 270104 | Mathematics 8, Accelerated                            |
| 270105 | Unused Code   |
| 270106 | Mathematics 1, General                                |
| 270107 | Mathematics 2, General                                |
| 270108 | Science Mathematics                                   |
| 270109 | Mathematics in the Arts                               |
| 270110 | Mathematics, Vocational                               |
| 270111 | Technical Mathematics                                 |
| 270112 | Mathematics Review                                    |
| 270113 | Mathematics Tutoring                                  |
| 270114 | Consumer Mathematics                                  |
| 270200 | Actuarial Sciences, Other                             |
| 270300 | Applied Mathematics, Other                            |
| 270400 | Pure Mathematics, Other                               |
| 270401 | Pre-Algebra   |
| 270402 | Algebra 1, Part 1                                     |
| 270403 | Algebra 1, Part 2                                     |

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| 270404 | Algebra 1                                 |
| 270405 | Algebra 2                                 |
| 270406 | Geometry, Plane                           |
| 270407 | Geometry, Solid                           |
| 270408 | Geometry, Plane and Solid                 |
| 270409 | Geometry, Informal                        |
| 270410 | Algebra 3                                 |
| 270411 | Trigonometry                              |
| 270412 | Analytic Geometry                         |
| 270413 | Trigonometry and Solid Geometry           |
| 270414 | Algebra and Trigonometry                  |
| 270415 | Algebra and Analytic Geometry             |
| 270416 | Analysis, Introductory                    |
| 270417 | Linear Algebra                            |
| 270418 | Calculus and Analytic Geometry            |
| 270419 | Calculus                                  |
| 270420 | Calculus, Advanced Placement              |
| 270421 | Mathematics 1, Unified                    |
| 270422 | Mathematics 2, Unified                    |
| 270423 | Mathematics 3, Unified                    |
| 270424 | Mathematics, Independent Study            |
| 270500 | Statistics, Other                         |
| 270511 | Statistics                                |
| 270521 | Probability                               |
| 270531 | Probability and Statistics                |
| 270601 | Basic Math 1                              |
| 270602 | Basic Math 2                              |
| 270603 | Basic Math 3                              |
| 270604 | Basic Math 4                              |
| 279900 | Mathematics, Other                        |
| 280100 | Aerospace Science (Air Force), Other      |
| 280111 | Aerospace Education                       |
| 280112 | Aerospace Education 2                     |
| 280113 | Aerospace Education 3                     |
| 280114 | Aerospace Education 4                     |
| 280121 | Civil Air Patrol                          |
| 280200 | Coast Guard Science, Other                |
| 280300 | Military Science (Army), Other            |
| 280311 | Army Leadership Development, Introduction |
| 280312 | Army Intermediate Leadership Development  |
| 280313 | Army Applied Leadership Development       |
| 280314 | Army Advanced Leadership Development      |
| 280400 | Naval Science (Navy, Marines), Other      |
| 280411 | Naval Science 1                           |
| 280412 | Naval Science 2                           |
| 280413 | Naval Science 3                           |
| 280414 | Naval Science 4                           |
| 280421 | Marine Corps Leadership Education 1       |
| 280422 | Marine Corps Leadership Education 2       |

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| 280423 | Marine Corps Leadership Education 3        |
| 280424 | Marine Corps Leadership Education 4        |
| 289900 | Military Sciences, Other                   |
| 290100 | Military Technologies, Other               |
| 300100 | Biological and Physical Sciences, Other    |
| 300111 | Science, Unified                           |
| 300112 | College Pre-Science Skills                 |
| 300121 | Science Study, Independent                 |
| 300131 | Outdoor Education                          |
| 300200 | Clinical Pastoral Care, Other              |
| 300300 | Engineering and Other Disciplines, Other   |
| 300311 | Engineering Concepts                       |
| 300400 | Humanities and Social Sciences, Other      |
| 300411 | Humanities                                 |
| 300421 | Humanities, European                       |
| 300431 | Humanities, American                       |
| 300441 | Humanities, African                        |
| 300451 | Humanities, Near East and Far East         |
| 300500 | Peace Studies, Other                       |
| 300600 | Systems Science, Other                     |
| 300611 | Futuristics                                |
| 300621 | Environmental Science                      |
| 300631 | Energy and Environment                     |
| 300700 | Women's Studies, Other                     |
| 300711 | Women's Studies                            |
| 300721 | Women's Studies in Literature              |
| 309900 | Multi/Interdisciplinary Studies, Other     |
| 310100 | Parks and Recreation, Other General        |
| 310111 | Recreation Aide                            |
| 310121 | Search and Rescue                          |
| 310200 | Outdoor Recreation, Other                  |
| 310211 | Winter/Ski Resort Operation                |
| 310300 | Parks and Recreation Management, Other     |
| 310400 | Water Resources, Other                     |
| 319900 | Parks and Recreation, Other                |
| 320100 | Basic Skills, Career and Employment, Other |
| 320101 | Unused Code                                |
| 320102 | Career Preparation                         |
| 320103 | Career Exploration                         |
| 320104 | Work Experience                            |
| 320105 | Work Experience, Advanced                  |
| 320106 | Cooperative Education 1                    |
| 320107 | Cooperative Education 2                    |
| 320108 | Unused Code                                |
| 320109 | Unused Code                                |
| 320110 | Unused Code                                |
| 320111 | Unused Code                                |
| 320112 | Unused Code                                |
| 320113 | Unused Code                                |

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| 320114 | Unused Code                                    |
| 320115 | Unused Code                                    |
| 320116 | Unused Code                                    |
| 320117 | Unused Code                                    |
| 320118 | Unused Code                                    |
| 320119 | Unused Code                                    |
| 320120 | Unused Code                                    |
| 320121 | Off-Campus Vo Tech Training - Unspecified      |
| 320200 | Basic Skills, General, Other                   |
| 320201 | Resource Room (Non Special Education)          |
| 320211 | Study Dynamics                                 |
| 320221 | Test Taking                                    |
| 330100 | Citizenship/Civic Activities, Other            |
| 330111 | Student Assistant                              |
| 330121 | Pep Squad                                      |
| 330131 | Student Government                             |
| 330141 | Tutoring                                       |
| 330151 | Community Service                              |
| 330161 | Unused Code                                    |
| 340100 | Health-Related Activities, Other               |
| 340111 | Physical and Health Education 7                |
| 340112 | Physical and Health Education 8                |
| 340113 | Physical and Health Education 9                |
| 340114 | Physical Education 10                          |
| 340115 | Physical Education 11                          |
| 340116 | Physical Education 12                          |
| 340121 | Physical Education, Adaptive                   |
| 340121 | Adaptive Physical Education (Multihandicapped) |
| 340121 | Adaptive Physical Education Nonregular program |
| 340122 | Physical Education - Medically Excused         |
| 340129 | Adaptive Physical Education (Multihandicapped) |
| 340129 | Adaptive Physical Education Nonregular program |
| 340131 | Health 7                                       |
| 340132 | Health 8                                       |
| 340133 | Health 9                                       |
| 340134 | Health 10                                      |
| 340135 | Health 11                                      |
| 340136 | Health 12                                      |
| 340137 | State Requirements                             |
| 340138 | Modern Medical Issues                          |
| 340141 | Drugs Alcohol and Tobacco                      |
| 340151 | Driver Education, Classroom                    |
| 340152 | Driver Education, Practice                     |
| 340161 | Physical Education Leadership Training         |
| 340171 | Life Saving                                    |
| 340181 | Safety   |
| 340191 | Sex Education                                  |
| 350100 | Interpersonal Skills, Other                    |
| 350111 | Interpersonal Relationships                    |

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| 350121 | Building Human Relationships               |
| 350131 | Peer Counseling                            |
| 360100 | Leisure and Recreational Activities, Other |
| 360111 | Sports, Individual                         |
| 360121 | Sports, Team                               |
| 360131 | Gymnastics                                 |
| 360141 | Drill Team                                 |
| 360151 | Track and Field                            |
| 360161 | Aquatics                                   |
| 360171 | Conditioning and Athletics                 |
| 360181 | Motorcycle Operation                       |
| 360191 | Recreational Activities                    |
| 360192 | Experiential Outdoor Education             |
| 370100 | Personal Awareness, Other                  |
| 370111 | Personal Development Techniques            |
| 370121 | Coping with Personal Problems              |
| 370131 | Self Perception                            |
| 380100 | Philosophy, Other                          |
| 380111 | Philosophy                                 |
| 380121 | Ethics                                     |
| 380131 | Logic                                      |
| 380141 | Epistemics                                 |
| 380151 | Social Justice Issues                      |
| 380200 | Religion, Other                            |
| 380201 | Catholicism, Foundations                   |
| 380202 | Who Is Jesus                               |
| 380203 | Scripture                                  |
| 380204 | Moral Issues, Social and Individual        |
| 380205 | Marriage, Life Choices in Christian Living |
| 380206 | Comparative Religion                       |
| 380207 | Sacraments                                 |
| 380208 | Eastern Religious Thought                  |
| 380209 | Religion and Psychology                    |
| 380210 | Western Religions                          |
| 380211 | Religion and Literature                    |
| 380212 | Religion, Introduction                     |
| 380213 | Prayer and Liturgy                         |
| 380214 | Judaism, Foundations                       |
| 380215 | Protestantism, Foundations                 |
| 380216 | Religious Movements in America             |
| 380217 | Islam and the Koran                        |
| 389900 | Philosophy and Religion, Other             |
| 390100 | Biblical Languages, Other                  |
| 390200 | Bible Studies, Other                       |
| 390300 | Missionary Studies, Other                  |
| 390400 | Religious Education, Other                 |
| 390500 | Religious Music, Other                     |
| 390600 | Theological Studies, Other                 |
| 390611 | Theological Studies                        |



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| 399900 | Theology, Other                             |
| 400100 | Physical Sciences, Other General            |
| 400111 | Science 8                                   |
| 400121 | Physical Science                            |
| 400131 | Chemistry and Physics Laboratory Techniques |
| 400141 | Physical Science, Applied                   |
| 400200 | Astronomy, Other                            |
| 400211 | Astronomy                                   |
| 400300 | Astrophysics, Other                         |
| 400400 | Atmospheric Sciences and Meteorology, Other |
| 400411 | Meteorology                                 |
| 400500 | Chemistry, Other                            |
| 400511 | Chemistry, Introductory                     |
| 400521 | Chemistry 1                                 |
| 400522 | Chemistry 2                                 |
| 400531 | Organic Chemistry                           |
| 400541 | Physical Chemistry                          |
| 400551 | Consumer Chemistry                          |
| 400561 | Chemistry, Independent Study                |
| 400600 | Geological Sciences, Other                  |
| 400611 | Earth Science                               |
| 400621 | Earth Science, College Preparatory          |
| 400631 | Geology                                     |
| 400632 | Geology - Field Studies                     |
| 400641 | Mineralogy                                  |
| 400700 | Miscellaneous Physical Sciences, Other      |
| 400711 | Oceanography                                |
| 400800 | Physics, Other                              |
| 400811 | Physics, General                            |
| 400821 | Physics 1                                   |
| 400822 | Physics 2                                   |
| 400831 | Physics 2 without Calculus                  |
| 400841 | Electricity and Electronics Science         |
| 400851 | Acoustics                                   |
| 400900 | Planetary Science, Other                    |
| 400911 | Rocketry and Space Science                  |
| 401011 | Aerospace Science                           |
| 409900 | Physical Sciences, Other                    |
| 410100 | Biological Technologies, Other              |
| 410200 | Nuclear Technologies, Other                 |
| 410211 | Radioactivity                               |
| 410300 | Physical Science Technologies, Other        |
| 419900 | Science Technologies, Other                 |
| 420100 | Psychology, Other General                   |
| 420111 | Psychology                                  |
| 420112 | Psychology, Advanced                        |
| 420113 | Abnormal Psychology                         |
| 420200 | Clinical Psychology, Other                  |
| 420300 | Cognitive Psychology, Other                 |

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| 420311 | Psychology of Learning                          |
| 420321 | Educational Psychology                          |
| 420400 | Community Psychology, Other                     |
| 420500 | Comparative Psychology, Other                   |
| 420600 | Counseling Psychology, Other                    |
| 420700 | Developmental Psychology, Other                 |
| 420711 | Child Psychology                                |
| 420721 | Adolescent Psychology                           |
| 420731 | Adjustment Psychology                           |
| 420800 | Experimental Psychology, Other                  |
| 420900 | Industrial and Organizational Psychology, Other |
| 421000 | Personality Psychology, Other                   |
| 421011 | Historical Personalities and Ideas              |
| 421021 | Humanistic Psychology                           |
| 421100 | Physiological Psychology, Other                 |
| 421200 | Psycholinguistics, Other                        |
| 421300 | Psychometrics, Other                            |
| 421400 | Psychopharmacology, Other                       |
| 421411 | Psychopharmacology                              |
| 421500 | Quantitative Psychology, Other                  |
| 421600 | Social Psychology, Other                        |
| 421611 | Social Psychology                               |
| 429900 | Psychology, Other                               |
| 430100 | Criminal Justice, Other                         |
| 430111 | Law Enforcement                                 |
| 430121 | Law Science                                     |
| 430200 | Fire Protection, Other                          |
| 430211 | Fire Fighting Practices                         |
| 430221 | Fire Safety Education                           |
| 430311 | Security Guard                                  |
| 439900 | Protective Services, Other                      |
| 440100 | Public Affairs, Other General                   |
| 440200 | Community Services, Other                       |
| 440300 | International Public Service, Other             |
| 440400 | Public Administration, Other                    |
| 440500 | Public Policy Studies, Other                    |
| 440600 | Public Works, Other                             |
| 440700 | Social Work, Other                              |
| 440711 | Human Services                                  |
| 449900 | Public Affairs, Other                           |
| 450100 | Social Sciences, Other General                  |
| 450111 | Social Science, Introduction                    |
| 450121 | Social Science, Advanced Theory and Research    |
| 450131 | Social Science Seminar                          |
| 450141 | Social Studies, Independent Study               |
| 450200 | Anthropology, Other                             |
| 450211 | Anthropology                                    |
| 450221 | Comparative Cultural Patterns                   |
| 450231 | Anthropology, Myth and Magic                    |

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| 450241 | Cultural Anthropology, Research           |
| 450300 | Archaeology, Other                        |
| 450311 | Archaeology                               |
| 450400 | Criminology, Other                        |
| 450500 | Demography, Other                         |
| 450511 | Population Education                      |
| 450600 | Economics, Other                          |
| 450601 | Economics, Theory                         |
| 450602 | Economics and Economic Problems           |
| 450603 | Consumer Economics                        |
| 450604 | Filing Your Income Taxes                  |
| 450605 | Insurance Theory                          |
| 450606 | Investment Economics                      |
| 450607 | Television and Economics                  |
| 450608 | Energy Education                          |
| 450609 | American Labor History                    |
| 450610 | Economics, Analysis and Criticism         |
| 450611 | Economics, College                        |
| 450612 | International Economics                   |
| 450700 | Geography, Other                          |
| 450701 | Geography 8                               |
| 450702 | Geography, United States                  |
| 450703 | Geography, North American                 |
| 450704 | World Geography                           |
| 450705 | Geography, Western Hemisphere and Africa  |
| 450706 | Geography, Eastern Hemisphere             |
| 450707 | Physical Geography                        |
| 450708 | Economic and Political Geography          |
| 450709 | Human and Cultural Geography              |
| 450710 | Field Geography, Honors                   |
| 450800 | History, Other                            |
| 450801 | History and Geography 7                   |
| 450802 | Our Cultural Heritage 7                   |
| 450803 | Social Studies 7, Honors                  |
| 450804 | United States History 8                   |
| 450805 | Social Studies 8                          |
| 450806 | Social Studies 8, Honors                  |
| 450807 | United States History, State and Local    |
| 450808 | United States History, Advanced Placement |
| 450809 | American History, Basic                   |
| 450810 | American History                          |
| 450811 | United States History 1                   |
| 450812 | United States History 2                   |
| 450813 | United States History, Honors             |
| 450814 | American History, Advanced Placement      |
| 450815 | Westward Movement                         |
| 450816 | Twentieth Century America                 |
| 450817 | Twenties and Thirties                     |
| 450818 | America Since 1945                        |

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| 450819 | Nineteen Sixties                              |
| 450820 | Nineteen Seventies                            |
| 450821 | Reform in American History                    |
| 450822 | American Inquiries                            |
| 450823 | Historic Events, United States                |
| 450824 | American Wars, Causes and Effects             |
| 450825 | Civil War                                     |
| 450826 | Civil War, Reconstruction and Industrialism   |
| 450827 | War and Modern Consciousness                  |
| 450828 | World War II                                  |
| 450829 | United States Military History 1              |
| 450830 | United States Military History 2              |
| 450831 | United States History, Field Study            |
| 450832 | North American History                        |
| 450833 | Mexican History                               |
| 450834 | South American History                        |
| 450835 | World History                                 |
| 450836 | World History, College                        |
| 450837 | World History, Modern                         |
| 450838 | World Civilization, Twentieth Century         |
| 450839 | World Civilization, Twentieth Century, Honors |
| 450840 | Western Civilization 9                        |
| 450841 | Western Civilization 9, Honors                |
| 450842 | Western Civilization, History                 |
| 450843 | Early Western Civilization                    |
| 450844 | Western Civilization, Advanced Placement      |
| 450845 | Ancient and Classical World                   |
| 450846 | Ancient Greek History                         |
| 450847 | Rome and Her Empire                           |
| 450848 | Ancient History and Middle Ages               |
| 450849 | English History                               |
| 450850 | English History, Honors                       |
| 450851 | French Revolution, Honors                     |
| 450852 | Modern Europe                                 |
| 450853 | European History, Mid-Nineteenth Through      |
| 450854 | European History, Twentieth Century           |
| 450855 | European History, Advanced Readings           |
| 450856 | European History, Modern, Advanced Placement  |
| 450857 | Third World History                           |
| 450858 | African History                               |
| 450859 | Africa, Middle East and Latin America         |
| 450860 | Latin American History                        |
| 450861 | Middle East History                           |
| 450862 | Israel, History                               |
| 450863 | Eastern Civilization                          |
| 450864 | Far East, History                             |
| 450865 | Asian History, Modern                         |
| 450866 | Pacific Lands, History                        |
| 450867 | Russian History                               |

450868 World Leaders, Past and Present  
450869 Historical Research  
450900 International Relations, Other  
450911 International Relations  
450921 International Relations, Honors  
450931 International Law  
450941 Model Security Council, Local  
450951 Model United Nations, Local  
450952 Model United Nations, National  
451000 Political Science and Government, Other  
451001 Civics  
451002 State and Local Government  
451003 Government, Basic  
451004 American Government  
451005 Presidency  
451006 Framework of the Constitution  
451007 Individual vs State  
451008 National State and Local Elections  
451009 Elections, Politics and Morality, Honors  
451010 Contemporary World Affairs  
451011 American Foreign Policy  
451012 Decision Making in a Crisis  
451013 American Heritage, Honors  
451014 Contemporary American Political Issues  
451015 Contemporary American Political Issues, Honors  
451016 American Government and Economics, Basic  
451017 American Government and Economics  
451018 American Government and Economics, Honors  
451019 Comparative Political Systems, Basic  
451020 Comparative World Governments  
451021 Americanism vs Communism  
451022 Americanism vs Communism, Honors  
451023 Communism and Its Growth  
451024 Civics, Honors  
451025 Writings Influencing Government  
451026 Government Internship  
451027 Model Senate  
451028 Political Leadership  
451029 Political Science  
451030 Political Science, Advanced Placement  
451031 Political Science and Government -  
451032 Political Turmoil  
451033 Contemporary Issues, Basic Skills  
451100 Sociology, Other  
451111 American Social Problems, Introduction  
451121 Sociology, General  
451131 Sociology, Issues  
451132 The Poor in America  
451141 Mobility in Society

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| 451151 | Violence In America                                   |
| 451161 | Death and Dying                                       |
| 451171 | Sociology, Honors                                     |
| 451181 | Sociology, Research                                   |
| 451200 | Urban Studies, Other                                  |
| 451211 | Urban Problems  |
| 451221 | Urban Ecology   |
| 451231 | Technology and Urbanization                           |
| 459900 | Social Sciences, Other                                |
| 460100 | Brickmasonry, Stonemasonry, and Tile Setting, Other   |
| 460111 | Masonry 1   |
| 460112 | Masonry 2   |
| 460113 | Masonry 3   |
| 460121 | Tile Setting and Plastering                           |
| 460131 | Concrete Technician                                   |
| 460200 | Carpentry, Other                                      |
| 460211 | Carpentry 1   |
| 460212 | Carpentry 2   |
| 460213 | Carpentry 3   |
| 460300 | Electrical and Power Transmission Installation, Other |
| 460311 | Housewiring 1   |
| 460312 | Housewiring 2   |
| 460321 | Electric Power and Communications Lineworker          |
| 460400 | Miscellaneous Construction Trades, Other              |
| 460411 | Building Construction 1                               |
| 460412 | Building Construction 2                               |
| 460413 | Building Construction 3                               |
| 460421 | Painting and Decorating                               |
| 460422 | Flooring Installation                                 |
| 460431 | Building Maintenance                                  |
| 460441 | Home Maintenance and Repair                           |
| 460451 | Building Construction - Cooperative Education 1       |
| 460452 | Building Construction - Cooperative Education 2       |
| 460500 | Plumbing, Pipefitting, and Steamfitting, Other        |
| 460511 | Plumbing 1  |
| 460512 | Plumbing 2  |
| 469900 | Construction Trades, Other                            |
| 470100 | Electrical and Electronics Equipment Repair, Other    |
| 470111 | Small Appliance Repair                                |
| 470121 | Radio and TV Repair 1                                 |
| 470122 | Radio and TV Repair 2                                 |
| 470123 | Radio and TV Repair 3                                 |
| 470124 | Telecommunications Technician                         |
| 470131 | Appliance Repair 1                                    |
| 470132 | Appliance Repair 2                                    |
| 470141 | Vending Machine Repair                                |
| 470151 | Business Machine Repair                               |
| 470161 | Industrial Electricity                                |
| 470171 | Industrial Electronics                                |

470181 Food Processing Machine Maintenance Technician/  
470200 Heating, Air Conditioning, and Refrigeration  
470211 Air Conditioning, Refrigeration, and Heating  
470212 Air Conditioning, Refrigeration, and Heating, Advanced  
470213 Air Conditioning, Refrigeration and Heating 3  
470300 Industrial Equipment Maintenance and Repair, Other  
470311 Industrial Mechanics 1  
470312 Industrial Mechanics 2  
470321 Diesel Mechanics  
470331 Industrial Maintenance Mechanics 1  
470332 Industrial Maintenance Mechanics 2  
470341 Petroleum Drilling Equipment Operation  
470342 Petroleum Drilling Equipment Operation  
470343 Petroleum Drilling Equipment Operation  
470400 Miscellaneous Mechanics and Repairers, Other  
470411 Musical Instrument Repair  
470421 Instrument Maintenance and Repair  
470431 Shoe Repair and Orthopedics 1  
470432 Shoe Repair and Orthopedics 2  
470433 Watch and Clock Repair  
470434 Bicycle Repair  
470500 Stationary Energy Sources, Other  
470511 Power Mechanics 1  
470512 Power Mechanics 2  
470513 Power Mechanics 3  
470514 Power Mechanics 4  
470521 Hydraulics and Pneumatics  
470600 Vehicle and Mobile Equipment Mechanics and  
470611 Small Engine Repair 1  
470612 Small Engine Repair 2  
470621 Auto Mechanics 1  
470622 Auto Mechanics 2  
470623 Auto Mechanics 3  
470624 Auto Mechanics - Cooperative Education 1  
470625 Auto Mechanics - Cooperative Education 2  
470631 Auto Body 1  
470632 Auto Body 2  
470633 Auto Body 3  
470641 Auto Service 1  
470642 Auto Service 2  
470651 Consumer Auto  
470661 Airframes 1  
470662 Airframes 2  
470671 Aviation Powerplant 1  
470672 Aviation Powerplant 2  
470673 Aviation Powerplant 3  
470674 Aviation Powerplant 4  
470681 Aviation Quality Control 1  
470682 Aviation Quality Control 2

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| 470691 | Aircraft Sheetmetal 1                      |
| 470692 | Aircraft Sheetmetal 2                      |
| 479900 | Mechanics and Repairers, Other             |
| 480100 | Drafting, Other                            |
| 480111 | Mechanical Drawing 1                       |
| 480112 | Mechanical Drawing 2                       |
| 480113 | Mechanical Drawing 3                       |
| 480114 | Mechanical Drawing 4                       |
| 480121 | Architectural Drawing 1                    |
| 480122 | Architectural Drawing 2                    |
| 480123 | Architectural Drawing 3                    |
| 480124 | Architectural Drawing 4                    |
| 480131 | Engineering Drawing 1                      |
| 480132 | Engineering Drawing 2                      |
| 480141 | Blueprint Reading                          |
| 480151 | Drafting 1, Cooperative                    |
| 480152 | Drafting 2, Cooperative                    |
| 480200 | Graphic and Printing Communications, Other |
| 480211 | Commercial Art 1                           |
| 480212 | Commercial Art 2                           |
| 480213 | Commercial Art, Cooperative                |
| 480214 | Commercial Art 3                           |
| 480221 | Graphic Arts 1                             |
| 480222 | Graphic Arts 2                             |
| 480223 | Graphic Arts 3                             |
| 480224 | Graphic Arts 4                             |
| 480231 | Sign Painting 1                            |
| 480232 | Sign Painting 2                            |
| 480233 | Sign Painting 3                            |
| 480241 | Bindery                                    |
| 480251 | Electronic Composition                     |
| 480261 | Copy Editing                               |
| 480300 | Leatherworking and Upholstering, Other     |
| 480311 | Leatherwork 1                              |
| 480312 | Leatherwork 2                              |
| 480321 | Upholstery                                 |
| 480322 | Upholstery, Advanced                       |
| 480331 | Auto Upholstery                            |
| 480400 | Precision Food Production, Other           |
| 480411 | Meatcutting 1                              |
| 480412 | Meatcutting 2                              |
| 480500 | Precision Metal Work, Other                |
| 480511 | Metal 1                                    |
| 480512 | Metal 2                                    |
| 480513 | Metal 3                                    |
| 480514 | Metal 4                                    |
| 480521 | Welding 1                                  |
| 480522 | Welding 2                                  |
| 480523 | Welding 3                                  |



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| 480524 | Welding - Cooperative Education                |
| 480531 | Sheet Metal 1                                  |
| 480532 | Sheet Metal 2                                  |
| 480541 | Metal Restoration                              |
| 480551 | Foundry 1                                      |
| 480552 | Foundry 2                                      |
| 480600 | Precision Work, Assorted Materials, Other      |
| 480611 | Plastics 1                                     |
| 480612 | Plastics 2                                     |
| 480621 | Space Age Plastics                             |
| 480700 | Woodworking, Other                             |
| 480711 | Woodworking 1                                  |
| 480712 | Woodworking 2                                  |
| 480713 | Woodworking 3                                  |
| 480714 | Woodworking 4                                  |
| 480721 | Furniture Refinishing                          |
| 480731 | Cabinetmaking 1                                |
| 480732 | Cabinetmaking 2                                |
| 489900 | Precision Production, Other                    |
| 490100 | Air Transportation, Other                      |
| 490111 | Aeronautics 1                                  |
| 490112 | Aeronautics 2                                  |
| 490121 | Aviation Technology 1                          |
| 490122 | Aviation Technology 2                          |
| 490123 | Aviation Technology 3                          |
| 490124 | Aviation Technology 4                          |
| 490131 | Air Travel Service Occupations                 |
| 490141 | Aircraft Parts Management 1                    |
| 490142 | Aircraft Parts Management 2                    |
| 490200 | Vehicle and Equipment Operation, Other         |
| 490211 | Forklift Operator                              |
| 490212 | Tractor-Trailer Truck Driving                  |
| 490213 | Heavy Vehicle Operation/Earth Moving Equipment |
| 490214 | Bus Driver/Chauffeur                           |
| 490300 | Water Transportation, Other                    |
| 490311 | Marine Mechanics, Basic                        |
| 490312 | Marine Mechanics, Advanced                     |
| 490321 | Boat Building                                  |
| 490331 | Navigation                                     |
| 490341 | Aquatic Occupations                            |
| 490411 | Introduction to Transportation Industry        |
| 490412 | Transportation Technology 2                    |
| 490421 | Transportation/Traffic Technician              |
| 499900 | Transportation and Material Moving, Other      |
| 500100 | Visual and Performing Arts, Other General      |
| 500111 | Aesthetics                                     |
| 500200 | Crafts, Other                                  |
| 500211 | Crafts 7                                       |
| 500212 | Crafts 8                                       |

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| 500213 | Crafts 9                         |
| 500214 | Crafts 10                        |
| 500215 | Crafts 11                        |
| 500216 | Crafts 12                        |
| 500221 | Crafts 11, Advanced              |
| 500222 | Crafts 12, Advanced              |
| 500231 | Decorator Crafts                 |
| 500241 | Enameling                        |
| 500251 | Jewelry 1                        |
| 500252 | Jewelry 2                        |
| 500253 | Jewelry 3                        |
| 500254 | Jewelry 4                        |
| 500261 | Ceramics 7                       |
| 500262 | Ceramics 8                       |
| 500263 | Ceramics 9                       |
| 500264 | Ceramics 10                      |
| 500265 | Ceramics 11                      |
| 500266 | Ceramics 12                      |
| 500271 | Textile Design                   |
| 500281 | Model Building                   |
| 500291 | Printmaking 1                    |
| 500292 | Printmaking 2                    |
| 500300 | Dance, Other                     |
| 500311 | Modern Dance for Beginners 9     |
| 500312 | Modern Dance for Beginners 10    |
| 500313 | Modern Dance for Beginners 11    |
| 500314 | Modern Dance for Beginners 12    |
| 500321 | Modern Dance 9, Intermediate     |
| 500322 | Modern Dance 10, Intermediate    |
| 500323 | Modern Dance 11, Intermediate    |
| 500324 | Modern Dance 12, Intermediate    |
| 500331 | Dance 9, Advanced                |
| 500332 | Dance 10, Advanced               |
| 500333 | Dance 11, Advanced               |
| 500334 | Dance 12, Advanced               |
| 500341 | Performing Dance Group 9         |
| 500342 | Performing Dance Group 10        |
| 500343 | Performing Dance Group 11        |
| 500344 | Performing Dance Group 12        |
| 500351 | Ballet and Jazz for Beginners 9  |
| 500352 | Ballet and Jazz for Beginners 10 |
| 500353 | Ballet and Jazz for Beginners 11 |
| 500354 | Ballet and Jazz for Beginners 12 |
| 500361 | Ethnic Dance                     |
| 500371 | Square Dance                     |
| 500381 | Aerobic Dance                    |
| 500400 | Design, Other                    |
| 500411 | Graphic Design                   |
| 500421 | Theater Makeup                   |

500431 Lighting Fundamentals, Theater  
500500 Dramatic Arts, Other  
500511 Stagecraft 9  
500512 Stagecraft 10  
500513 Stagecraft 11  
500514 Stagecraft 12  
500521 Improvisation and Mime  
500531 Playwriting  
500541 Theater Practicum Contract  
500551 Drama, History  
500561 Drama, Independent Study  
500600 Film Arts, Other  
500611 Film Study  
500612 Language of the Cinema  
500621 Photography 10  
500622 Photography 11, Elementary  
500623 Photography 12, Elementary  
500631 Photography 11, Advanced  
500632 Photography 12, Advanced  
500700 Fine Arts, Other  
500701 Fine Arts 7  
500702 Fine Arts 8  
500703 Art, General  
500704 Art 1  
500705 Art 2  
500706 Art 3  
500707 Art 4  
500708 Art 1, Independent Study  
500709 Art 2, Independent Study  
500711 Art Services 10  
500712 Art Services 11  
500713 Art Services 12  
500714 Drawing  
500715 Painting 1  
500716 Painting 2  
500717 Watercolor 1  
500718 Cartooning  
500719 Mural Painting  
500720 Sculpture  
500721 Silk Screen  
500722 Assemblage  
500723 Product Design  
500724 Life Drawing  
500725 Calligraphy  
500726 Art History and Appreciation  
500727 Black Fine Arts  
500728 Mexico, Fine Arts  
500729 Bicultural Art  
500730 Artist in Residence Program

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| 500731 | Ethnic Art History             |
| 500732 | Art As A Multicultural Study   |
| 500800 | Graphic Arts Technology, Other |
| 500811 | Computer Graphics Design       |
| 500900 | Music, Other                   |
| 500901 | Music 7                        |
| 500902 | Music 8                        |
| 500903 | Band 7                         |
| 500904 | Band 7, Advanced               |
| 500905 | Band 8                         |
| 500906 | Band 8, Advanced               |
| 500907 | Band 9                         |
| 500908 | Band 9, Advanced               |
| 500909 | Band, Concert                  |
| 500910 | Band, Marching                 |
| 500911 | Band, Symphonic                |
| 500912 | Orchestra 7                    |
| 500913 | Orchestra 7, Advanced          |
| 500914 | Orchestra 8                    |
| 500915 | Orchestra 8, Advanced          |
| 500916 | Orchestra 9                    |
| 500917 | Orchestra 9, Advanced          |
| 500918 | Orchestra 10                   |
| 500919 | Orchestra 11                   |
| 500920 | Orchestra 12                   |
| 500921 | Instrumental String Class      |
| 500922 | Brass and Percussion Class     |
| 500923 | Wind Ensemble                  |
| 500924 | Woodwind Class                 |
| 500925 | Electronic Music, Introduction |
| 500926 | Ensemble, Instrumental         |
| 500927 | Guitar, Beginning              |
| 500928 | Guitar, Intermediate           |
| 500929 | Guitar, Advanced               |
| 500930 | Handbells                      |
| 500931 | Piano 1                        |
| 500932 | Piano 2                        |
| 500933 | Organ                          |
| 500934 | Music Lessons, Applied         |
| 500935 | Chorus 7                       |
| 500936 | Chorus 7, Advanced             |
| 500937 | Chorus 8                       |
| 500938 | Chorus 8, Advanced             |
| 500939 | Chorus 9                       |
| 500940 | Chorus 9, Advanced             |
| 500941 | Chorus 10                      |
| 500942 | Chorus 10, Advanced            |
| 500943 | Chorus 11                      |
| 500944 | Chorus 11, Advanced            |

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500945 Chorus 12  
500946 Chorus 12, Advanced  
500947 Vocal Ensemble  
500948 Voice Class  
500949 Harmony and Composition  
500950 Arranging  
500951 Conducting  
500952 Music Theory  
500953 Music History 7  
500954 Music History 8  
500955 Music History 9  
500956 Music History 10  
500957 Music History 11  
500958 Music History 12  
500959 Music Literature 9  
500960 Music Literature 10  
500961 Music Literature 11  
500962 Music Literature 12  
500963 Music Appreciation  
500964 Folk Music, Ethnic  
500965 Music Theater  
500966 Music, Independent Study  
500967 Music Laboratory, General Survey  
509900 Visual and Performing Arts, Other  
510101 Executive Internship  
510102 Executive Internship 2  
510103 International Careers Internship  
541001 General Math Skills  
541009 Functional Math Skills, not for credit  
541101 Functional Consumer Math  
541109 Functional Consumer Math, not for credit  
541201 Functional Vocational Math  
541209 Functional Vocational Math, not for credit  
542011 Functional Language Arts 1  
542019 Functional Language Arts 1, not for credit  
542021 Functional Language Arts 2  
542029 Functional Language Arts 2, not for credit  
542031 Functional Language Arts 3  
542039 Functional Language Arts 3, not for credit  
542041 Functional Language Arts 4  
542049 Functional Language Arts 4, not for credit  
542051 Functional Vocational English  
542059 Functional Vocational English, not for credit  
542101 Functional Reading  
542109 Functional Reading, not for credit  
542201 Functional Oral Communication  
542209 Functional Oral Communication, not for credit  
542301 Functional Writing  
542309 Functional Writing, not for credit

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| 542401 | Functional Academics                              |
| 542409 | Functional Academics, not for credit              |
| 543001 | Activities Of Daily And Family Living             |
| 543009 | Activities of Daily and Family Living, not for    |
| 543101 | Social/behavioral Skills                          |
| 543109 | Social/behavioral Skills, not for credit          |
| 543201 | Functional Leisure And Recreational Skills        |
| 543209 | Functional Leisure and Recreational Skills, not   |
| 543301 | Functional Health                                 |
| 543309 | Functional Health, not for credit                 |
| 543401 | Functional Transition Skills                      |
| 543409 | Functional Transition Skills, not for credit      |
| 544001 | Functional Science                                |
| 544009 | Functional Science, not for credit                |
| 544501 | Functional Social Skills                          |
| 544509 | Functional Social Studies, not for credit         |
| 549401 | Handicapped Developmental Support Services        |
| 549409 | Handicapped Developmental Support Services, not   |
| 550001 | General Prevocational Preparation                 |
| 550009 | General Prevocational Preparation, not for credit |
| 550101 | Career Exploration                                |
| 550109 | Career Exploration, not for credit                |
| 550201 | General Work-study/experience                     |
| 550209 | General Work-study/experience, not for credit     |
| 550301 | General Work Experience                           |
| 550309 | General Work Experience, not for credit           |
| 550401 | Combined Vocational/academic Preparation          |
| 550409 | Combined Vocational/academic Preparation, not for |
| 551011 | General Agriculture 1                             |
| 551019 | General Agriculture 1, not for credit             |
| 551021 | General Agriculture 2                             |
| 551029 | General Agriculture 2, not for credit             |
| 551031 | General Agriculture 3                             |
| 551039 | General Agriculture 3, not for credit             |
| 551111 | Animal Care 1                                     |
| 551119 | Animal Care 1, not for credit                     |
| 551121 | Animal Care 2                                     |
| 551129 | Animal Care 2, not for credit                     |
| 551211 | Plant Care 1                                      |
| 551219 | Plant Care 1, not for credit                      |
| 551221 | Plant Care 2                                      |
| 551229 | Plant Care 2, not for credit                      |
| 551311 | Agricultural Mechanics 1                          |
| 551319 | Agricultural Mechanics 1, not for credit          |
| 551321 | Agricultural Mechanics 2                          |
| 551329 | Agricultural Mechanics 2, not for credit          |
| 551411 | Agricultural Work Study                           |
| 551419 | Agricultural Work Study, not for credit           |
| 551511 | Agricultural Work Experience                      |

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| 551519 | Agricultural Work Experience, not for credit         |
| 552011 | General Office Practice 1                            |
| 552019 | General Office Practice 1, not for credit            |
| 552021 | General Office Practice 2                            |
| 552031 | General Office Practice 3                            |
| 552111 | Office Machines 1                                    |
| 552121 | Office Machines 2                                    |
| 552211 | Business Word Study 1                                |
| 552221 | Business Work Study 2                                |
| 552311 | Business Work Experience 1                           |
| 552321 | Business Work Experience 2                           |
| 553011 | General Health Occupations 1                         |
| 553019 | General Health Occupations 1, not for credit         |
| 553021 | General Health Occupations 2                         |
| 553029 | General Health Occupations 2, not for credit         |
| 553031 | General Health Occupations 3                         |
| 553039 | General Health Occupations 3, not for credit         |
| 553111 | Health Occupations Work Study 1                      |
| 553119 | Health Occupations Work Study 1, not for credit      |
| 553121 | Health Occupations Work Study 2                      |
| 553129 | Health Occupations Work Study 2, not for credit      |
| 553211 | Health Occupations Work Experience 1                 |
| 553219 | Health Occupations Work Experience 1, not for credit |
| 553221 | Health Occupations Work Experience 2                 |
| 553229 | Health Occupations Work Experience 2                 |
| 554011 | General Home Economics 1                             |
| 554019 | General Home Economics 1, not for credit             |
| 554021 | General Home Economics 2                             |
| 554029 | General Home Economics 2, not for credit             |
| 554031 | General Home Economics 3                             |
| 554039 | General Home Economics 3, not for credit             |
| 554111 | Child Development 1                                  |
| 554119 | Child Development 1, not for credit                  |
| 554121 | Child Development 2                                  |
| 554129 | Child Development 2, not for credit                  |
| 554211 | Clothing And Textiles 1                              |
| 554219 | Clothing and Textiles 1, not for credit              |
| 554221 | Clothing And Textiles 2                              |
| 554229 | Clothing and Textiles 2, not for credit              |
| 554311 | Food And Nutrition 1                                 |
| 554319 | Food and Nutrition 1, not for credit                 |
| 554321 | Food And Nutrition 2                                 |
| 554329 | Food and Nutrition 2, not for credit                 |
| 554411 | Home Economics Work Study 1                          |
| 554419 | Home Economics Work Study 1, not for credit          |
| 554421 | Home Economics Work Study 2                          |
| 554429 | Home Economics Work Study 2, not for credit          |
| 554511 | Home Economics Work Experience 1                     |
| 554519 | Home Economics Work Experience 1, not for credit     |

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554521 Home Economics Work Experience 2  
554529 Home Economics Work Experience 2, not for credit  
555011 General Industrial Arts 1  
555019 General Industrial Arts 1, not for credit  
555021 General Industrial Arts 2  
555029 General Industrial Arts 2, not for credit  
555031 General Industrial Arts 3  
555039 General Industrial Arts 3, not for credit  
556111 Cosmetology/barber 1  
556119 Cosmetology/barber 1, not for credit  
556121 Cosmetology/barber 2  
556129 Cosmetology/barber 2, not for credit  
556211 Custodial And Housekeeping Services 1  
556219 Custodial and Housekeeping Services 1, not for credit  
556221 Custodial And Housekeeping Services 2  
556229 Custodial and Housekeeping Services 2, not for credit  
556311 Food Services 1  
556319 Food Services 1, not for credit  
556321 Food Services 2  
556329 Food Services 2, not for credit  
556411 Miscellaneous Services 1  
556419 Miscellaneous Services 1, not for credit  
556421 Miscellaneous Services 2  
556429 Miscellaneous Services 2, not for credit  
556511 Service Occupations Work Study 1  
556519 Service Occupations Work Study 1, not for credit  
556521 Service Occupations Work Study 2  
556529 Service Occupations Work Study 2, not for credit  
556611 Service Occupations Work Experience 1  
556619 Service Occupations Work Experience 1, not for credit  
556621 Service Occupations Work Experience 2  
556629 Service Occupations Work Experience 2, not for credit  
557111 Graphic And Printing Communications 1  
557119 Graphic And Printing Communications 1, not for credit  
557121 Graphic And Printing Communications 2,  
557129 Graphic And Printing Communications 2, not for credit  
557211 Leatherwork And Upholstery 1,  
557219 Leatherwork And Upholstery 1, not for credit  
557221 Leatherwork And Upholstery 2  
557229 Leatherwork And Upholstery 2, not for credit  
557311 Meatcutting 1  
557319 Meatcutting 1, not for credit  
557321 Meatcutting 2  
557329 Meatcutting 2, not for credit  
557411 Precision Production Work Study 1  
557419 Precision Production Work Study 1, not for credit  
557421 Precision Production Work Study 2  
557429 Precision Production Work Study 2, not for credit  
557511 Precision Production Work Experience 1



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| 557519 | Precision Production Work Experience 1, not for credit         |
| 557521 | Precision Production Work Experience 2                         |
| 557529 | Precision Production Work Experience 2                         |
| 558011 | General Construction Trades 1                                  |
| 558019 | General Construction Trades 1, not for credit                  |
| 558021 | General Construction Trades 2                                  |
| 558029 | General Construction Trades 2, not for credit                  |
| 558031 | General Construction Trades 3                                  |
| 558039 | General Construction Trades 3, not for credit                  |
| 558111 | Brickmasonry, Stonemasonry, And Tile Setting 1                 |
| 558119 | Brickmasonry, Stonemasonry, And Tile Setting 1, not for credit |
| 558121 | Brickmasonry, Stonemasonry, And Tile Setting 2                 |
| 558129 | Brickmasonry, Stonemasonry, And Tile Setting 2, not for credit |
| 558211 | Carpentry 1  |
| 558219 | Carpentry 1, not for credit                                    |
| 558221 | Carpentry 2  |
| 558229 | Carpentry 2, not for credit                                    |
| 558311 | Plumbing 1   |
| 558319 | Plumbing 1, not for credit                                     |
| 558321 | Plumbing 2   |
| 558329 | Plumbing 2, not for credit                                     |
| 558411 | Construction Trades Work Study 1                               |
| 558419 | Construction Trades Work Study 1, not for credit               |
| 558421 | Construction Trades Work Study 2                               |
| 558429 | Construction Trades Work Study 2, not for credit               |
| 558511 | Construction Trades Work Experience 1                          |
| 558519 | Construction Trades Work Experience 1, not for credit          |
| 558521 | Construction Trades Work Experience 1                          |
| 558529 | Construction Trades Work Experience 2                          |
| 559011 | Auto Service 1   |
| 559019 | Auto Service 1, not for credit                                 |
| 559021 | Auto Service 2   |
| 559029 | Auto Service 2, not for credit                                 |
| 559111 | Auto Service, Work Experience 1                                |
| 559119 | Auto Service, Work Experience 1, not for credit                |
| 559121 | Auto Service, Work Experience 2                                |
| 559129 | Auto Service, Work Experience 2, not for credit                |
| 562300 | Special Education Language Arts                                |
| 562301 | Resource Language Arts/english 1                               |
| 562302 | Resource Language Arts/english 2                               |
| 562303 | Resource Language Arts/english 3                               |
| 562304 | Resource Language Arts/english 4                               |
| 562309 | Resource Language Arts/english, not for credit                 |
| 562310 | Special Education Reading                                      |
| 562311 | Resource Reading   |
| 562319 | Resource Reading, not taken for credit                         |
| 562320 | Special Education Writing                                      |
| 562321 | Resource Writing   |
| 562329 | Resource Writing, not for credit                               |

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| 562700 | Special Education Math  |
| 562701 | Resource General Math   |
| 562709 | Resource General Math, not for credit                           |
| 562711 | Resource Vocational Math  |
| 562719 | Resource Vocational Math, not for credit                        |
| 562721 | Resource Consumer Math  |
| 562729 | Resource Consumer Math, not for credit                          |
| 563201 | Resource Career Exploration/prevocational                       |
| 563209 | Resource Career Exploration/prevocational Skill, not for credit |
| 563211 | Resource Transition Skills                                      |
| 563219 | Resource Transition Skills, not for credit                      |
| 564000 | Special Education General Science                               |
| 564001 | Resource General Science  |
| 564009 | Resource General Science, not for credit                        |
| 564500 | Special Education Social Studies                                |
| 564501 | Resource Social Studies   |
| 564509 | Resource Social Studies, not for credit                         |
| 569001 | General Tutorial Services                                       |
| 569009 | General Tutorial Services, not for credit                       |
| 569101 | Resource Study Skills   |
| 569109 | Resource Study Skills, not for credit                           |
| 569201 | School And Social Survival Skills                               |
| 569209 | School and Social Survival Skills, not for credit               |
| 569301 | Resource Survival Skills  |
| 569309 | Resource Survival Skills, not for credit                        |
| 569401 | Handicap Specific Support Services                              |
| 569409 | Handicap Specific Support Services, not for credit              |
| 600000 | Uncodeable  |
| 600001 | Undifferentiated Transfer Credits                               |

## **Appendix L**

### **Classification of Secondary School Courses, in Alphabetical Order**

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420113 Abnormal Psychology  
060200 Accounting, Other  
060211 Accounting/Business Management Careers -  
070100 Accounting, Bookkeeping, and Related Programs, Other  
070121 Accounting 1  
070122 Accounting 2  
070131 Accounting, College  
400851 Acoustics  
543001 Activities Of Daily And Family Living  
543009 Activities of Daily and Family Living, not for  
270200 Actuarial Sciences, Other  
340121 Adaptive Physical Education (Multihandicapped)  
340121 Adaptive Physical Education Nonregular program  
340129 Adaptive Physical Education (Multihandicapped)  
340129 Adaptive Physical Education Nonregular program  
420731 Adjustment Psychology  
420721 Adolescent Psychology  
200117 Adult Roles and Functions  
110232 Advanced PASCAL  
110242 Advanced BASIC  
110252 Advanced COBOL  
231216 Advanced Reading & Study Skills  
090200 Advertising, Other  
090211 Advertising  
500381 Aerobic Dance  
490111 Aeronautics 1  
490112 Aeronautics 2  
140200 Aerospace, Aeronautical, and Astronautical  
140211 Aerospace Materials  
140221 Aerospace Engineering Design  
280100 Aerospace Science (Air Force), Other  
280111 Aerospace Education  
280112 Aerospace Education 2  
280113 Aerospace Education 3  
280114 Aerospace Education 4  
401011 Aerospace Science  
500111 Aesthetics  
050123 Africa and South America  
050130 Africa and Middle East  
450859 Africa, Middle East and Latin America  
050122 African Area Studies  
160200 African (Non-Semitic) Languages, Other  
450858 African History  
050231 Afro American Studies  
010111 Agribusiness, Introduction  
019900 Agribusiness and Agricultural Production, Other  
010100 Agricultural Business and Management, Other  
010121 Agricultural Business Operation  
010151 Agricultural Mathematics

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|--------|--|
| 010161 | Agricultural Microprocessing                           |
| 010172 | Agricultural Cooperative Education II                  |
| 010200 | Agricultural Mechanics, Other                          |
| 010211 | Agricultural Mechanics, General                        |
| 010212 | Agricultural Mechanics 2                               |
| 010213 | Agricultural Mechanics 3                               |
| 010214 | Agricultural Mechanics 4                               |
| 010300 | Agricultural Production, Other                         |
| 010311 | Agricultural Production, General                       |
| 010400 | Agricultural Products and Processing, Other            |
| 010411 | Agricultural Products and Processing I                 |
| 010412 | Agricultural Products and Processing II                |
| 010421 | Agricultural Products and Processing -                 |
| 010500 | Agricultural Services and Supplies, Other              |
| 010511 | Agricultural Supplies Marketing                        |
| 020100 | Agricultural Sciences, Other General                   |
| 020111 | Agricultural Sciences, General                         |
| 020121 | Agricultural Occupations 1                             |
| 020122 | Agricultural Occupations 2                             |
| 020123 | Agricultural Occupations 3                             |
| 020124 | Agricultural Occupations 4                             |
| 029900 | Agricultural Sciences, Other                           |
| 140300 | Agricultural Engineering, Other                        |
| 551311 | Agricultural Mechanics 1                               |
| 551319 | Agricultural Mechanics 1, not for credit               |
| 551321 | Agricultural Mechanics 2                               |
| 551329 | Agricultural Mechanics 2, not for credit               |
| 551411 | Agricultural Work Study                                |
| 551419 | Agricultural Work Study, not for credit                |
| 551511 | Agricultural Work Experience                           |
| 551519 | Agricultural Work Experience, not for credit           |
| 010171 | Agriculture Cooperatives                               |
| 010181 | Agriculture, Independent Study                         |
| 010312 | Agriculture Technology 1                               |
| 010313 | Agriculture Technology 2                               |
| 020411 | Agronomy   |
| 470211 | Air Conditioning, Refrigeration, and Heating           |
| 470212 | Air Conditioning, Refrigeration, and Heating, Advanced |
| 470213 | Air Conditioning, Refrigeration and Heating 3          |
| 490100 | Air Transportation, Other                              |
| 490131 | Air Travel Service Occupations                         |
| 470691 | Aircraft Sheetmetal 1                                  |
| 470692 | Aircraft Sheetmetal 2                                  |
| 490141 | Aircraft Parts Management 1                            |
| 490142 | Aircraft Parts Management 2                            |
| 470661 | Airframes 1  |
| 470662 | Airframes 2  |
| 270402 | Algebra 1, Part 1                                      |
| 270403 | Algebra 1, Part 2                                      |

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| 270404 | Algebra 1                                 |
| 270405 | Algebra 2                                 |
| 270410 | Algebra 3                                 |
| 270414 | Algebra and Trigonometry                  |
| 270415 | Algebra and Analytic Geometry             |
| 179900 | Allied Health, Other                      |
| 450818 | America Since 1945                        |
| 050104 | America's People and Problems             |
| 050102 | American Studies, Basic                   |
| 050103 | American Studies, General                 |
| 050105 | American Studies, Honors                  |
| 050108 | American West                             |
| 230711 | American Literature                       |
| 450609 | American Labor History                    |
| 450809 | American History, Basic                   |
| 450810 | American History                          |
| 450814 | American History, Advanced Placement      |
| 450822 | American Inquiries                        |
| 450824 | American Wars, Causes and Effects         |
| 451004 | American Government                       |
| 451011 | American Foreign Policy                   |
| 451013 | American Heritage, Honors                 |
| 451016 | American Government and Economics, Basic  |
| 451017 | American Government and Economics         |
| 451018 | American Government and Economics, Honors |
| 451111 | American Social Problems, Introduction    |
| 451021 | Americanism vs Communism                  |
| 451022 | Americanism vs Communism, Honors          |
| 160221 | Amharic 1 (Ethiopian)                     |
| 160222 | Amharic 2 (Ethiopian)                     |
| 270416 | Analysis, Introductory                    |
| 270412 | Analytic Geometry                         |
| 260631 | Anatomy                                   |
| 450845 | Ancient and Classical World               |
| 450846 | Ancient Greek History                     |
| 450848 | Ancient History and Middle Ages           |
| 050110 | Anglo America                             |
| 010321 | Animal Production                         |
| 010521 | Animal Grooming                           |
| 020200 | Animal Sciences, Other                    |
| 020211 | Animal Sciences 1                         |
| 020212 | Animal Sciences 2                         |
| 260741 | Animal Behavior                           |
| 551111 | Animal Care 1                             |
| 551119 | Animal Care 1, not for credit             |
| 551121 | Animal Care 2                             |
| 551129 | Animal Care 2, not for credit             |
| 450200 | Anthropology, Other                       |
| 450211 | Anthropology                              |

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| 450231 | Anthropology, Myth and Magic                 |
| 080100 | Apparel and Accessories Marketing, Other     |
| 470131 | Appliance Repair 1                           |
| 470132 | Appliance Repair 2                           |
| 270300 | Applied Mathematics, Other                   |
| 490341 | Aquatic Occupations                          |
| 360161 | Aquatics                                     |
| 161115 | Arabic 1                                     |
| 161116 | Arabic 2                                     |
| 161117 | Arabic 3                                     |
| 161118 | Arabic 4                                     |
| 450300 | Archaeology, Other                           |
| 450311 | Archaeology                                  |
| 040221 | Architectural Theory                         |
| 140400 | Architectural Engineering, Other             |
| 150100 | Architectural Technologies, Other            |
| 480121 | Architectural Drawing 1                      |
| 480122 | Architectural Drawing 2                      |
| 480123 | Architectural Drawing 3                      |
| 480124 | Architectural Drawing 4                      |
| 040100 | Architecture and Environmental Design, Other |
| 040200 | Architecture, Other                          |
| 040211 | Architecture, Introduction                   |
| 040212 | Architecture, Advanced                       |
| 049900 | Architecture and Environmental Design, Other |
| 250200 | Archival Science, Other                      |
| 050100 | Area Studies, Other                          |
| 050101 | Area Studies                                 |
| 059900 | Area and Ethnic Studies, Other               |
| 280311 | Army Leadership Development, Introduction    |
| 280312 | Army Intermediate Leadership Development     |
| 280313 | Army Applied Leadership Development          |
| 280314 | Army Advanced Leadership Development         |
| 500950 | Arranging                                    |
| 500703 | Art, General                                 |
| 500704 | Art 1  |
| 500705 | Art 2  |
| 500706 | Art 3  |
| 500707 | Art 4  |
| 500708 | Art 1, Independent Study                     |
| 500709 | Art 2, Independent Study                     |
| 500711 | Art Services 10                              |
| 500712 | Art Services 11                              |
| 500713 | Art Services 12                              |
| 500726 | Art History and Appreciation                 |
| 500732 | Art As A Multicultural Study                 |
| 230861 | Arthurian Legend                             |
| 110151 | Artificial Intelligence                      |
| 500730 | Artist in Residence Program                  |

050129 Asia, Africa and Mideast  
050124 Asian and African Cultural Studies, Basic  
050125 Asian and African Cultural Studies, General  
050126 Asian and African Cultural Studies, Honors  
050127 Asian Studies  
450865 Asian History, Modern  
160300 Asiatic Languages, Other  
500722 Assemblage  
400200 Astronomy, Other  
400211 Astronomy  
400300 Astrophysics, Other  
400400 Atmospheric Sciences and Meteorology, Other  
150311 Audio Electronics  
180100 Audiology and Speech Pathology, Other  
081211 Auto Parts Merchandising  
470621 Auto Mechanics 1  
470622 Auto Mechanics 2  
470623 Auto Mechanics 3  
470624 Auto Mechanics - Cooperative Education 1  
470625 Auto Mechanics - Cooperative Education 2  
470631 Auto Body 1  
470632 Auto Body 2  
470633 Auto Body 3  
470641 Auto Service 1  
470642 Auto Service 2  
480331 Auto Upholstery  
559011 Auto Service 1  
559019 Auto Service 1, not for credit  
559021 Auto Service 2  
559029 Auto Service 2, not for credit  
559111 Auto Service, Work Experience 1  
559119 Auto Service, Work Experience 1, not for credit  
559121 Auto Service, Work Experience 2  
559129 Auto Service, Work Experience 2, not for credit  
081221 Automotive Professional Training  
150811 Automotive Design & Technology  
470671 Aviation Powerplant 1  
470672 Aviation Powerplant 2  
470673 Aviation Powerplant 3  
470674 Aviation Powerplant 4  
470681 Aviation Quality Control 1  
470682 Aviation Quality Control 2  
490121 Aviation Technology 1  
490122 Aviation Technology 2  
490123 Aviation Technology 3  
490124 Aviation Technology 4  
200431 Baking  
500351 Ballet and Jazz for Beginners 9  
500352 Ballet and Jazz for Beginners 10

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| 500353 | Ballet and Jazz for Beginners 11                 |
| 500354 | Ballet and Jazz for Beginners 12                 |
| 160400 | Balto-Slavic Languages, Other                    |
| 500903 | Band 7   |
| 500904 | Band 7, Advanced                                 |
| 500905 | Band 8   |
| 500906 | Band 8, Advanced                                 |
| 500907 | Band 9   |
| 500908 | Band 9, Advanced                                 |
| 500909 | Band, Concert                                    |
| 500910 | Band, Marching                                   |
| 500911 | Band, Symphonic                                  |
| 070211 | Bank Teller                                      |
| 070231 | Bank Proof Operator                              |
| 070241 | Bank Data Entry Occupations                      |
| 060300 | Banking and Finance, Other                       |
| 070200 | Banking and Related Financial Programs, Other    |
| 070201 | Banking & Financial Careers                      |
| 070251 | Banking and Financial Careers - Cooperative      |
| 120421 | Barbering 1                                      |
| 120422 | Barbering 2                                      |
| 120423 | Barbering 3                                      |
| 180200 | Basic Clinical Health Sciences, Other            |
| 270601 | Basic Math 1                                     |
| 270602 | Basic Math 2                                     |
| 270603 | Basic Math 3                                     |
| 270604 | Basic Math 4                                     |
| 320100 | Basic Skills, Career and Employment, Other       |
| 320200 | Basic Skills, General, Other                     |
| 110241 | BASIC, Introduction                              |
| 230125 | Bible as Literature                              |
| 390200 | Bible Studies, Other                             |
| 390100 | Biblical Languages, Other                        |
| 500729 | Bicultural Art                                   |
| 470434 | Bicycle Repair                                   |
| 130200 | Bilingual/Bicultural Education, Other            |
| 480241 | Bindery  |
| 260200 | Biochemistry and Biophysics, Other               |
| 260211 | Biochemistry                                     |
| 140500 | Bioengineering and Biomedical Engineering, Other |
| 230136 | Biography  |
| 300100 | Biological and Physical Sciences, Other          |
| 410100 | Biological Technologies, Other                   |
| 260100 | Biology, Other General                           |
| 260121 | Biology, Basic 1                                 |
| 260122 | Biology, Basic 2                                 |
| 260131 | Biology, General 1                               |
| 260132 | Biology, General 2                               |
| 260141 | Biology, Honors 1                                |

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| 260142 | Biology, Advanced  |
| 260181 | Biology Seminar  |
| 260171 | Biopsychology  |
| 230721 | Black Literature   |
| 500727 | Black Fine Arts  |
| 480141 | Blueprint Reading  |
| 490321 | Boat Building  |
| 070111 | Bookkeeping 1  |
| 070112 | Bookkeeping 2  |
| 070141 | Bookkeeping and Accounting 1                                   |
| 070142 | Bookkeeping and Accounting 2                                   |
| 260300 | Botany, Other  |
| 260311 | Botany   |
| 090821 | Braille Communications   |
| 500922 | Brass and Percussion Class                                     |
| 460100 | Brickmasonry, Stonemasonry, and Tile Setting, Other            |
| 558111 | Brickmasonry, Stonemasonry, And Tile Setting 1                 |
| 558119 | Brickmasonry, Stonemasonry, And Tile Setting 1, not for credit |
| 558121 | Brickmasonry, Stonemasonry, And Tile Setting 2                 |
| 558129 | Brickmasonry, Stonemasonry, And Tile Setting 2, not for credit |
| 230811 | British Literature Survey                                      |
| 090611 | Broadcast Journalism   |
| 100141 | Broadcast Management 1   |
| 100142 | Broadcast Management 2   |
| 090711 | Broadcasting, Introduction                                     |
| 100143 | Broadcasting Practicum   |
| 120521 | Building & Grounds Maintenance                                 |
| 120522 | Building & Grounds Maintenance                                 |
| 120523 | Building & Grounds Maintenance                                 |
| 350121 | Building Human Relationships                                   |
| 460411 | Building Construction 1  |
| 460412 | Building Construction 2  |
| 460413 | Building Construction 3  |
| 460431 | Building Maintenance   |
| 460451 | Building Construction - Cooperative Education 1                |
| 460452 | Building Construction - Cooperative Education 2                |
| 490214 | Bus Driver/Chauffeur   |
| 060100 | Business and Management, Other General                         |
| 060111 | Business Introduction  |
| 060121 | Business Law   |
| 060131 | Business, Independent Study                                    |
| 060141 | Business Education, Cooperative                                |
| 060400 | Business Administration and Management, Other                  |
| 060411 | Business Organization and Management                           |
| 060500 | Business Economics, Other                                      |
| 060511 | Business Economics   |
| 069900 | Business and Management, Other                                 |
| 070171 | Business Mathematics 1   |
| 070172 | Business Mathematics 2   |

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| 070300 | Business Data Processing and Related Programs, Other |
| 070321 | Business Data Processing 1                           |
| 070322 | Business Data Processing 2                           |
| 070331 | Business Computer Programming 1                      |
| 070332 | Business Computer Programming 2                      |
| 070411 | Business English 1                                   |
| 070412 | Business English 2                                   |
| 070413 | Business English 3                                   |
| 070414 | Business English 4                                   |
| 079900 | Business and Office, Other                           |
| 080200 | Business and Personal Services Marketing, Other      |
| 190200 | Business Home Economics, Other                       |
| 470151 | Business Machine Repair                              |
| 552211 | Business Word Study 1                                |
| 552221 | Business Work Study 2                                |
| 552311 | Business Work Experience 1                           |
| 552321 | Business Work Experience 2                           |
| 480731 | Cabinetmaking 1                                      |
| 480732 | Cabinetmaking 2                                      |
| 100181 | Cable Television                                     |
| 270418 | Calculus and Analytic Geometry                       |
| 270419 | Calculus   |
| 270420 | Calculus, Advanced Placement                         |
| 500725 | Calligraphy  |
| 050140 | Canadian Area Studies                                |
| 160311 | Cantonese 1  |
| 160312 | Cantonese 2  |
| 160313 | Cantonese 3  |
| 160314 | Cantonese 4  |
| 320102 | Career Preparation                                   |
| 320103 | Career Exploration                                   |
| 550101 | Career Exploration                                   |
| 550109 | Career Exploration, not for credit                   |
| 090612 | Careers in Radio/Television Broadcasting             |
| 460200 | Carpentry, Other                                     |
| 460211 | Carpentry 1  |
| 460212 | Carpentry 2  |
| 460213 | Carpentry 3  |
| 558211 | Carpentry 1  |
| 558219 | Carpentry 1, not for credit                          |
| 558221 | Carpentry 2  |
| 558229 | Carpentry 2, not for credit                          |
| 142611 | Cartography  |
| 500718 | Cartooning   |
| 080751 | Cashier Checker Training                             |
| 200451 | Catering   |
| 380201 | Catholicism, Foundations                             |
| 260400 | Cell and Molecular Biology, Other                    |
| 260411 | Cell Biology   |

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| 170522 | Central Service Technician                             |
| 140600 | Ceramic Engineering, Other                             |
| 500261 | Ceramics 7   |
| 500262 | Ceramics 8   |
| 500263 | Ceramics 9   |
| 500264 | Ceramics 10  |
| 500265 | Ceramics 11  |
| 500266 | Ceramics 12  |
| 200441 | Chef   |
| 140700 | Chemical Engineering, Other                            |
| 150621 | Chemical Manufacturing Technology                      |
| 170321 | Chemical Technology 1                                  |
| 170322 | Chemical Technology 2                                  |
| 170581 | Chemistry for Health Science                           |
| 400131 | Chemistry and Physics Laboratory Techniques            |
| 400500 | Chemistry, Other                                       |
| 400511 | Chemistry, Introductory                                |
| 400521 | Chemistry 1  |
| 400522 | Chemistry 2  |
| 400561 | Chemistry, Independent Study                           |
| 200121 | Child Development 8                                    |
| 200122 | Child Development 1                                    |
| 200123 | Child Development 2                                    |
| 200124 | Child Development 3                                    |
| 200125 | Child Development 4                                    |
| 200200 | Child Care and Guidance Management and Services, Other |
| 200211 | Child Care Services                                    |
| 200221 | Child Care Aide  |
| 200231 | Child Care Management                                  |
| 200261 | Child Care - Cooperative Education 1                   |
| 200262 | Child Care - Cooperative Education 2                   |
| 420711 | Child Psychology                                       |
| 554111 | Child Development 1                                    |
| 554119 | Child Development 1, not for credit                    |
| 554121 | Child Development 2                                    |
| 554129 | Child Development 2, not for credit                    |
| 230155 | Children's Literature & Fantasy                        |
| 161351 | Chinese for Native Speakers 1                          |
| 161352 | Chinese for Native Speakers 2                          |
| 161353 | Chinese for Native Speakers 3                          |
| 180300 | Chiropractic, Other                                    |
| 500935 | Chorus 7   |
| 500936 | Chorus 7, Advanced                                     |
| 500937 | Chorus 8   |
| 500938 | Chorus 8, Advanced                                     |
| 500939 | Chorus 9   |
| 500940 | Chorus 9, Advanced                                     |
| 500941 | Chorus 10  |
| 500942 | Chorus 10, Advanced                                    |

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| 500943 | Chorus 11   |
| 500944 | Chorus 11, Advanced   |
| 500945 | Chorus 12   |
| 500946 | Chorus 12, Advanced   |
| 330100 | Citizenship/Civic Activities, Other                                   |
| 040300 | City, Community, and Regional Planning, Other                         |
| 451001 | Civics  |
| 451024 | Civics, Honors  |
| 140800 | Civil Engineering, Other  |
| 150200 | Civil Technologies, Other   |
| 150221 | Civil Engineering Technician  |
| 280121 | Civil Air Patrol  |
| 450825 | Civil War   |
| 450826 | Civil War, Reconstruction and Industrialism                           |
| 160631 | Classical Greek 1   |
| 160632 | Classical Greek 2   |
| 160633 | Classical Greek 3   |
| 160634 | Classical Greek 4   |
| 230200 | Classics, Other   |
| 300200 | Clinical Pastoral Care, Other   |
| 420200 | Clinical Psychology, Other  |
| 200131 | Clothing 7  |
| 200132 | Clothing 8  |
| 200133 | Clothing 1  |
| 200134 | Clothing 2  |
| 200135 | Clothing 3  |
| 200136 | Clothing 4  |
| 200300 | Clothing, Apparel, and Textiles Management, Production, and Services, |
| 200311 | Clothing Occupations 1  |
| 200312 | Clothing Occupations 2  |
| 200313 | Clothing Occupations 3  |
| 200314 | Clothing Occupations - Cooperative Education I                        |
| 200315 | Clothing Occupations - Cooperative Education 2                        |
| 200321 | Clothing Maintenance Aide   |
| 200391 | Clothing Production Management  |
| 554211 | Clothing And Textiles 1   |
| 554219 | Clothing and Textiles 1, not for credit                               |
| 554221 | Clothing And Textiles 2   |
| 554229 | Clothing and Textiles 2, not for credit                               |
| 280200 | Coast Guard Science, Other  |
| 110251 | COBOL, Introduction   |
| 420300 | Cognitive Psychology, Other   |
| 300112 | College Pre-Science Skills  |
| 550401 | Combined Vocational/academic Preparation                              |
| 550409 | Combined Vocational/academic Preparation, not for                     |
| 200331 | Commercial Garment and Apparel Construction                           |
| 480211 | Commercial Art 1  |
| 480212 | Commercial Art 2  |
| 480213 | Commercial Art, Cooperative   |

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| 480214 | Commercial Art 3                                 |
| 100100 | Communication Technologies, Other                |
| 090100 | Communications, Other General                    |
| 090300 | Communications Research, Other                   |
| 099900 | Communications, Other                            |
| 100121 | Communications Media Production                  |
| 451023 | Communism and Its Growth                         |
| 170421 | Community Health                                 |
| 330151 | Community Service                                |
| 420400 | Community Psychology, Other                      |
| 440200 | Community Services, Other                        |
| 200641 | Companion to the Aged                            |
| 050117 | Comparative World Cultures                       |
| 230300 | Comparative Literature, Other                    |
| 230311 | Comparative Literature                           |
| 260771 | Comparative Embryology                           |
| 380206 | Comparative Religion                             |
| 420500 | Comparative Psychology, Other                    |
| 450221 | Comparative Cultural Patterns                    |
| 451019 | Comparative Political Systems, Basic             |
| 451020 | Comparative World Governments                    |
| 230400 | Composition, Other                               |
| 230401 | Composition, Expository                          |
| 200118 | Comprehensive Consumer and Homemaking Home       |
| 080811 | Computer Sales Representative                    |
| 110100 | Computer and Information Sciences, Other General |
| 110111 | Computer Appreciation                            |
| 110121 | Computer Mathematics 1                           |
| 110122 | Computer Mathematics 2                           |
| 110131 | Computer Applications                            |
| 110132 | Computer Applications, Independent Study         |
| 110141 | Computer Science, Advanced Placement             |
| 110200 | Computer Programming, Other                      |
| 110211 | Computer Programming 1                           |
| 110212 | Computer Programming 2                           |
| 110213 | Computer Programming 3                           |
| 110321 | Computer Programming - Cooperative Education     |
| 119900 | Computer and Information Sciences, Other         |
| 140900 | Computer Engineering, Other                      |
| 150431 | Computer-Assisted Design/Drafting (CAD)          |
| 500811 | Computer Graphics Design                         |
| 070311 | Computers In Business                            |
| 460131 | Concrete Technician                              |
| 360171 | Conditioning and Athletics                       |
| 500951 | Conducting                                       |
| 030200 | Conservation and Regulation, Other               |
| 030211 | Conservation and Regulation                      |
| 469900 | Construction Trades, Other                       |
| 558411 | Construction Trades Work Study 1                 |

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| 558419 | Construction Trades Work Study 1, not for credit      |
| 558421 | Construction Trades Work Study 2                      |
| 558429 | Construction Trades Work Study 2, not for credit      |
| 558511 | Construction Trades Work Experience 1                 |
| 558519 | Construction Trades Work Experience 1, not for credit |
| 558521 | Construction Trades Work Experience 1                 |
| 558529 | Construction Trades Work Experience 2                 |
| 060331 | Consumer Lending                                      |
| 129900 | Consumer, Personal, and Miscellaneous Services, Other |
| 200100 | Consumer and Homemaking Home Economics, Other         |
| 200141 | Consumer Education                                    |
| 200142 | Consumer Education 2                                  |
| 200651 | Consumer Aide   |
| 270114 | Consumer Mathematics                                  |
| 400551 | Consumer Chemistry                                    |
| 450603 | Consumer Economics                                    |
| 470651 | Consumer Auto   |
| 451010 | Contemporary World Affairs                            |
| 451014 | Contemporary American Political Issues                |
| 451015 | Contemporary American Political Issues, Honors        |
| 451033 | Contemporary Issues, Basic Skills                     |
| 320106 | Cooperative Education 1                               |
| 320107 | Cooperative Education 2                               |
| 370121 | Coping with Personal Problems                         |
| 480261 | Copy Editing  |
| 120411 | Cosmetology   |
| 120412 | Cosmetology 2   |
| 120413 | Cosmetology 3   |
| 120414 | Cosmetology - Cooperative Education 2                 |
| 120415 | Cosmetology - Cooperative Education 2                 |
| 556111 | Cosmetology/barber 1                                  |
| 556119 | Cosmetology/barber 1, not for credit                  |
| 556121 | Cosmetology/barber 2                                  |
| 556129 | Cosmetology/barber 2, not for credit                  |
| 420600 | Counseling Psychology, Other                          |
| 070662 | Court Reporter  |
| 500200 | Crafts, Other   |
| 500211 | Crafts 7  |
| 500212 | Crafts 8  |
| 500213 | Crafts 9  |
| 500214 | Crafts 10   |
| 500215 | Crafts 11   |
| 500216 | Crafts 12   |
| 500221 | Crafts 11, Advanced                                   |
| 500222 | Crafts 12, Advanced                                   |
| 230500 | Creative Writing, Other                               |
| 230511 | Creative Writing 10                                   |
| 230512 | Creative Writing 11                                   |
| 230513 | Creative Writing 12                                   |

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| 230521 | Creative Writing, Independent Study                   |
| 430100 | Criminal Justice, Other                               |
| 450400 | Criminology, Other                                    |
| 010331 | Crop Production                                       |
| 090831 | Cryptography  |
| 450241 | Cultural Anthropology, Research                       |
| 200126 | Current Issues in Child Development                   |
| 130300 | Curriculum and Instruction, Other                     |
| 200611 | Custodial Services                                    |
| 556211 | Custodial And Housekeeping Services 1                 |
| 556219 | Custodial and Housekeeping Services 1, not for credit |
| 556221 | Custodial And Housekeeping Services 2                 |
| 556229 | Custodial and Housekeeping Services 2, not for credit |
| 200341 | Custom Apparel Construction                           |
| 200351 | Custom Tailoring and Alteration                       |
| 200551 | Custom Drapery and Window Treatment Design            |
| 200561 | Custom Slipcovering and Upholstering                  |
| 160431 | Czech 1   |
| 160432 | Czech 2   |
| 160433 | Czech 3   |
| 020241 | Dairy Production                                      |
| 500300 | Dance, Other  |
| 500331 | Dance 9, Advanced                                     |
| 500332 | Dance 10, Advanced                                    |
| 500333 | Dance 11, Advanced                                    |
| 500334 | Dance 12, Advanced                                    |
| 070351 | Data Entry Operator 1                                 |
| 070352 | Data Entry Operator 2                                 |
| 110300 | Data Processing, Other                                |
| 110311 | Data Processing, Introduction                         |
| 110312 | Data Processing, Intermediate                         |
| 110313 | Data Processing, Advanced                             |
| 230149 | Death   |
| 451161 | Death and Dying                                       |
| 231031 | Debate Practicum Contract                             |
| 451012 | Decision Making in a Crisis                           |
| 500231 | Decorator Crafts                                      |
| 450500 | Demography, Other                                     |
| 170100 | Dental Services, Other                                |
| 170111 | Dental Assistant 1                                    |
| 170112 | Dental Assistant 2                                    |
| 170121 | Dental Assistant, Cooperative                         |
| 170131 | Dental Technology 1                                   |
| 170132 | Dental Technology 2                                   |
| 180400 | Dentistry, Other                                      |
| 500400 | Design, Other   |
| 050121 | Developing Nations                                    |
| 420700 | Developmental Psychology, Other                       |
| 170200 | Diagnostic and Treatment Services, Other              |



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| 470321 | Diesel Mechanics                              |
| 200461 | Dietetic Aide                                 |
| 080711 | Distributive Education 1                      |
| 080712 | Distributive Education 2                      |
| 080713 | Distributive Education 3                      |
| 080721 | Distributive Education 1, Cooperative         |
| 080722 | Distributive Education 2, Cooperative         |
| 080771 | Distributive Education, Independent Study     |
| 480100 | Drafting, Other                               |
| 480151 | Drafting 1, Cooperative                       |
| 480152 | Drafting 2, Cooperative                       |
| 230127 | Drama, Introduction                           |
| 500551 | Drama, History                                |
| 500561 | Drama, Independent Study                      |
| 500500 | Dramatic Arts, Other                          |
| 500714 | Drawing                                       |
| 360141 | Drill Team                                    |
| 340151 | Driver Education, Classroom                   |
| 340152 | Driver Education, Practice                    |
| 340141 | Drugs Alcohol and Tobacco                     |
| 120111 | Dry Cleaning 1                                |
| 120112 | Dry Cleaning 2                                |
| 120100 | Drycleaning and Laundering Services, Other    |
| 160501 | Dutch 1                                       |
| 160502 | Dutch 2                                       |
| 160503 | Dutch 3                                       |
| 450843 | Early Western Civilization                    |
| 400611 | Earth Science                                 |
| 400621 | Earth Science, College Preparatory            |
| 380208 | Eastern Religious Thought                     |
| 450863 | Eastern Civilization                          |
| 260611 | Ecology                                       |
| 450708 | Economic and Political Geography              |
| 050241 | Economics of Afro Americans                   |
| 450600 | Economics, Other                              |
| 450601 | Economics, Theory                             |
| 450602 | Economics and Economic Problems               |
| 450610 | Economics, Analysis and Criticism             |
| 450611 | Economics, College                            |
| 130100 | Education, Other General                      |
| 130400 | Education Administration, Other               |
| 139900 | Education, Other                              |
| 130500 | Educational Media, Other                      |
| 420321 | Educational Psychology                        |
| 170221 | EKG Technician                                |
| 451009 | Elections, Politics and Morality, Honors      |
| 460321 | Electric Power and Communications Lineworker  |
| 141000 | Electrical, Electronics, and Communications   |
| 150300 | Electrical and Electronic Technologies, Other |

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| 150321 | Electrical Technology                                   |
| 150341 | Electrical/Electronics Engineering Technician           |
| 460300 | Electrical and Power Transmission Installation, Other   |
| 470100 | Electrical and Electronics Equipment Repair, Other      |
| 010251 | Electricity and Electronics, Agricultural               |
| 210113 | Electricity 1   |
| 210114 | Electricity 2   |
| 210119 | Electricity and Electronics, Introduction               |
| 210120 | Electricity and Electronics, Advanced                   |
| 210130 | Electricity - Cooperative Education 1                   |
| 210131 | Electricity - Cooperative Education 2                   |
| 210150 | Electricity/Electronics - Cooperative                   |
| 210151 | Electricity/Electronics - Cooperative                   |
| 400841 | Electricity and Electronics Science                     |
| 150400 | Electromechanical Instrumentation and Maintenance       |
| 150411 | Electromechanical Technology 1                          |
| 150412 | Electromechanical Technology 2                          |
| 150331 | Electronic Technology 1                                 |
| 150332 | Electronic Technology 2                                 |
| 480251 | Electronic Composition                                  |
| 500925 | Electronic Music, Introduction                          |
| 150333 | Electronics Fabrication                                 |
| 210115 | Electronics 1   |
| 210116 | Electronics 2   |
| 210117 | Electronics 3   |
| 210118 | Electronics 4   |
| 210140 | Electronics - Cooperative Education 1                   |
| 210141 | Electronics - Cooperative Education 2                   |
| 180500 | Emergency/Disaster Science, Other                       |
| 500241 | Enameling   |
| 300631 | Energy and Environment                                  |
| 450608 | Energy Education  |
| 140100 | Engineering, Other General                              |
| 141100 | Engineering Mechanics, Other                            |
| 141200 | Engineering Related, Other                              |
| 141300 | Engineering Science, Other                              |
| 149900 | Engineering, Other                                      |
| 159900 | Engineering and Engineering-Related Technologies, Other |
| 300300 | Engineering and Other Disciplines, Other                |
| 300311 | Engineering Concepts                                    |
| 480131 | Engineering Drawing 1                                   |
| 480132 | Engineering Drawing 2                                   |
| 160121 | English as a Second Language 1                          |
| 160122 | English as a Second Language 2                          |
| 160123 | English as a Second Language 3                          |
| 160124 | English as a Second Language, Skills Lab                |
| 230100 | English, Other General                                  |
| 230101 | English 7   |
| 230102 | English 7, Honors                                       |

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| 230103  | English 8, Below Grade Level              |
| 230104  | English 8                                 |
| 230105  | English 8, Honors                         |
| 230106  | English 1, Below Grade Level              |
| 230107  | English 1                                 |
| 230108  | English 1, Honors                         |
| 230109  | English 2, Below Grade Level              |
| 230110  | English 2                                 |
| 230111  | English 2, Honors                         |
| 230112  | English 3, Below Grade Level              |
| 230113  | English 3                                 |
| 230114  | English 3, Honors                         |
| 230115  | English 4, Below Grade Level              |
| 230116  | English 4                                 |
| 230117  | English 4, Honors                         |
| 230152  | English, Real Life Problem Solving        |
| 2301610 | English Skills 1 for Visually Impaired    |
| 2301620 | English Skills 2 for Visually Impaired    |
| 2301630 | English Skills 3 for Visually Impaired    |
| 2301640 | English Skills 4 for Visually Impaired    |
| 450849  | English History                           |
| 450850  | English History, Honors                   |
| 500926  | Ensemble, Instrumental                    |
| 081121  | Entertainment Park/Tourism - Cooperative  |
| 120200  | Entertainment Services, Other             |
| 080300  | Entrepreneurship, Other                   |
| 030212  | Environmental Management 1                |
| 030213  | Environmental Management 2                |
| 030221  | Environmental Management - Cooperative    |
| 040400  | Environmental Design, Other               |
| 141400  | Environmental Health Engineering, Other   |
| 150500  | Environmental Control Technologies, Other |
| 150511  | Environmental Control Technologies        |
| 300621  | Environmental Science                     |
| 180600  | Epidemiology, Other                       |
| 380141  | Epistemics                                |
| 380121  | Ethics                                    |
| 050200  | Ethnic Studies, Other                     |
| 050221  | Ethnic and Family Heritage                |
| 230141  | Ethnic Literature                         |
| 500361  | Ethnic Dance                              |
| 500731  | Ethnic Art History                        |
| 230412  | Etymology                                 |
| 050118  | European Culture Studies, Basic           |
| 050119  | European Culture Studies, General         |
| 050120  | European Culture Studies, Honors          |
| 450853  | European History, Mid-Nineteenth Through  |
| 450854  | European History, Twentieth Century       |
| 450855  | European History, Advanced Readings       |

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| 450856 | European History, Modern, Advanced Placement         |
| 130600 | Evaluation and Research, Other                       |
| 200621 | Executive Housekeeping                               |
| 510101 | Executive Internship                                 |
| 510102 | Executive Internship 2                               |
| 360192 | Experiential Outdoor Education                       |
| 420800 | Experimental Psychology, Other                       |
| 190300 | Family and Community Services, Other                 |
| 190400 | Family/Consumer Resource Management, Other           |
| 200161 | Family Health 1                                      |
| 200162 | Family Health 2                                      |
| 200171 | Family Relations                                     |
| 450864 | Far East, History                                    |
| 010131 | Farm and Ranch Management                            |
| 010241 | Farm Construction                                    |
| 080111 | Fashion Merchandising                                |
| 080121 | Fashion Design and Illustration                      |
| 080131 | Fashion Merchandising - Cooperative                  |
| 080132 | Fashion Merchandising - Cooperative                  |
| 200371 | Fashion and Fabric Coordination                      |
| 020521 | Fertilizers and Chemicals                            |
| 260151 | Field Biology  |
| 450710 | Field Geography, Honors                              |
| 450604 | Filing Your Income Taxes                             |
| 100151 | Film Making and Production 1                         |
| 100152 | Film Making and Production 2                         |
| 500600 | Film Arts, Other                                     |
| 500611 | Film Study   |
| 060311 | Financial Careers                                    |
| 070221 | Financial Mathematics                                |
| 080400 | Financial Services Marketing, Other                  |
| 500700 | Fine Arts, Other                                     |
| 500701 | Fine Arts 7  |
| 500702 | Fine Arts 8  |
| 160451 | Finnish 1  |
| 160452 | Finnish 2  |
| 160453 | Finnish 3  |
| 160454 | Finnish 4  |
| 430200 | Fire Protection, Other                               |
| 430211 | Fire Fighting Practices                              |
| 430221 | Fire Safety Education                                |
| 170211 | First Aid  |
| 020281 | Fish Production                                      |
| 030300 | Fishing and Fisheries, Other                         |
| 460422 | Flooring Installation                                |
| 080511 | Floral Sales   |
| 200521 | Floral Design  |
| 010621 | Floriculture   |
| 080500 | Floristry, Farm and Garden Supplies Marketing, Other |

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| 500964 | Folk Music, Ethnic                              |
| 230741 | Folklore, American                              |
| 020300 | Food Sciences, Other                            |
| 080600 | Food Marketing, Other                           |
| 080611 | Food Marketing/Distribution - Overview          |
| 080621 | Food Marketing - Cooperative Education 1        |
| 080622 | Food Marketing - Cooperative Education 2        |
| 190500 | Food Sciences and Human Nutrition, Other        |
| 200400 | Food Production, Management and Services, Other |
| 200411 | Food Service Training                           |
| 200412 | Food Service Training 2                         |
| 200413 | Food Services/Restaurant Management             |
| 200421 | Food Service Cooperative Training               |
| 200471 | Food Testing                                    |
| 470181 | Food Processing Machine Maintenance Technician/ |
| 554311 | Food And Nutrition 1                            |
| 554319 | Food and Nutrition 1, not for credit            |
| 554321 | Food And Nutrition 2                            |
| 554329 | Food and Nutrition 2, not for credit            |
| 556311 | Food Services 1                                 |
| 556319 | Food Services 1, not for credit                 |
| 556321 | Food Services 2                                 |
| 556329 | Food Services 2, not for credit                 |
| 200181 | Foods and Nutrition 7                           |
| 200182 | Foods and Nutrition 8                           |
| 200183 | Foods 1   |
| 200184 | Foods 2   |
| 200185 | Foods 3   |
| 200186 | Foods 4   |
| 160100 | Foreign Languages, Multiple Emphasis, Other     |
| 160111 | Foreign Language, Exploratory                   |
| 160336 | Foreign Language Contract, Japanese             |
| 160427 | Foreign Language Contract, Russian              |
| 160519 | Foreign Language Contract, German               |
| 160909 | Foreign Language Contract, French               |
| 160919 | Foreign Language Contract, Italian              |
| 160925 | Foreign Language Contract, Latin                |
| 160939 | Foreign Language Contract, Spanish              |
| 161119 | Foreign Language Contract - Arabic              |
| 169900 | Foreign Languages, Other                        |
| 030400 | Forestry Production and Processing, Other       |
| 030500 | Forestry and Related Sciences, Other            |
| 030511 | Forestry Science 1                              |
| 030512 | Forestry Science 2                              |
| 030521 | Forestry Occupations - Work Experience          |
| 490211 | Forklift Operator                               |
| 110221 | FORTTRAN, Introduction                          |
| 200241 | Foster Care and Family Care                     |
| 480551 | Foundry 1                                       |

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| 480552 | Foundry 2                                       |
| 451006 | Framework of the Constitution                   |
| 160901 | French 7  |
| 160902 | French 8  |
| 160903 | French 1  |
| 160904 | French 2  |
| 160905 | French 3  |
| 160906 | French 4  |
| 160907 | French, Advanced Placement                      |
| 160908 | French Field-Based Experience                   |
| 160910 | French, Conversational                          |
| 161361 | French for Native Speakers 1                    |
| 161362 | French for Native Speakers 2                    |
| 161363 | French for Native Speakers 3                    |
| 161364 | French for Native Speakers 4                    |
| 450851 | French Revolution, Honors                       |
| 010681 | Fruit and Vegetable Production                  |
| 231311 | Functional English 1                            |
| 231312 | Functional English 2                            |
| 231313 | Functional English 3                            |
| 231314 | Functional English 4                            |
| 541009 | Functional Math Skills, not for credit          |
| 541101 | Functional Consumer Math                        |
| 541109 | Functional Consumer Math, not for credit        |
| 541201 | Functional Vocational Math                      |
| 541209 | Functional Vocational Math, not for credit      |
| 542011 | Functional Language Arts 1                      |
| 542019 | Functional Language Arts 1, not for credit      |
| 542021 | Functional Language Arts 2                      |
| 542029 | Functional Language Arts 2, not for credit      |
| 542031 | Functional Language Arts 3                      |
| 542039 | Functional Language Arts 3, not for credit      |
| 542041 | Functional Language Arts 4                      |
| 542049 | Functional Language Arts 4, not for credit      |
| 542051 | Functional Vocational English                   |
| 542059 | Functional Vocational English, not for credit   |
| 542101 | Functional Reading                              |
| 542109 | Functional Reading, not for credit              |
| 542201 | Functional Oral Communication                   |
| 542209 | Functional Oral Communication, not for credit   |
| 542301 | Functional Writing                              |
| 542309 | Functional Writing, not for credit              |
| 542401 | Functional Academics                            |
| 542409 | Functional Academics, not for credit            |
| 543201 | Functional Leisure And Recreational Skills      |
| 543209 | Functional Leisure and Recreational Skills, not |
| 543301 | Functional Health                               |
| 543309 | Functional Health, not for credit               |
| 543401 | Functional Transition Skills                    |

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| 543409 | Functional Transition Skills, not for credit      |
| 544001 | Functional Science                                |
| 544009 | Functional Science, not for credit                |
| 544501 | Functional Social Skills                          |
| 544509 | Functional Social Studies, not for credit         |
| 120300 | Funeral Services, Other                           |
| 480721 | Furniture Refinishing                             |
| 300611 | Futuristics                                       |
| 080700 | General Marketing, Other                          |
| 120511 | General Services Occupations 1                    |
| 120512 | General Services Occupations 2                    |
| 120513 | General Services Occupations 3                    |
| 120514 | General Services Occupations 4                    |
| 541001 | General Math Skills                               |
| 550001 | General Prevocational Preparation                 |
| 550009 | General Prevocational Preparation, not for credit |
| 550201 | General Work-study/experience                     |
| 550209 | General Work-study/experience, not for credit     |
| 550301 | General Work Experience                           |
| 550309 | General Work Experience, not for credit           |
| 551011 | General Agriculture 1                             |
| 551019 | General Agriculture 1, not for credit             |
| 551021 | General Agriculture 2                             |
| 551029 | General Agriculture 2, not for credit             |
| 551031 | General Agriculture 3                             |
| 551039 | General Agriculture 3, not for credit             |
| 552011 | General Office Practice 1                         |
| 552019 | General Office Practice 1, not for credit         |
| 552021 | General Office Practice 2                         |
| 552031 | General Office Practice 3                         |
| 553011 | General Health Occupations 1                      |
| 553019 | General Health Occupations 1, not for credit      |
| 553021 | General Health Occupations 2                      |
| 553029 | General Health Occupations 2, not for credit      |
| 553031 | General Health Occupations 3                      |
| 553039 | General Health Occupations 3, not for credit      |
| 554011 | General Home Economics 1                          |
| 554019 | General Home Economics 1, not for credit          |
| 554021 | General Home Economics 2                          |
| 554029 | General Home Economics 2, not for credit          |
| 554031 | General Home Economics 3                          |
| 554039 | General Home Economics 3, not for credit          |
| 555011 | General Industrial Arts 1                         |
| 555019 | General Industrial Arts 1, not for credit         |
| 555021 | General Industrial Arts 2                         |
| 555029 | General Industrial Arts 2, not for credit         |
| 555031 | General Industrial Arts 3                         |
| 555039 | General Industrial Arts 3, not for credit         |
| 558011 | General Construction Trades 1                     |

558019 General Construction Trades 1, not for credit  
558021 General Construction Trades 2  
558029 General Construction Trades 2, not for credit  
558031 General Construction Trades 3  
558039 General Construction Trades 3, not for credit  
569001 General Tutorial Services  
569009 General Tutorial Services, not for credit  
260161 Genetics  
450700 Geography, Other  
450701 Geography 8  
450702 Geography, United States  
450703 Geography, North American  
450705 Geography, Western Hemisphere and Africa  
450706 Geography, Eastern Hemisphere  
141500 Geological Engineering, Other  
400600 Geological Sciences, Other  
400631 Geology  
400632 Geology - Field Studies  
270406 Geometry, Plane  
270407 Geometry, Solid  
270408 Geometry, Plane and Solid  
270409 Geometry, Informal  
141600 Geophysical Engineering, Other  
200642 Geriatrics 2  
200643 Geriatrics - Cooperative Education 1  
200644 Geriatrics - Cooperative Education 2  
160511 German 7  
160512 German 8  
160513 German 1  
160514 German 2  
160515 German 3  
160516 German 4  
160517 German, Advanced Placement  
160518 German Field-Based Experience  
160500 Germanic Languages, Other  
240141 Gifted and Talented Program  
050138 Global Education  
451003 Government, Basic  
451026 Government Internship  
230406 Grammar 7  
230407 Grammar 8  
230408 Grammar 9  
230409 Grammar 10  
230410 Grammar 11  
230411 Grammar 12  
480200 Graphic and Printing Communications, Other  
480221 Graphic Arts 1  
480222 Graphic Arts 2  
480223 Graphic Arts 3



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| 480224 | Graphic Arts 4  |
| 500411 | Graphic Design  |
| 500800 | Graphic Arts Technology, Other                        |
| 557111 | Graphic And Printing Communications 1                 |
| 557119 | Graphic And Printing Communications 1, not for credit |
| 557121 | Graphic And Printing Communications 2,                |
| 557129 | Graphic And Printing Communications 2, not for credit |
| 160600 | Greek, Other  |
| 010641 | Greenhouse Management                                 |
| 080612 | Grocery Management                                    |
| 500927 | Guitar, Beginning                                     |
| 500928 | Guitar, Intermediate                                  |
| 500929 | Guitar, Advanced                                      |
| 360131 | Gymnastics  |
| 500930 | Handbells   |
| 569401 | Handicap Specific Support Services                    |
| 569409 | Handicap Specific Support Services, not for credit    |
| 549401 | Handicapped Developmental Support Services            |
| 549409 | Handicapped Developmental Support Services, not       |
| 230413 | Handwriting   |
| 500949 | Harmony and Composition                               |
| 050281 | Hawaiian  |
| 050291 | Hawaiian Culture Studies, Modern                      |
| 160341 | Hawaiian 1  |
| 160342 | Hawaiian 2  |
| 160343 | Hawaiian 3  |
| 160344 | Hawaiian 4  |
| 160345 | Hawaiian Language and Culture                         |
| 170511 | Health Occupations 1                                  |
| 170521 | Health Occupations 2                                  |
| 170591 | Health Occupations, Independent Study                 |
| 170592 | Health Occupations - Cooperative Education 1          |
| 170593 | Health Occupations - Cooperative Education 2          |
| 180700 | Health Sciences Administration, Other                 |
| 189900 | Health Sciences, Other                                |
| 340100 | Health-Related Activities, Other                      |
| 340131 | Health 7  |
| 340132 | Health 8  |
| 340133 | Health 9  |
| 340134 | Health 10   |
| 340135 | Health 11   |
| 340136 | Health 12   |
| 553111 | Health Occupations Work Study 1                       |
| 553119 | Health Occupations Work Study 1, not for credit       |
| 553121 | Health Occupations Work Study 2                       |
| 553129 | Health Occupations Work Study 2, not for credit       |
| 553211 | Health Occupations Work Experience 1                  |
| 553219 | Health Occupations Work Experience 1, not for credit  |
| 553221 | Health Occupations Work Experience 2                  |

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| 553229 | Health Occupations Work Experience 2                                 |
| 470200 | Heating, Air Conditioning, and Refrigeration                         |
| 490213 | Heavy Vehicle Operation/Earth Moving Equipment                       |
| 161111 | Hebrew 1   |
| 161112 | Hebrew 2   |
| 161113 | Hebrew 3   |
| 161114 | Hebrew 4   |
| 180800 | Hematology, Other  |
| 230147 | Heroes   |
| 450823 | Historic Events, United States                                       |
| 421011 | Historical Personalities and Ideas                                   |
| 450869 | Historical Research  |
| 050128 | History of China   |
| 050136 | History of Russia  |
| 450800 | History, Other   |
| 450801 | History and Geography 7  |
| 080800 | Home and Office Products Marketing, Other                            |
| 170411 | Home Health Aide   |
| 190100 | Home Economics, Other General  |
| 199900 | Home Economics, Other  |
| 200111 | Home Economics 7   |
| 200112 | Home Economics 8   |
| 200113 | Home Economics 1   |
| 200114 | Home Economics 2   |
| 200115 | Home Economics 3   |
| 200116 | Home Economics 4   |
| 200151 | Home Economics Occupations 1, Exploratory                            |
| 200152 | Home Economics Occupations 2, Exploratory                            |
| 200153 | Home Economics Laboratory Assistant                                  |
| 200154 | Home Economics Leadership  |
| 200191 | Home Management 1  |
| 200192 | Home Management 2  |
| 200193 | Home Economics - Cooperative Education 1                             |
| 200194 | Home Economics - Cooperative Education 2                             |
| 200500 | Home Furnishings and Equipment Management, Production, and Services, |
| 200531 | Home Decorating  |
| 200541 | Home Furnishings Aide  |
| 200571 | Home-Service Assisting 1   |
| 200572 | Home Service Assisting 2   |
| 200573 | Home Service Asst - Cooperative Education 1                          |
| 200574 | Home Service Asst - Cooperative Education 2                          |
| 460441 | Home Maintenance and Repair  |
| 554411 | Home Economics Work Study 1  |
| 554419 | Home Economics Work Study 1, not for credit                          |
| 554421 | Home Economics Work Study 2  |
| 554429 | Home Economics Work Study 2, not for credit                          |
| 554511 | Home Economics Work Experience 1                                     |
| 554519 | Home Economics Work Experience 1, not for credit                     |
| 554521 | Home Economics Work Experience 2                                     |

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| 554529 | Home Economics Work Experience 2, not for credit |
| 200631 | Homemaker's Aide                                 |
| 020261 | Horse Production                                 |
| 020262 | Horseshoeing/Farrier Training                    |
| 010661 | Horticultural Mechanics I                        |
| 010662 | Horticultural Mechanics II                       |
| 010600 | Horticulture, Other                              |
| 010611 | Horticulture                                     |
| 080900 | Hospitality and Recreation Marketing, Other      |
| 080921 | Hospitality Sales 1                              |
| 080922 | Hospitality Sales 2                              |
| 060711 | Hotel and Motel Management                       |
| 060712 | Hotel and Motel Training                         |
| 460311 | Housewiring 1                                    |
| 460312 | Housewiring 2                                    |
| 200511 | Housing and Interior Design 1                    |
| 200512 | Housing and Interior Design 2                    |
| 060600 | Human Resources Development, Other               |
| 190600 | Human Environment and Housing, Other             |
| 440711 | Human Services                                   |
| 450709 | Human and Cultural Geography                     |
| 421021 | Humanistic Psychology                            |
| 300400 | Humanities and Social Sciences, Other            |
| 300411 | Humanities                                       |
| 300421 | Humanities, European                             |
| 300431 | Humanities, American                             |
| 300441 | Humanities, African                              |
| 300451 | Humanities, Near East and Far East               |
| 230135 | Humor  |
| 470521 | Hydraulics and Pneumatics                        |
| 500521 | Improvisation and Mime                           |
| 240131 | Independent Study                                |
| 230751 | Indian Literature                                |
| 050251 | Indians of North America                         |
| 160700 | Indic Languages, Other                           |
| 190700 | Individual and Family Development, Other         |
| 451007 | Individual vs State                              |
| 120531 | Industrial Maintenance/Mechanics 1               |
| 120532 | Industrial Maintenance/Mechanics 2               |
| 141700 | Industrial Engineering, Other                    |
| 150600 | Industrial Production Technologies, Other        |
| 150601 | Industrial Research & Development                |
| 150611 | Industrial Production Technology 1               |
| 150612 | Industrial Production Technology 2               |
| 210100 | Industrial Arts, Other                           |
| 210101 | Industrial Arts 7                                |
| 210102 | Industrial Arts 8                                |
| 210103 | Industrial Arts 1                                |
| 210104 | Industrial Arts 2                                |

210105 Industrial Arts 3  
210106 Industrial Arts 4  
210108 Industrial Production  
210109 Industrial Occupations 1  
210110 Industrial Occupations 2  
210111 Industrial Cooperative Work Experience  
210112 Industrial Cooperative Work Experience, Advanced  
210125 Industrial Education Management Trainee  
210126 Industrial Arts Research  
420900 Industrial and Organizational Psychology, Other  
470161 Industrial Electricity  
470171 Industrial Electronics  
470300 Industrial Equipment Maintenance and Repair, Other  
470311 Industrial Mechanics 1  
470312 Industrial Mechanics 2  
470331 Industrial Maintenance Mechanics 1  
470332 Industrial Maintenance Mechanics 2  
210107 Industry and Technology  
110400 Information Sciences and Systems, Other  
060700 Institutional Management, Other  
200600 Institutional, Home Management, and Supporting  
200671 Institutional, Home Management Support Services -  
470421 Instrument Maintenance and Repair  
500921 Instrumental String Class  
141211 Instrumentation Physics 1  
141212 Instrumentation Physics 2  
141213 Instrumentation Physics 3  
141214 Instrumentation Physics 4 /Advanced Placement  
150421 Instrumentation Technology  
060800 Insurance and Risk Management, Other  
060811 Insurance Careers  
081000 Insurance Marketing, Other  
450605 Insurance Theory  
090121 Intercultural Communications  
040500 Interior Design, Other  
040511 Interior Design  
200513 Interior Design Occupations  
010700 International Agriculture, Other  
060900 International Business Management, Other  
130700 International and Comparative Education, Other  
190800 International/Comparative Home Economics, Other  
200187 International Foods  
440300 International Public Service, Other  
450612 International Economics  
450900 International Relations, Other  
450911 International Relations  
450921 International Relations, Honors  
450931 International Law  
510103 International Careers Internship

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| 230414 | Interpersonal Communication             |
| 350100 | Interpersonal Skills, Other             |
| 350111 | Interpersonal Relationships             |
| 490411 | Introduction to Transportation Industry |
| 450606 | Investment Economics                    |
| 061000 | Investments and Securities, Other       |
| 061011 | Investments and Taxation                |
| 160800 | Iranian Languages, Other                |
| 230123 | Irish Literature                        |
| 380217 | Islam and the Koran                     |
| 450862 | Israel, History                         |
| 160911 | Italian 7                               |
| 160912 | Italian 8                               |
| 160913 | Italian 1                               |
| 160914 | Italian 2                               |
| 160915 | Italian 3                               |
| 160916 | Italian 4                               |
| 160917 | Italian, Advanced Placement             |
| 160918 | Italian Field-Based Experience          |
| 161331 | Italian for Native Speakers 1           |
| 161332 | Italian for Native Speakers 2           |
| 161333 | Italian for Native Speakers 3           |
| 160900 | Italic Languages, Other                 |
| 160331 | Japanese 1                              |
| 160332 | Japanese 2                              |
| 160333 | Japanese 3                              |
| 160334 | Japanese 4                              |
| 160335 | Japanese 5                              |
| 161341 | Japanese for Native Speakers 1          |
| 161342 | Japanese for Native Speakers 2          |
| 161343 | Japanese for Native Speakers 3          |
| 500251 | Jewelry 1                               |
| 500252 | Jewelry 2                               |
| 500253 | Jewelry 3                               |
| 500254 | Jewelry 4                               |
| 050261 | Jewish Historical Significance          |
| 090400 | Journalism (Mass Communications), Other |
| 090411 | Journalism 1                            |
| 090412 | Journalism 2                            |
| 090413 | Journalism 3                            |
| 090421 | Journalism Investigations               |
| 380214 | Judaism, Foundations                    |
| 080321 | Junior Achievement                      |
| 070341 | Key Punch Operator                      |
| 070361 | Keyboarding                             |
| 160351 | Korean 1                                |
| 160352 | Korean 2                                |
| 160353 | Korean 3                                |
| 160354 | Korean 4                                |

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| 160355 | Korean 5  |
| 061100 | Labor Industrial Relations, Other               |
| 170311 | Laboratory Program 1                            |
| 170312 | Laboratory Program 2                            |
| 040600 | Landscape Architecture, Other                   |
| 010631 | Landscaping                                     |
| 010632 | Landscaping, Advanced                           |
| 500612 | Language of the Cinema                          |
| 050113 | Latin America                                   |
| 160920 | Latin 1   |
| 160921 | Latin 2   |
| 160922 | Latin 3   |
| 160923 | Latin 4   |
| 160924 | Latin, Advanced Placement                       |
| 230321 | Latin American Authors/Literature               |
| 450860 | Latin American History                          |
| 220100 | Law, Other                                      |
| 220111 | Law Fundamentals                                |
| 220121 | Law and You                                     |
| 430111 | Law Enforcement                                 |
| 430121 | Law Science                                     |
| 480311 | Leatherwork 1                                   |
| 480312 | Leatherwork 2                                   |
| 557211 | Leatherwork And Upholstery 1,                   |
| 557219 | Leatherwork And Upholstery 1, not for credit    |
| 557221 | Leatherwork And Upholstery 2                    |
| 557229 | Leatherwork And Upholstery 2, not for credit    |
| 480300 | Leatherworking and Upholstering, Other          |
| 070661 | Legal Office Procedures                         |
| 070681 | Legal/Medical Office Procedures                 |
| 360100 | Leisure and Recreational Activities, Other      |
| 239900 | Letters, Other                                  |
| 240100 | Liberal/General Studies, Other                  |
| 240111 | Liberal Studies                                 |
| 250100 | Library and Archival Sciences, Other General    |
| 250111 | Library Science                                 |
| 250300 | Library Assisting, Other                        |
| 250311 | Library Assistant                               |
| 250400 | Library Science, Other                          |
| 259900 | Library and Archival Sciences, Other            |
| 269900 | Life Sciences, Other                            |
| 340171 | Life Saving                                     |
| 500724 | Life Drawing                                    |
| 500431 | Lighting Fundamentals, Theater                  |
| 270417 | Linear Algebra                                  |
| 230600 | Linguistics (includes Phonetics, Semantics, and |
| 230611 | Linguistics                                     |
| 090431 | Literary Magazine                               |
| 230122 | Literature, Contemporary                        |

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| 230140 | Literature of Human Values                 |
| 230700 | Literature, American, Other                |
| 230800 | Literature, English, Other                 |
| 020221 | Livestock 9                                |
| 020222 | Livestock 10                               |
| 380131 | Logic                                      |
| 110261 | LOGO, Introduction                         |
| 210121 | Machine Shop 1                             |
| 210122 | Machine Shop 2                             |
| 210123 | Machine Shop 3                             |
| 210124 | Machine Shop 4                             |
| 061200 | Management Information Systems, Other      |
| 061300 | Management Science, Other                  |
| 160321 | Mandarin 1                                 |
| 160322 | Mandarin 2                                 |
| 160323 | Mandarin 3                                 |
| 160324 | Mandarin 4                                 |
| 160325 | Mandarin 5                                 |
| 030711 | Marine Management/Oceanography 1           |
| 030712 | Marine Management/Oceanography 2           |
| 260621 | Marine Biology                             |
| 260622 | Marine Biology, Advanced                   |
| 280421 | Marine Corps Leadership Education 1        |
| 280422 | Marine Corps Leadership Education 2        |
| 280423 | Marine Corps Leadership Education 3        |
| 280424 | Marine Corps Leadership Education 4        |
| 490311 | Marine Mechanics, Basic                    |
| 490312 | Marine Mechanics, Advanced                 |
| 061400 | Marketing Management and Research, Other   |
| 061411 | Marketing Management and Decision Making   |
| 089900 | Marketing and Distribution, Other          |
| 200172 | Marriage Society and Change                |
| 380205 | Marriage, Life Choices in Christian Living |
| 460111 | Masonry 1                                  |
| 460112 | Masonry 2                                  |
| 460113 | Masonry 3                                  |
| 090111 | Mass Media                                 |
| 141800 | Materials, Engineering, Other              |
| 270100 | Mathematics, Other General                 |
| 270101 | Mathematics 7                              |
| 270102 | Mathematics 7, Accelerated                 |
| 270103 | Mathematics 8                              |
| 270104 | Mathematics 8, Accelerated                 |
| 270106 | Mathematics 1, General                     |
| 270107 | Mathematics 2, General                     |
| 270109 | Mathematics in the Arts                    |
| 270110 | Mathematics, Vocational                    |
| 270112 | Mathematics Review                         |
| 270113 | Mathematics Tutoring                       |

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| 270421 | Mathematics 1, Unified                     |
| 270422 | Mathematics 2, Unified                     |
| 270423 | Mathematics 3, Unified                     |
| 270424 | Mathematics, Independent Study             |
| 279900 | Mathematics, Other                         |
| 480411 | Meatcutting 1                              |
| 480412 | Meatcutting 2                              |
| 557311 | Meatcutting 1                              |
| 557319 | Meatcutting 1, not for credit              |
| 557321 | Meatcutting 2                              |
| 557329 | Meatcutting 2, not for credit              |
| 141900 | Mechanical Engineering, Other              |
| 150800 | Mechanical and Related Technologies, Other |
| 150821 | Mechanical Engineering Technology          |
| 480111 | Mechanical Drawing 1                       |
| 480112 | Mechanical Drawing 2                       |
| 480113 | Mechanical Drawing 3                       |
| 480114 | Mechanical Drawing 4                       |
| 479900 | Mechanics and Repairers, Other             |
| 070671 | Medical Office Procedures                  |
| 170300 | Medical Laboratory Technologies, Other     |
| 170531 | Medical Terminology                        |
| 170541 | Medical Records Secretary                  |
| 170551 | Medical Assisting                          |
| 180900 | Medical Laboratory, Other                  |
| 181801 | Medical Ethics                             |
| 181000 | Medicine, Other                            |
| 230871 | Medieval Literature                        |
| 170400 | Mental Health/Human Services, Other        |
| 170431 | Mental Health Worker                       |
| 480511 | Metal 1                                    |
| 480512 | Metal 2                                    |
| 480513 | Metal 3                                    |
| 480514 | Metal 4                                    |
| 480541 | Metal Restoration                          |
| 142000 | Metallurgical Engineering, Other           |
| 142011 | Metallurgy/Powder Metal Basics             |
| 400411 | Meteorology                                |
| 050271 | Mexican American Heritage                  |
| 230781 | Mexican American Literature                |
| 450833 | Mexican History                            |
| 500728 | Mexico, Fine Arts                          |
| 260500 | Microbiology, Other                        |
| 260511 | Microbiology                               |
| 050131 | Middle Eastern Studies                     |
| 050132 | Middle East, War for Survival              |
| 450861 | Middle East History                        |
| 280300 | Military Science (Army), Other             |
| 289900 | Military Sciences, Other                   |



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| 290100 | Military Technologies, Other                          |
| 400641 | Mineralogy  |
| 142100 | Mining and Mineral Engineering, Other                 |
| 150900 | Mining and Petroleum Technologies, Other              |
| 150911 | Mining Technology                                     |
| 050211 | Minorities in America                                 |
| 170500 | Miscellaneous Allied Health Services, Other           |
| 260600 | Miscellaneous Specialized Areas, Life Sciences, Other |
| 400700 | Miscellaneous Physical Sciences, Other                |
| 460400 | Miscellaneous Construction Trades, Other              |
| 470400 | Miscellaneous Mechanics and Repairers, Other          |
| 556411 | Miscellaneous Services 1                              |
| 556419 | Miscellaneous Services 1, not for credit              |
| 556421 | Miscellaneous Services 2                              |
| 556429 | Miscellaneous Services 2, not for credit              |
| 390300 | Missionary Studies, Other                             |
| 451141 | Mobility in Society                                   |
| 450941 | Model Security Council, Local                         |
| 450951 | Model United Nations, Local                           |
| 450952 | Model United Nations, National                        |
| 451027 | Model Senate  |
| 500281 | Model Building  |
| 160611 | Modern Greek for Survival                             |
| 160621 | Modern Greek  |
| 160622 | Modern Greek 2  |
| 160623 | Modern Greek 3  |
| 160624 | Modern Greek 4  |
| 230831 | Modern British Writers                                |
| 340138 | Modern Medical Issues                                 |
| 450852 | Modern Europe   |
| 500311 | Modern Dance for Beginners 9                          |
| 500312 | Modern Dance for Beginners 10                         |
| 500313 | Modern Dance for Beginners 11                         |
| 500314 | Modern Dance for Beginners 12                         |
| 500321 | Modern Dance 9, Intermediate                          |
| 500322 | Modern Dance 10, Intermediate                         |
| 500323 | Modern Dance 11, Intermediate                         |
| 500324 | Modern Dance 12, Intermediate                         |
| 380204 | Moral Issues, Social and Individual                   |
| 360181 | Motorcycle Operation                                  |
| 309900 | Multi/Interdisciplinary Studies, Other                |
| 500719 | Mural Painting  |
| 250500 | Museology, Other                                      |
| 500900 | Music, Other  |
| 500901 | Music 7   |
| 500902 | Music 8   |
| 500934 | Music Lessons, Applied                                |
| 500952 | Music Theory  |
| 500953 | Music History 7                                       |

500954 Music History 8  
500955 Music History 9  
500956 Music History 10  
500957 Music History 11  
500958 Music History 12  
500959 Music Literature 9  
500960 Music Literature 10  
500961 Music Literature 11  
500962 Music Literature 12  
500963 Music Appreciation  
500965 Music Theater  
500966 Music, Independent Study  
500967 Music Laboratory, General Survey  
470411 Musical Instrument Repair  
230132 Mysteries  
230211 Mythological Literature, Greek and Roman  
230126 Mythology and Fable  
451008 National State and Local Elections  
161000 Native American Languages, Other  
142200 Naval Architecture and Marine Engineering, Other  
280400 Naval Science (Navy, Marines), Other  
280411 Naval Science 1  
280412 Naval Science 2  
280413 Naval Science 3  
280414 Naval Science 4  
490331 Navigation  
050137 Neglected World  
050106 New England Studies  
450819 Nineteen Sixties  
450820 Nineteen Seventies  
230150 Nobel Prize Authors  
230137 Non Fiction  
050111 North America and Current Events  
050112 North and South America  
450832 North American History  
160521 Norwegian 1  
160522 Norwegian 2  
230130 Novels  
142300 Nuclear Engineering, Other  
410200 Nuclear Technologies, Other  
170631 Nurse's Aide and Orderly  
170641 Nurse's Aide, Cooperative  
170651 Nurse's Mathematics  
010651 Nursery Operations and Management  
170600 Nursing-Related Services, Other  
170621 Nursing, Practical  
181100 Nursing, Other  
020251 Nutrition and Feeds  
200188 Nutrition

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| 230144 | Occult Literature                         |
| 142400 | Ocean Engineering, Other                  |
| 400711 | Oceanography                              |
| 320121 | Off-Campus Vo Tech Training - Unspecified |
| 070161 | Office Machines                           |
| 070162 | Office Machines, Vocational               |
| 070400 | Office Supervision and Management, Other  |
| 070731 | Office Procedures 1                       |
| 070732 | Office Procedures 2                       |
| 070741 | Office Education 1, Cooperative           |
| 070742 | Office Education 2, Cooperative           |
| 552111 | Office Machines 1                         |
| 552121 | Office Machines 2                         |
| 050107 | Old South                                 |
| 170700 | Ophthalmic Services, Other                |
| 170711 | Optical Services Assistant                |
| 150631 | Optics Technology                         |
| 181200 | Optometry, Other                          |
| 500912 | Orchestra 7                               |
| 500913 | Orchestra 7, Advanced                     |
| 500914 | Orchestra 8                               |
| 500915 | Orchestra 8, Advanced                     |
| 500916 | Orchestra 9                               |
| 500917 | Orchestra 9, Advanced                     |
| 500918 | Orchestra 10                              |
| 500919 | Orchestra 11                              |
| 500920 | Orchestra 12                              |
| 500933 | Organ                                     |
| 400531 | Organic Chemistry                         |
| 061500 | Organizational Behavior, Other            |
| 080911 | Orientation to Hospitality Careers        |
| 140111 | Orientation to Engineering                |
| 020421 | Ornamental Horticulture 1                 |
| 020422 | Ornamental Horticulture 2                 |
| 020423 | Ornamental Horticulture 3                 |
| 181300 | Osteopathic Medicine, Other               |
| 450802 | Our Cultural Heritage 7                   |
| 300131 | Outdoor Education                         |
| 310200 | Outdoor Recreation, Other                 |
| 050139 | Pacific Rim Nations                       |
| 450866 | Pacific Lands, History                    |
| 460421 | Painting and Decorating                   |
| 500715 | Painting 1                                |
| 500716 | Painting 2                                |
| 200173 | Parenthood                                |
| 310100 | Parks and Recreation, Other General       |
| 310300 | Parks and Recreation Management, Other    |
| 319900 | Parks and Recreation, Other               |
| 110231 | PASCAL, Introduction                      |

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| 260761 | Pathology                              |
| 300500 | Peace Studies, Other                   |
| 350131 | Peer Counseling                        |
| 330121 | Pep Squad                              |
| 500341 | Performing Dance Group 9               |
| 500342 | Performing Dance Group 10              |
| 500343 | Performing Dance Group 11              |
| 500344 | Performing Dance Group 12              |
| 070371 | Peripheral Computer Operator           |
| 070153 | Personal Recordkeeping                 |
| 120400 | Personal Services, Other               |
| 120431 | Personal Services Occupations          |
| 370100 | Personal Awareness, Other              |
| 370111 | Personal Development Techniques        |
| 421000 | Personality Psychology, Other          |
| 061600 | Personnel Management, Other            |
| 070500 | Personnel and Training Programs, Other |
| 142500 | Petroleum Engineering, Other           |
| 150921 | Petroleum Technology                   |
| 470341 | Petroleum Drilling Equipment Operation |
| 470342 | Petroleum Drilling Equipment Operation |
| 470343 | Petroleum Drilling Equipment Operation |
| 181400 | Pharmacy, Other                        |
| 181411 | Pharmacy Technician                    |
| 380100 | Philosophy, Other                      |
| 380111 | Philosophy                             |
| 389900 | Philosophy and Religion, Other         |
| 100131 | Photography, Commercial                |
| 100132 | Photography, Advanced Commercial       |
| 500621 | Photography 10                         |
| 500622 | Photography 11, Elementary             |
| 500623 | Photography 12, Elementary             |
| 500631 | Photography 11, Advanced               |
| 500632 | Photography 12, Advanced               |
| 340111 | Physical and Health Education 7        |
| 340112 | Physical and Health Education 8        |
| 340113 | Physical and Health Education 9        |
| 340114 | Physical Education 10                  |
| 340115 | Physical Education 11                  |
| 340116 | Physical Education 12                  |
| 340121 | Physical Education, Adaptive           |
| 340122 | Physical Education - Medically Excused |
| 340161 | Physical Education Leadership Training |
| 400100 | Physical Sciences, Other General       |
| 400121 | Physical Science                       |
| 400141 | Physical Science, Applied              |
| 400541 | Physical Chemistry                     |
| 409900 | Physical Sciences, Other               |
| 410300 | Physical Science Technologies, Other   |

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| 450707 | Physical Geography                             |
| 400800 | Physics, Other                                 |
| 400811 | Physics, General                               |
| 400821 | Physics 1                                      |
| 400822 | Physics 2                                      |
| 400831 | Physics 2 without Calculus                     |
| 421100 | Physiological Psychology, Other                |
| 260751 | Physiology, Human                              |
| 260752 | Physiology, Advanced                           |
| 500931 | Piano 1  |
| 500932 | Piano 2  |
| 400900 | Planetary Science, Other                       |
| 020400 | Plant Sciences, Other                          |
| 551211 | Plant Care 1                                   |
| 551219 | Plant Care 1, not for credit                   |
| 551221 | Plant Care 2                                   |
| 551229 | Plant Care 2, not for credit                   |
| 480611 | Plastics 1                                     |
| 480612 | Plastics 2                                     |
| 230129 | Plays, Modern Survey                           |
| 500531 | Playwriting                                    |
| 460500 | Plumbing, Pipefitting, and Steamfitting, Other |
| 460511 | Plumbing 1                                     |
| 460512 | Plumbing 2                                     |
| 558311 | Plumbing 1                                     |
| 558319 | Plumbing 1, not for credit                     |
| 558321 | Plumbing 2                                     |
| 558329 | Plumbing 2, not for credit                     |
| 181500 | Podiatry, Other                                |
| 230133 | Poetry   |
| 160441 | Polish 1                                       |
| 160442 | Polish 2                                       |
| 160443 | Polish 3                                       |
| 160444 | Polish 4                                       |
| 451000 | Political Science and Government, Other        |
| 451028 | Political Leadership                           |
| 451029 | Political Science                              |
| 451030 | Political Science, Advanced Placement          |
| 451031 | Political Science and Government -             |
| 451032 | Political Turmoil                              |
| 181600 | Population and Family Planning, Other          |
| 450511 | Population Education                           |
| 160926 | Portuguese 1                                   |
| 160927 | Portuguese 2                                   |
| 160928 | Portuguese 3                                   |
| 160929 | Portuguese 4                                   |
| 160930 | Portuguese 5                                   |
| 161321 | Portuguese for Native Speakers 1               |
| 161322 | Portuguese for Native Speakers 2               |

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| 161323 | Portuguese for Native Speakers 3                       |
| 161324 | Portuguese for Native Speakers 4                       |
| 020231 | Poultry  |
| 010231 | Power and Machinery, Agricultural                      |
| 470511 | Power Mechanics 1                                      |
| 470512 | Power Mechanics 2                                      |
| 470513 | Power Mechanics 3                                      |
| 470514 | Power Mechanics 4                                      |
| 380213 | Prayer and Liturgy                                     |
| 181700 | Pre-Dentistry, Other                                   |
| 181800 | Pre-Medicine, Other                                    |
| 181900 | Pre-Pharmacy, Other                                    |
| 182000 | Pre-Veterinary, Other                                  |
| 270401 | Pre-Algebra  |
| 480400 | Precision Food Production, Other                       |
| 480500 | Precision Metal Work, Other                            |
| 480600 | Precision Work, Assorted Materials, Other              |
| 489900 | Precision Production, Other                            |
| 557411 | Precision Production Work Study 1                      |
| 557419 | Precision Production Work Study 1, not for credit      |
| 557421 | Precision Production Work Study 2                      |
| 557429 | Precision Production Work Study 2, not for credit      |
| 557511 | Precision Production Work Experience 1                 |
| 557519 | Precision Production Work Experience 1, not for credit |
| 557521 | Precision Production Work Experience 2                 |
| 557529 | Precision Production Work Experience 2                 |
| 451005 | Presidency   |
| 500291 | Printmaking 1  |
| 500292 | Printmaking 2  |
| 270521 | Probability  |
| 270531 | Probability and Statistics                             |
| 500723 | Product Design   |
| 182100 | Prosectorial Science, Other                            |
| 439900 | Protective Services, Other                             |
| 230145 | Protest Literature                                     |
| 380215 | Protestantism, Foundations                             |
| 421200 | Psycholinguistics, Other                               |
| 420100 | Psychology, Other General                              |
| 420111 | Psychology   |
| 420112 | Psychology, Advanced                                   |
| 420311 | Psychology of Learning                                 |
| 429900 | Psychology, Other                                      |
| 421300 | Psychometrics, Other                                   |
| 421400 | Psychopharmacology, Other                              |
| 421411 | Psychopharmacology                                     |
| 090500 | Public Relations, Other                                |
| 182200 | Public Health Laboratory Science, Other                |
| 231011 | Public Speaking  |
| 440100 | Public Affairs, Other General                          |

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| 440400 | Public Administration, Other                   |
| 440500 | Public Policy Studies, Other                   |
| 440600 | Public Works, Other                            |
| 449900 | Public Affairs, Other                          |
| 270400 | Pure Mathematics, Other                        |
| 150700 | Quality Control and Safety Technologies, Other |
| 150711 | Quality Control Technology                     |
| 421500 | Quantitative Psychology, Other                 |
| 090600 | Radio/Television News Broadcast, Other         |
| 090700 | Radio/Television, Other General                |
| 100161 | Radio Production                               |
| 100191 | Radio/Television Production 1                  |
| 100192 | Radio/Television Production 2                  |
| 470121 | Radio and TV Repair 1                          |
| 470122 | Radio and TV Repair 2                          |
| 470123 | Radio and TV Repair 3                          |
| 410211 | Radioactivity                                  |
| 230153 | Reading, Independent Study                     |
| 231211 | Reading Development 1                          |
| 231212 | Reading Development 2                          |
| 231213 | Reading Development 3                          |
| 231214 | Reading Development 4                          |
| 060321 | Real Estate Finance                            |
| 061700 | Real Estate, Other                             |
| 061711 | Real Estate Marketing                          |
| 230121 | Realism  |
| 070151 | Recordkeeping 1                                |
| 070152 | Recordkeeping 2                                |
| 310111 | Recreation Aide                                |
| 360191 | Recreational Activities                        |
| 450821 | Reform in American History                     |
| 170800 | Rehabilitation Services, Other                 |
| 380200 | Religion, Other                                |
| 380209 | Religion and Psychology                        |
| 380211 | Religion and Literature                        |
| 380212 | Religion, Introduction                         |
| 380216 | Religious Movements in America                 |
| 390400 | Religious Education, Other                     |
| 390500 | Religious Music, Other                         |
| 230119 | Renaissance Literature                         |
| 030100 | Renewable Natural Resources, Other General     |
| 039900 | Renewable Natural Resources, Other             |
| 070651 | Reprographics                                  |
| 230154 | Research Technique                             |
| 320201 | Resource Room (Non Special Education)          |
| 562301 | Resource Language Arts/english 1               |
| 562302 | Resource Language Arts/english 2               |
| 562303 | Resource Language Arts/english 3               |
| 562304 | Resource Language Arts/english 4               |

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|--------|---|
| 562309 | Resource Language Arts/english, not for credit                  |
| 562311 | Resource Reading  |
| 562319 | Resource Reading, not taken for credit                          |
| 562321 | Resource Writing  |
| 562329 | Resource Writing, not for credit                                |
| 562701 | Resource General Math   |
| 562709 | Resource General Math, not for credit                           |
| 562711 | Resource Vocational Math  |
| 562719 | Resource Vocational Math, not for credit                        |
| 562721 | Resource Consumer Math  |
| 562729 | Resource Consumer Math, not for credit                          |
| 563201 | Resource Career Exploration/prevocational                       |
| 563209 | Resource Career Exploration/prevocational Skill, not for credit |
| 563211 | Resource Transition Skills                                      |
| 563219 | Resource Transition Skills, not for credit                      |
| 564001 | Resource General Science  |
| 564009 | Resource General Science, not for credit                        |
| 564501 | Resource Social Studies   |
| 564509 | Resource Social Studies, not for credit                         |
| 569101 | Resource Study Skills   |
| 569109 | Resource Study Skills, not for credit                           |
| 569301 | Resource Survival Skills  |
| 569309 | Resource Survival Skills, not for credit                        |
| 080741 | Retail Learning Laboratory                                      |
| 230900 | Rhetoric, Other   |
| 230134 | Rock Poetry   |
| 400911 | Rocketry and Space Science                                      |
| 230120 | Romanticism   |
| 450847 | Rome and Her Empire   |
| 110271 | RPG Programming, Introduction                                   |
| 030621 | Rural Recreation  |
| 160421 | Russian 1   |
| 160422 | Russian 2   |
| 160423 | Russian 3   |
| 160424 | Russian 4   |
| 160425 | Russian 5   |
| 160426 | Russian 6   |
| 230124 | Russian Literature  |
| 450867 | Russian History   |
| 380207 | Sacraments  |
| 340181 | Safety  |
| 080731 | Salesmanship  |
| 230851 | Satire, Modern British  |
| 130800 | School Psychology, Other  |
| 200481 | School Food Service   |
| 569201 | School And Social Survival Skills                               |
| 569209 | School and Social Survival Skills, not for credit               |
| 230138 | Science Fiction   |
| 260111 | Science 7   |



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| 270108 | Science Mathematics                                   |
| 300111 | Science, Unified                                      |
| 300121 | Science Study, Independent                            |
| 400111 | Science 8   |
| 419900 | Science Technologies, Other                           |
| 380203 | Scripture   |
| 500720 | Sculpture   |
| 310121 | Search and Rescue                                     |
| 070600 | Secretarial and Related Programs, Other               |
| 070631 | Secretarial Administration 1                          |
| 070632 | Secretarial Administration 2                          |
| 430311 | Security Guard  |
| 370131 | Self Perception                                       |
| 230151 | Seminar on an Author                                  |
| 161100 | Semitic Languages, Other                              |
| 556511 | Service Occupations Work Study 1                      |
| 556519 | Service Occupations Work Study 1, not for credit      |
| 556521 | Service Occupations Work Study 2                      |
| 556529 | Service Occupations Work Study 2, not for credit      |
| 556611 | Service Occupations Work Experience 1                 |
| 556619 | Service Occupations Work Experience 1, not for credit |
| 556621 | Service Occupations Work Experience 2                 |
| 556629 | Service Occupations Work Experience 2, not for credit |
| 340191 | Sex Education   |
| 230821 | Shakespeare   |
| 480531 | Sheet Metal 1   |
| 480532 | Sheet Metal 2   |
| 470431 | Shoe Repair and Orthopedics 1                         |
| 470432 | Shoe Repair and Orthopedics 2                         |
| 230131 | Short Story   |
| 070611 | Shorthand 1   |
| 070612 | Shorthand 2   |
| 090811 | Sign Language 1                                       |
| 090812 | Sign Language 2                                       |
| 480231 | Sign Painting 1                                       |
| 480232 | Sign Painting 2                                       |
| 480233 | Sign Painting 3                                       |
| 500721 | Silk Screen   |
| 070733 | Simulated Office                                      |
| 020271 | Small Animal Production 1                             |
| 020272 | Small Animal Production 2                             |
| 061800 | Small Business Management and Ownership, Other        |
| 061811 | Small Business Management                             |
| 470111 | Small Appliance Repair                                |
| 470611 | Small Engine Repair 1                                 |
| 470612 | Small Engine Repair 2                                 |
| 130900 | Social Foundations, Other                             |
| 380151 | Social Justice Issues                                 |
| 421600 | Social Psychology, Other                              |

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| 421611 | Social Psychology                                 |
| 440700 | Social Work, Other                                |
| 450100 | Social Sciences, Other General                    |
| 450111 | Social Science, Introduction                      |
| 450121 | Social Science, Advanced Theory and Research      |
| 450131 | Social Science Seminar                            |
| 450141 | Social Studies, Independent Study                 |
| 450803 | Social Studies 7, Honors                          |
| 450805 | Social Studies 8                                  |
| 450806 | Social Studies 8, Honors                          |
| 459900 | Social Sciences, Other                            |
| 543101 | Social/behavioral Skills                          |
| 543109 | Social/behavioral Skills, not for credit          |
| 451100 | Sociology, Other                                  |
| 451121 | Sociology, General                                |
| 451131 | Sociology, Issues                                 |
| 451171 | Sociology, Honors                                 |
| 451181 | Sociology, Research                               |
| 010182 | SOEP - Supervised Occupational                    |
| 010261 | Soil and Water Mechanical Practices               |
| 020500 | Soil Sciences, Other                              |
| 020511 | Soil Sciences, General                            |
| 450834 | South American History                            |
| 050109 | Southwest United States                           |
| 050134 | Soviet Union and China                            |
| 050135 | Soviet Union and Afro American Developing Nations |
| 480621 | Space Age Plastics                                |
| 160931 | Spanish 7   |
| 160932 | Spanish 8   |
| 160933 | Spanish 1   |
| 160934 | Spanish 2   |
| 160935 | Spanish 3   |
| 160936 | Spanish 4   |
| 160937 | Spanish, Advanced Placement                       |
| 160938 | Spanish Field-Based Experience                    |
| 160941 | Spanish for Travelers                             |
| 160942 | Spanish, Commercial                               |
| 161311 | Spanish for Native Speakers 1                     |
| 161312 | Spanish for Native Speakers 2                     |
| 161313 | Spanish for Native Speakers 3                     |
| 161314 | Spanish for Native Speakers 4                     |
| 161315 | Spanish for Native Speakers 5/Advanced Placement  |
| 131000 | Special Education, Other                          |
| 562300 | Special Education Language Arts                   |
| 562310 | Special Education Reading                         |
| 562320 | Special Education Writing                         |
| 562700 | Special Education Math                            |
| 564000 | Special Education General Science                 |
| 564500 | Special Education Social Studies                  |

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| 231000 | Speech, Debate, and Forensics, Other             |
| 231021 | Speech 1   |
| 231022 | Speech 2   |
| 231023 | Speech 3   |
| 070613 | Speed Writing                                    |
| 231215 | Speed Reading                                    |
| 230405 | Spelling   |
| 120211 | Sports Officiating                               |
| 170561 | Sports Medicine                                  |
| 230143 | Sports through Literature                        |
| 360111 | Sports, Individual                               |
| 360121 | Sports, Team                                     |
| 500371 | Square Dance                                     |
| 500511 | Stagecraft 9                                     |
| 500512 | Stagecraft 10                                    |
| 500513 | Stagecraft 11                                    |
| 500514 | Stagecraft 12                                    |
| 080311 | Starting Your Own Business                       |
| 010141 | State and Community Agriculture                  |
| 230761 | State Writers                                    |
| 340137 | State Requirements                               |
| 451002 | State and Local Government                       |
| 470500 | Stationary Energy Sources, Other                 |
| 270500 | Statistics, Other                                |
| 270511 | Statistics                                       |
| 220131 | Street Law                                       |
| 140411 | Strength of Materials - Architectural            |
| 141911 | Strength of Materials - Mechanical Technology    |
| 150111 | Structural Engineering Technician                |
| 131100 | Student Counseling and Personnel Services, Other |
| 170611 | Student Assessment of Child Health               |
| 330111 | Student Assistant                                |
| 330131 | Student Government                               |
| 320211 | Study Dynamics                                   |
| 240121 | Summer Abroad                                    |
| 010271 | Surveying, Agricultural                          |
| 142600 | Surveying and Mapping Sciences, Other            |
| 150211 | Surveying  |
| 160211 | Swahili 1  |
| 160212 | Swahili 2  |
| 160531 | Swedish 1  |
| 160532 | Swedish 2  |
| 160533 | Swedish 3  |
| 110500 | Systems Analysis, Other                          |
| 142700 | Systems Engineering, Other                       |
| 300600 | Systems Science, Other                           |
| 200137 | Tailoring  |
| 061900 | Taxation, Other                                  |
| 131200 | Teacher Education, General Programs, Other       |

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| 131300 | Teacher Education, Specific Subject Areas, Other       |
| 200251 | Teacher Aide/Elementary                                |
| 200252 | Teacher Aide/Secondary                                 |
| 131400 | Teaching English as a Second Language/Foreign          |
| 231100 | Technical and Business Writing, Other                  |
| 231111 | Technical English                                      |
| 270111 | Technical Mathematics                                  |
| 451231 | Technology and Urbanization                            |
| 470124 | Telecommunications Technician                          |
| 080781 | Telephone Service Representative                       |
| 080782 | Telephone Directory Assistant                          |
| 090721 | Television and Taste                                   |
| 100171 | Television Production 1                                |
| 100172 | Television Production 2                                |
| 100173 | Television Production 3                                |
| 100174 | Television Production 4                                |
| 450607 | Television and Economics                               |
| 320221 | Test Taking  |
| 142800 | Textile Engineering, Other                             |
| 500271 | Textile Design   |
| 190900 | Textiles and Clothing, Other                           |
| 200381 | Textiles Testing                                       |
| 451132 | The Poor in America                                    |
| 500421 | Theater Makeup   |
| 500541 | Theater Practicum Contract                             |
| 230139 | Themes in Literature                                   |
| 390600 | Theological Studies, Other                             |
| 390611 | Theological Studies                                    |
| 399900 | Theology, Other  |
| 200661 | Therapeutic Recreation Aide                            |
| 450857 | Third World History                                    |
| 460121 | Tile Setting and Plastering                            |
| 081111 | Tourism Services                                       |
| 182300 | Toxicology (Clinical), Other                           |
| 360151 | Track and Field  |
| 490212 | Tractor-Trailer Truck Driving                          |
| 062000 | Trade and Industrial Supervision and Management, Other |
| 070621 | Transcription  |
| 160125 | Transitional English                                   |
| 081100 | Transportation and Travel Marketing, Other             |
| 490412 | Transportation Technology 2                            |
| 490421 | Transportation/Traffic Technician                      |
| 499900 | Transportation and Material Moving, Other              |
| 270411 | Trigonometry   |
| 270413 | Trigonometry and Solid Geometry                        |
| 010671 | Turf Management  |
| 161211 | Turkish 1  |
| 161212 | Turkish 2  |
| 330141 | Tutoring   |

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| 450817 | Twenties and Thirties                               |
| 450816 | Twentieth Century America                           |
| 070711 | Typewriting 1                                       |
| 070712 | Typewriting 2                                       |
| 070713 | Typewriting 3                                       |
| 070721 | Typewriting, Personal                               |
| 070700 | Typing, General Office, and Related Programs, Other |
| 050133 | U S S R   |
| 160411 | Ukrainian 1   |
| 600000 | Uncodeable  |
| 600001 | Undifferentiated Transfer Credits                   |
| 450804 | United States History 8                             |
| 450807 | United States History, State and Local              |
| 450808 | United States History, Advanced Placement           |
| 450811 | United States History 1                             |
| 450812 | United States History 2                             |
| 450813 | United States History, Honors                       |
| 450829 | United States Military History 1                    |
| 450830 | United States Military History 2                    |
| 450831 | United States History, Field Study                  |
| 160940 | Unused Code   |
| 270105 | Unused Code   |
| 320101 | Unused Code   |
| 320108 | Unused Code   |
| 320109 | Unused Code   |
| 320110 | Unused Code   |
| 320111 | Unused Code   |
| 320112 | Unused Code   |
| 320113 | Unused Code   |
| 320114 | Unused Code   |
| 320115 | Unused Code   |
| 320116 | Unused Code   |
| 320117 | Unused Code   |
| 320118 | Unused Code   |
| 320119 | Unused Code   |
| 320120 | Unused Code   |
| 330161 | Unused Code   |
| 480321 | Upholstery  |
| 480322 | Upholstery, Advanced                                |
| 040700 | Urban Design, Other                                 |
| 451200 | Urban Studies, Other                                |
| 451211 | Urban Problems                                      |
| 451221 | Urban Ecology                                       |
| 230148 | Utopias   |
| 470600 | Vehicle and Mobile Equipment Mechanics and          |
| 490200 | Vehicle and Equipment Operation, Other              |
| 081200 | Vehicles and Petroleum Marketing, Other             |
| 470141 | Vending Machine Repair                              |
| 170571 | Veterinary Science                                  |

182400 Veterinary Medicine, Other  
230841 Victorian Literature  
451151 Violence In America  
500100 Visual and Performing Arts, Other General  
509900 Visual and Performing Arts, Other  
230404 Vocabulary  
500947 Vocal Ensemble  
209900 Vocational Home Economics, Other  
230156 Vocational English  
500948 Voice Class  
450827 War and Modern Consciousness  
080761 Warehousing Industrial and Wholesale Material  
470433 Watch and Clock Repair  
310400 Water Resources, Other  
490300 Water Transportation, Other  
500717 Watercolor 1  
030311 Waterman Occupations  
200361 Wedding and Specialty Consulting  
010221 Welding, Agricultural  
480521 Welding 1  
480522 Welding 2  
480523 Welding 3  
480524 Welding - Cooperative Education  
230771 Western Literature  
380210 Western Religions  
450840 Western Civilization 9  
450841 Western Civilization 9, Honors  
450842 Western Civilization, History  
450844 Western Civilization, Advanced Placement  
450815 Westward Movement  
380202 Who Is Jesus  
030600 Wildlife Management, Other  
030611 Wildlife Management  
500923 Wind Ensemble  
310211 Winter/Ski Resort Operation  
230142 Women in Literature  
300700 Women's Studies, Other  
300711 Women's Studies  
300721 Women's Studies in Literature  
500924 Woodwind Class  
480700 Woodworking, Other  
480711 Woodworking 1  
480712 Woodworking 2  
480713 Woodworking 3  
480714 Woodworking 4  
070641 Word Processing 1  
070642 Word Processing 2  
070643 Word Processing 3  
230415 Word Study - Remedial

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| 320104 | Work Experience                               |
| 320105 | Work Experience, Advanced                     |
| 050114 | World Studies 1                               |
| 050115 | World Studies 2                               |
| 050116 | World Studies, Honors                         |
| 100111 | World of Communications                       |
| 230118 | World Literature                              |
| 230128 | World Drama                                   |
| 450704 | World Geography                               |
| 450828 | World War II                                  |
| 450835 | World History                                 |
| 450836 | World History, College                        |
| 450837 | World History, Modern                         |
| 450838 | World Civilization, Twentieth Century         |
| 450839 | World Civilization, Twentieth Century, Honors |
| 450868 | World Leaders, Past and Present               |
| 230402 | Writing Laboratory                            |
| 230403 | Writing About Literature                      |
| 451025 | Writings Influencing Government               |
| 090441 | Yearbook Production 1                         |
| 090442 | Yearbook Production 2                         |
| 160541 | Yiddish 1                                     |
| 160542 | Yiddish 2                                     |
| 160543 | Yiddish 3                                     |
| 230146 | Youth and Literature                          |
| 260700 | Zoology, Other                                |
| 260711 | Zoology                                       |
| 260721 | Zoology, Vertebrate                           |
| 260731 | Zoology, Invertebrate                         |

## **Appendix M**

### **Glossary of NELLS:88 Terminology**

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## Glossary of NELS:88 Terms

Note: Words in the glossary have been cross-referenced. If a word used in a definition has its own entry elsewhere in the glossary, the word appears in italics in its first usage under each entry.

**Alternative completer:** The NELS:88 second follow-up distinguished three levels of enrollment status: students enrolled in a regular high school program, *dropouts* who had enrolled in (or had completed) some alternative (non-diploma) high school equivalency accrediting program (for example, preparation classes for the *GED test*), and dropouts receiving no alternative instruction. The term "alternative completer" was used for dropouts receiving any sort of instruction to prepare them for equivalency certification, and for dropouts who had already received the GED or other equivalency certification. In terms of questionnaire completion, alternative completers were treated in two ways. Dropouts receiving alternative instruction in preparation for possible equivalency certification were administered the dropout questionnaire. Those dropouts who had received the GED or other high school equivalency certification were treated as school completers, and were administered the *student questionnaire*.

**ASCII:** American Standard Code for Information Interchange. A standard method for encoding characters; includes codes representing upper and lower case letters, numerals, and punctuation.

**Augmentation students:** See State augmentation students.

**Base year ineligible (BYI) study:** A NELS:88 First Follow-Up study which sought to locate and survey eligible respondents who were part of the Base Year *sample*, yet were ineligible to participate in the Base Year due to mental or physical incapacity, language barrier, or other factors. (See entry for "Followback study of excluded students.")

**Bias (due to nonresponse):** Difference that occurs when respondents differ as a group from nonrespondents on a characteristic being studied.

**Bias (due to undercoverage):** This bias arises because some portion of the potential sampling frame is missed or excluded. For example, if the school list from which a school *sample* is drawn is incomplete or inaccurate, school undercoverage may occur. In NELS:88 the most important potential source of undercoverage bias was exclusion of 5.37 percent of the potential sample of eighth graders in the base year. (See entry for "Base year ineligible study" and "Followback study of excluded students.")

**Bias (of an estimate):** The difference between the expected value of a *sample* estimate and the corresponding true value for the *population*.

**Burden:** Formally, this is the aggregate hours realistically required for data providers to participate in a data collection. Burden also has a subjective or psychological dimension: the degree to which providing information is regarded as onerous may depend on the salience to the respondent of the questions that are being posed and on other factors such as competing time demands.

**BY:** NELS:88 Base Year Study conducted in 1988.

**Carnegie units:** A standard of measurement used for secondary education that represents the completion of a course that meets one period per day for one year.

**CCD:** Common Core of Data. Data annually collected from all public schools in the United States by the National Center for Education Statistics.

**CD-ROM:** Compact Disc Read-Only Memory. A computer storage disc in the same physical form as an audio CD. A CD-ROM can store approximately 650 megabytes of digital data. NELS:88 data are available both in magnetic media, such as tapes, as well as in optical laser disc media, such as CD-ROM.

**Ceiling effect:** The result of a cognitive test having insufficient numbers of the more difficult items. In a *longitudinal* study, ceiling effects in the follow-up testings can cause change scores to be artificially constrained for high ability examinees. More information (that is, smaller error of measurement) is obtained with respect to ability level if high ability individuals receive relatively harder items (and if low ability individuals receive proportionately easier items). The matching of item difficulty to a person's ability level yields increased *reliability* at the extremes of the score distribution where it is most needed for studies of longitudinal change. That is, the measurement problems related to *floor* and ceiling effects in combination with regression effects found at the extreme score ranges seriously hamper the accuracy of change measures in longitudinal studies. Hence one strategy employed in NELS:88 to minimize ceiling effects was to develop test forms that are "adaptive" to the ability level of the examinee. The multilevel tests used in the first and second follow-ups of NELS:88--with test assignment based on prior test performance--work to minimize the possibility of ceiling effects biasing the estimates of the score gains. (See entry for "Floor effect.")

**Certainty school:** A first or second follow-up school attended by four or more NELS:88 *sample* members, as determined by *tracing* and data collection efforts. These schools are included in the sample with certainty (probability = 1). All NELS:88 first follow-up sample members in the school at the time of data collection were included in the second follow-up.

**Closed-ended:** A type of question in which the data provider's responses are limited to given alternatives (as opposed to an *open-ended* question. See entry for "Open-ended.")

**Cluster size:** The number of NELS:88 *sample* members attending a particular high school.

**Codebook:** A *record* of each variable being measured, including variable name, columns occupied by each variable in the data matrix, values used to define each variable, unweighted frequencies, unweighted percents, and weighted valid percents. (See entry for "electronic codebook.")

**Cognitive test battery:** One of the two parts of the Student Survey (the second part being the *student questionnaire*). Four achievement areas (mathematics, reading, science, and social studies [history/citizenship/geography]) were measured.

**Cohort:** A group of individuals who have a statistical factor in common, for example, year of birth or grade in school or year of high school graduation. NELS:88 embraces three overlapping but distinct nationally-representative grade cohorts: 1987-88 eighth graders, 1989-90 high school sophomores, and 1991-92 high school seniors.

**Composite variables:** A composite variable is one that is constructed through either the combination of two or more variables (socioeconomic status, for example) or calculated through the application of a mathematical function to a variable. Also called a "derived variable" or "constructed variable."

**Confidence interval:** A *sample*-based estimate expressed as an interval or range of values within which the true *population* value is expected to be located (with a specified degree of confidence).

**Contextual data:** In NELS:88, the primary unit of analysis is the student (or *dropout*), and information from the other study components, referred to as the contextual data, should be viewed as extensions of the student data—for example, as *school administrator*, *teacher*, and *parent* reports on the student's school learning environment or home situation.

**Core school:** School that was selected between Phases 1 and 2 of the Second Follow-Up to receive the full complement (*School Administrator*, *Teacher*, *Transcript*) of study components, and for in-school data collection sessions.

**Core student:** Students who are part of the primary *cohort* of NELS:88, in contrast to *state augmentation* or *School Effectiveness Study* students. The core students include those chosen as eighth graders in the 1988 Base Year Study and those added to the *sample* through *freshening* procedures during the First or Second Follow-Up.

**Core study:** The original NELS:88 study, in contrast to the study with additions and follow-up additions like the *state augmentation* studies and the *School Effectiveness Study*.

**Course offerings:** School-level summaries of courses offered and of course enrollment levels; while in *HS&B* course offerings data were collected for all schools, in NELS:88 such data have been collected only for schools in the *School Effectiveness Study*.

**Cross-sectional survey:** A cross-sectional design represents events and statuses at a single point in time. For example, a cross-sectional survey may measure the cumulative educational attainment (achievements, attitudes, statuses) of students at a particular stage of schooling (for example, eighth grade, tenth grade, or twelfth grade). In contrast, a *longitudinal* (or repeated measurement of the same *sample* units) survey measures the change or growth in educational attainments that occurs over a particular period of schooling. The longitudinal design of NELS:88 generates—by means of sample "*freshening*"—three representative cross-sections (eighth graders in 1988, high school sophomores in 1990, seniors in 1992) and permits analysis of individual level change over time through longitudinal analysis and of group level and intercohort change through the cross-sectional comparisons. (See entry for "Longitudinal or Panel Survey.")

**Data element:** The most basic unit of information. In data processing it is the fundamental data structure. It is defined by its size (in characters) and data type (e.g. alphanumeric, numeric only, true/false, date) and may include a specific set of values or range of values.

**Design effect:** A measure of *sample* efficiency. The design effect (DEFF) is the *variance* of an estimate divided by the variance of the estimate that would have occurred if a sample of the same size had been selected using simple random sampling. Sometimes it is more useful to work with *standard errors* than with variances. The root design effect (DEFT) expresses the relation between the actual standard error of an estimate and the standard error of the corresponding estimates from a simple random sample.

**Dropout:** The term is used both to describe an event—leaving school before graduating—and a status—an individual who is not in school and is not a graduate at a defined point in time. The "*cohort dropout rate*" in NELS:88 is based on measurement of enrollment status of 1988 eighth graders two and four years later (that is, in the spring term of 1990 and the spring term of 1992) and of 1990 sophomores two years later.

A respondent who has not graduated from high school or attained an equivalency certificate and who has not attended high school for 20 consecutive days (not counting any excused absences) is considered to be a dropout. In contrast, transferring schools—for example, from a public to a private school—is not regarded as a dropout event, nor is delayed graduation (as when a student is continuously enrolled but takes an additional year to complete school). A person who drops out of school may later return and graduate: at the time the person left school initially, he or she is called a "dropout," and at the time the person returns to school, he or she is called a "stopout."

**Early graduate:** A student who graduated from high school in less than the typical amount of time.) For example, if a student graduated in December of his/her senior year (when the majority of his/her classmates graduate the following May or June), the student is categorized as an early graduate. In the main study data collection, early graduates were administered a special supplement in the *student questionnaire* along with the *cognitive test battery*.

**Electronic codebook (ECB):** While hardcopy *codebooks* with item stems, response categories, associated response frequency distributions, unweighted percents, and weighted valid percents are contained within the NELS:88 user's manuals, NELS:88 data are also available on *CD-ROM* in an electronic codebook (ECB) format. For example, the electronic codebook created for the combined base year first follow-up NELS:88 data is a menu-driven system that allows users to perform functions such as the following: (a) search a list of NELS:88 *BY-FI* database variables based upon key words or variable names/labels; (b) display weighted and unweighted percentages for each variable in the database; (c) display question text for each variable in the database; (d) select or tag variables for subsequent analysis; (e) generate SAS-PC or SPSS-PC+ program code/command statements for subsequently constructing a system file of the selected variables; and (f) generate a codebook of the selected variables. An electronic codebook is also being prepared for the NELS:88 second follow-up data, and will again be housed on a CD-ROM.

**ETS:** Educational Testing Service. *NORC*'s subcontractor for NELS:88 cognitive test development and evaluation.

**F1:** The NELS:88 first follow-up, conducted in 1990.

**F2:** The NELS:88 second follow-up, conducted in 1992.

**File:** Refers to a data file containing a set of related computerized *records*.

**Floor effect:** The result of a cognitive test being too difficult for a large number of the examinees, causing the low ability examinees to receive chance scores on the first testing, and on subsequent testings if the test remains too difficult. Floor effects result in an inability to discriminate among low ability individuals at time one or time two, and there will be no reliable discrimination among examinees with respect to amounts of change. A possible solution, utilized in NELS:88, is to develop test forms that are "adaptive" to the ability level of the examinee, which tends to minimize the possibility of floor effects biasing the estimates of the score gains.

**Followback study of excluded students:** A continuation in the NELS:88 second follow-up of a special substudy begun in the first follow-up as (see entry for) the *base year ineligibles study*.

**Freshening:** A NELS:88 sampling procedure by which high school sophomores were added in the first follow-up who were not in the eighth grade in the U.S. two years before. This process was repeated in the second follow-up, adding high school seniors who were not in the eighth grade in the U.S. four years

before, and not in the tenth grade in the U.S. two years before. This process ensured that the *sample* would be representative of the 1992 senior class by allowing 1992 seniors who did not have a chance for selection into the base year (or the first follow-up) sample to have some probability of 1992 selection.

**GED recipient:** A person who has obtained certification of high school equivalency by meeting state requirements and passing an approved exam, which is intended to provide an appraisal of the person's achievement or performance in the broad subject matter areas usually required for high school graduation. (See entry for "GED test" and "Alternative completer.")

**GED test:** General Educational Development test. A test administered by the American Council on Education as the basis for awarding a high school equivalent certification.

**HS&B:** High School and Beyond. The second in the series of *longitudinal* education studies sponsored by NCES. The HS&B Base Year study surveyed sophomore and senior students in 1980.

**IEP:** Individualized Education Program in special education for students with a mental or physical disability.

**IRT:** Item Response Theory. A method of estimating achievement level by considering the pattern of right, wrong, and omitted responses on all items administered to an individual student. Rather than merely counting right and wrong responses, the IRT procedure also considers characteristics of each of the test items, such as their difficulty, and the likelihood that they could be guessed correctly by low-ability individuals. IRT scores are less likely than simple number-right or formula scores to be distorted by correct guesses on difficult items if a student's response vector also contains incorrect answers to easier questions. Another attribute of IRT that makes it useful for NELS:88 is the calibration of item parameters for all items administered to all students. This makes it possible to obtain scores on the same scale for students who took harder or easier forms of the test. IRT also permits vertical scaling of the three grade levels (grade 8 in 1988, grade 10 in 1990, grade 12 in 1992).

**Item nonresponse:** The amount of missing information when a valid response to an item or variable was expected. (See entry for "Unit-nonresponse.")

**LEP:** Limited English Proficient. A concept developed to assist in identifying those language-minority students (individuals from non-English language backgrounds) who need language assistance services, in their own language or in English, in the schools. (See entries for "NEP" and "LM.") The Bilingual Education Act, reauthorized in 1988 (PL 100-297), describes a limited English proficient student as one who:

- 1) meets one or more of the following conditions:
  - a) the student was born outside of the United States or the student's native language is not English;
  - b) the student comes from an environment where a language other than English is dominant;  
or
  - c) the student is American Indian or Alaskan Native and comes from an environment where a language other than English has had a significant impact on his/her level of English language proficiency; and
- 2) has sufficient difficulty speaking, reading, writing, or understanding the English language to deny him or her the opportunity to learn successfully in English-only classrooms.

**LM:** Language Minority. A fully English proficient student in whose home a non-English language is typically spoken. This groups includes students whose English is fluent enough to benefit from instruction in academic subjects offered in English.

**Longitudinal or panel survey:** In a longitudinal design, similar measurements--of the same *sample* of individuals, institutions, households or of some other defined unit--are taken at multiple time points. NELS:88 employs a longitudinal design that follows the same individuals over time, and permits the analysis of individual-level change. (See entry for "Cross-sectional survey.")

**Machine editing:** Also called forced data cleaning or logical editing. Uses computerized instructions in the data cleaning program that ensure common sense consistency within and across the responses from a data provider.

**Microdata (microrecords):** Observations of individual *sample* members, such as those contained on the NELS:88 data *files*.

**MSA:** Metropolitan statistical area. A large population nucleus and the nearby communities which have a high degree of economic and social integration with that nucleus. Each MSA consists of one or more entire counties (or county equivalents) that meet specified standards pertaining to population, commuting ties, and metropolitan character. (However, in New England, towns and cities, rather than counties, are the basic units.) MSAs are designated by the Office of Management and Budget (*OMB*). An MSA includes a city and, generally, its entire urban area and the remainder of the county or counties in which the urban area is located. A MSA also includes such additional outlying counties which meet specified criteria relating to metropolitan character and level of community of workers into the central city or counties.

**Multidimensional raking:** An adjustment procedure in weighting whereby the sum of the weights for each marginal category of respondents in the follow-up rounds of NELS:88 was made equal to the corresponding sum of the final prior round weights for that group.

**NAEP:** The National Assessment of Educational Progress.

**NAIS:** The National Association of Independent Schools. This organization endorsed NELS:88. NAIS schools form a base year school sampling stratum in NELS:88, and NAIS constitutes a category within the restricted use *file* school control type variable.

**NCEA:** The National Catholic Educational Association. This organization endorsed NELS:88.

**NCES:** The National Center for Education Statistics, Office of Educational Research and Improvement, of the U.S. Department of Education. This governmental agency is the primary sponsor of NELS:88, and is also the sponsoring agency for (among other studies) *NAEP*, *HS&B*, and *NLS-72*.

**NELS:88:** The National Education Longitudinal Study of 1988. Third in the series of *longitudinal* education studies sponsored by NCES. The study began in 1988 with the eighth-grade class of that year. The study has collected data in 1988, 1990, and 1992 on student's school experiences, as well as background information from *school administrators*, *teachers* and *parents* (in the base year and second follow-up only). The study seeks to learn about students' educational experiences and outcomes from eighth grade through high school and beyond.

**NEP:** No English Proficiency. A student who does not speak English. (See entry for "LEP.")

**New Basics:** In its report *A Nation At Risk: The Imperative for Educational Reform* (1983), the National Commission on Excellence in Education recommended that all high school students "be required to lay the foundations in the Five New Basics by taking the following curriculum during their four years of high school: (i) 4 years of English; (ii) 3 years of mathematics; (iii) 3 years of science; (iv) 3 years of social studies; and (v) one-half year of computer science." A more stringent version of the New Basics was offered by Secretary of Education William Bennett in 1988 (*American Education, Making It Work: A Report to the President and the American People*), comprising the scheme above, plus a minimum of two years of foreign language. Summary composite variables, reflecting various interpretations of the New Basics, were created for the HS&B and NAEP high school transcript studies; the NELS:88 transcript study provides both HS&B and NAEP equivalent New Basics variables.

**NLS-72:** The National Longitudinal Study of the High School Class of 1972. This project was the first in the series of *longitudinal* education studies sponsored by NCES.

**Noncertainty schools:** Schools in which fewer than four (three, two or one) NELS:88 students attended. These schools were not subsampled for participation in the *School Administrator, Teacher, and Transcript* components. Additionally, the survey instruments were not administered in group sessions in the schools, as was done in the *certainty schools*.

**Nonresponse:** (See entry for "Item nonresponse" and "Unit nonresponse.")

**Nonsampling error:** An error in *sample* estimates that cannot be attributed to sampling fluctuations. Such errors may arise from many sources including imperfect implementation of sampling procedures, differential unit or *item nonresponse* across subgroups, *bias* in estimation, or errors in observation and recording.

**NORC:** The National Opinion Research Center at The University of Chicago. NORC conducts NELS:88 for the National Center for Education Statistics.

**NSF:** The National Science Foundation, which is one of the sponsors of NELS:88. The National Science Foundation awards grants and contracts to individuals and organizations to conduct research. NSF sponsored two components of the second follow-up: 1) additions to the *student questionnaire* to learn about students' experiences and their exposure to mathematics and science curricula, and 2) a *teacher survey* of mathematics and science teachers to obtain evaluations of their NELS:88 student(s) and to learn about their classroom practices and background preparation for teaching.

**OBEMLA:** The Office of Bilingual Education and Minority Languages Affairs, U.S. Department of Education. OBEMLA funded a NELS:88 supplement that inquired into the education experiences of students whose native language is other than English.

**OMB:** The Office of Management and Budget, U.S. Executive Branch. OMB is a federal agency with the responsibility for reviewing all studies funded by executive branch agencies. OMB reviewed, commented on, and approved the NELS:88 questionnaires, as indicated by their approval number and its expiration date in the top right corner of the questionnaire covers.

**Open-ended:** A type of question in which the data provider's responses are not limited to given alternatives.

**Optical disc:** A disc that is read optically (e.g., by laser technology), rather than magnetically. (See entry for "CD-ROM.")

**Optical scanning:** A system of recording responses that transfers responses into machine-readable data through optical mark reading. This method of data capture was used for the NELS:88 *student questionnaires* and *cognitive tests*, as well as for the *parent* and *teacher questionnaires*. (In contrast, responses to certain other questionnaires, such as the *school administrator questionnaire*, were keyed by using conventional data entry methods.)

**Out-of-sequence:** This term means that a student is not in the grade that he/she would be in if progressing with the majority of the *cohort* through school. For example, most NELS:88 *sample* members were in the tenth grade in the 1989-90 school year; one would be described as out-of-sequence if found to be in the eleventh grade in the 1989-90 school year.

**Parent, NELS-targeted parent/guardian:** The NELS:88 Parent Component sought to collect information from parents of eligible student/*dropout* respondents. It was asked that the parent or guardian who knew most about his or her child's educational experience complete the questionnaire.

**PIN:** Personal Identification Number. A unique number assigned to each district and school.

**Population:** All individuals in the group to which conclusions from a data collection activity are to be applied. Weighted results of NELS:88 data provide estimates for populations and subgroups.

**Population variance:** A measure of dispersion defined as the average of the squared deviations between the observed values of the elements of a population or *sample* and the population mean of those values.

**Postsecondary education:** The provision of formal instructional programs with a curriculum designed primarily for students who have completed the requirements for a high school diploma or equivalent. This includes programs of an academic, vocational, and continuing professional education purpose, and excludes avocational and adult basic education programs.

**Poststratification adjustment:** A weight adjustment that forces survey estimates to match independent *population* totals within selected poststrata (adjustment cells).

**Precision:** The difference between a *sample*-based estimate and its expected value. Precision is measured by the *sampling error* (or *standard error*) of an estimate.

**Probability sample:** A sample selected by a method such that each unit has a fixed and determined probability of selection.

**QED:** Quality Education Data. QED is a commercial firm that publishes national directories of all public and private schools and districts. Its list of schools in the U.S. constituted the sampling frame for the base year, and provided important information on school location, principal's name, minority enrollment, and other characteristics.

**Range check:** A determination of whether responses fall within a predetermined set of acceptable values.

**Record format:** The layout of the information contained in a data *record* (includes the name, type, and size of each field in the record).



**Records:** A logical grouping of *data elements* within a *file* upon which a computer program acts.

**Reliability:** The consistency in results of a test or measurement including the tendency of the test or measurement to produce the same results when applied twice to some entity or attribute believed not to have changed in the interval between measurements.

**Sample:** Subgroup selected from the entire *population*.

**Sampling error:** The part of the difference between a value for an entire *population* and an estimate of that value derived from a *probability sample* that results from observing only a sample of values.

**Sampling variance:** A measure of dispersion of values of a statistic that would occur if the survey were repeated a large number of times using the same *sample* design, instrument and data collection methodology. The square root of the sampling variance is the *standard error*.

**School administrator questionnaire:** This questionnaire was to be completed by the principal and/or someone designated by the principal. The questionnaire sought basic information about school policies, number of students in each class, curriculum offered, programs for disadvantaged and disabled students, and other school characteristics.

**School climate:** The social system and culture of the school, including the organizational structure of the school and values and expectations within it.

**School Coordinator:** A person designated in each school to act as a contact person between the school and *NORC*. This person assisted with establishing a *survey day* in the school, and in some cases where the school *cluster size* was very small, the School Coordinator administered the student instruments.

**School Effectiveness Study:** A component of NELS:88 added to the first follow-up to permit the study of school effects. The supplement substantially increased *cluster sizes* and provided in-school representative student *samples* at approximately 250 urban and suburban schools in the thirty largest *MSAs* in order to permit researchers to assess the impact of various school characteristics (such as structural and management characteristics and *school climate*) on student outcomes (such as student achievement and educational experience). This component was continued in the second follow-up, and included *student, school administrator, teacher, and parent questionnaires*, transcript surveys, as well as a *course offerings* component.

**Standard deviation:** The most widely used measure of dispersion of a frequency distribution. It is equal to the positive square root of the *population variance*.

**Standard error:** The positive square root of the *sampling variance*. It is a measure of the dispersion of the sampling distribution of a statistic. Standard errors are used to establish *confidence intervals* for the statistics being analyzed.

**State augmentation students:** In the base year, certain states funded a *sample* of additional schools in the state to produce a representative sample of schools in the state. In this sense, the state's sample was "augmented" to maximize the utility of the NELS:88 data for those states. The students from those base year schools were designated as "augmentation" students, and were followed and surveyed in the first follow-up, though the students had dispersed to many tenth-grade schools. In the second follow-up these students were surveyed again.

**Stopout:** A student who had one or more occurrences of school non-attendance for 20 or more days (not including any excused absences) who subsequently returned to school. In NELS:88, this term was used for temporary dropouts *within a round* (e.g., out of school in fall 1989 but back spring 1990, as contrasted to 1990 dropouts who were back in school in spring term of 1992).

**Student questionnaire:** One of the two parts of the student survey (the other part is the *cognitive test battery*). This instrument contained a locator section for *tracing sample* members for future waves of NELS:88 and a series of questions about courses taken, hours spent on homework, and perceptions of the school and the home environment.

**Survey day:** A day chosen by the school during the data collection period when an *NORC* interviewer and a clerical assistant (or the *School Coordinator* in schools with only a small group of *sample* members) administered the survey to the school's sample of students. The survey day session lasted about three hours for the actual data collection, with about thirty minutes each for preparation and clean-up/preparation of completed materials for mailing.

**Teacher questionnaire:** Math and science teachers of selected students were asked to complete a teacher questionnaire, which collected data on school and teacher characteristics (including teacher qualifications and experience), evaluations of student performance, and classroom teaching practices.

**Teacher, NELS-targeted teacher sample:** In the base year and first follow-up, two teacher reports were sought for each student, reflecting a combination of two subjects from four subject areas (English, social studies, science, mathematics). In the second follow-up, one teacher report per pupil was sought for those students who were enrolled mathematics, science, or both, in one of the schools designated for school *contextual data* collection.

**Tracing:** The locating (and ascertaining of school enrollment status) of NELS:88 *sample* members. Sample members were traced at six points in time subsequent to eighth grade: autumn term 1988, autumn term 1989, spring term 1990, autumn term 1990, autumn term 1991, and spring term 1992.

**Transfer student:** A NELS:88 *sample* member who moved from one school to another after the subsampling of schools between Phase 1 (the *tracing* of sample members to their school of enrollment) and Phase 2 (the re-verification of *sample* members' school of enrollment).

**Unit nonresponse:** Failure of a survey unit (for example, at the institutional level, a school, or at the individual level, a respondent, such as a student or a teacher) to cooperate or complete survey instrument. Unit nonresponse may be contrasted to *item nonresponse*, which is the failure of a participating *sample* member to give a valid response to a particular question on a survey instrument.

**Validity:** The capacity of an item or measuring instrument to measure what it was designed to measure; stated most often in terms of the correlation between scores in the instrument and measures of performance on some external criterion. *Reliability*, on the other hand, refers to consistency of measurement over time. (See entry for "Reliability.")

**Variance:** See entry for "Population variance" and "Sampling variance."

**Weighted estimates:** Estimates from a *sample* survey in which the sample data are statistically weighted (multiplied) by factors reflecting the sample design. The weights (referred to as sampling weights) are typically equal to the reciprocals of the overall selection probabilities, multiplied by a *nonresponse* or

*poststratification adjustment.* Thus, for example, the 1,035 completed *school administrator questionnaires* in the NELS:88 base year represent a *population* of 38,774 schools. Individual completed cases (that is, base year school administrator questionnaires) may "represent" anywhere from a minimum of 1.5 schools to a maximum of 387.3 schools. To take another example, 12,111 base year questionnaire respondents reported themselves to be male, and a slightly greater number (12,244) reported themselves to be female. When these cases are multiplied by the nonresponse-adjusted student weights to yield a weighted percent that reflects the national population of eighth graders, the estimate for males is 50.1 percent of the 1988 eighth-grade *cohort* while females are estimated to comprise 49.9 percent of the nation's 1988 eighth graders.

## **Appendix N**

### **NELS:88 Student and Dropout Components: Descriptions of Data Collection Instruments and Procedures**

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## I. Introduction

Information about instrument development and data collection procedures for the second follow-up student and dropout surveys is contained in this appendix. Detailed information about the base year, first follow-up, and second follow-up school, teacher, and parent surveys may be found in the appropriate data user's manuals for each data file. A general overview of these surveys is included in Appendix A of the *NELS:88 Second Follow-Up Student Component Data User's Manual*.

## II. Data Collection Instruments

The data collection instruments for the second follow-up were similar in content and form to those utilized in the prior waves. The instruments included a student, dropout, school administrator, parent, and teacher questionnaire, and a cognitive test for students and dropouts. The new student supplement, added in the first follow-up to elicit demographic information from newly freshened students and base year nonparticipants, was again administered in the second follow-up. An early graduate supplement was added for students who graduated from high school before their in-school data collection session in the spring of 1992.

Instrument development was guided by the research objectives of NELS:88. Questionnaires were designed to meet the longitudinal goals of the study, and items were chosen based on their utility in predicting or explaining future outcomes as measured in the second follow-up or later survey waves. All of the questionnaires employed in the base year, first follow-up, and second follow-up surveys were framed to provide continuity and consistency with earlier NCES education longitudinal studies, as well as to address new areas of policy concern and to reflect recent directions in theory. Where appropriate, NELS:88 drew test and questionnaire content from NLS-72, HS&B, and other NCES studies, such as the National Assessment of Educational Progress (NAEP) and the Schools and Staffing Study (SASS), to ensure a common standard of measurement that would permit comparisons with other important data sources, and maximize the utility of NELS:88 data. For example, NELS:88 mathematics tests were designed so that NELS:88 and NAEP test scores can be equated, and so that HS&B and NELS:88 mathematics test results can be equated as well. Appendix E of the *NELS:88 Second Follow-Up Student Component Data File User's Manual* contains an outline of the items which overlap between the NELS:88 base year, first follow-up, and second follow-up student questionnaires, the NLS-72 base year student questionnaire, and the base year HS&B senior cohort student questionnaire.

A field test of the NELS:88 second follow-up, conducted in 1990 and 1991, examined survey instruments and procedures and played a key role in instrument development. Although the teacher component was not included in the second follow-up field test, the second follow-up field test did include six other survey components: the school administrator, student, the cognitive test battery, dropout, and parent surveys, and the transcript component.<sup>1</sup> Upon completion of field test data collection, the information gathered was used to inform planning for the main study. Analysis of field test data was also used to improve the measurement properties of test and questionnaire items, as well as to identify instrument items which needed to be modified or deleted for reasons of instrument length or item format.

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<sup>1</sup> In the original design of the NELS:88 second follow-up, the teacher survey was included as an optional component of the study. Funding for the option was not received in time for its inclusion in the second follow-up field test.

A detailed description of the second follow-up field test can be found in the *Field Test Report: National Education Longitudinal Study of 1988 Second Follow-Up*.<sup>2</sup>

The content areas of the base year, first follow-up, and second follow-up questionnaires are similar. Since longitudinal data users may benefit from being able to take into account the data that were collected in 1994, the NELS:88 third follow-up questionnaire is included as Appendix Q of the *NELS:88 Second Follow-Up Student Component Data File User's Manual*.

## 2.1 Student Questionnaire and Cognitive Tests

Sample members who attended school during the spring term of the 1991-92 school year were administered a student questionnaire, either at an in-school or off-campus survey session. Sample members administered a student questionnaire also included: those identified as dropouts at some earlier time but who returned to and remained in school during the spring term of 1992; and students who had left school but already passed the general equivalency degree test (GED) or other equivalency certification. The sixty-minute, self-administered questionnaire collected information on a wide range of topics, including students' background, language use, home environment, perceptions of self, occupational or postsecondary educational plans, jobs and household chores, school experiences and activities, work, and social activities. Information collected by the second follow-up student questionnaire supplies a baseline for the study of the NELS:88 cohort's transition to postsecondary education or entry into the labor market. The second follow-up student questionnaire was available in both English and Spanish.<sup>3</sup>

In addition to the student questionnaire, students completed a series of cognitive tests which were also administered at their in-school or off-campus survey sessions. The combined tests covered four subject areas and included 116 items to be completed in 85 minutes. The cognitive tests are briefly described below:

- **Reading Comprehension** (21 items, 21 minutes) consisted of five short passages followed by comprehension and interpretation questions, such as interpreting the author's perspective, understanding the meaning of words in context, and identifying figures of speech. As in first follow-up, two versions of the reading test were utilized, differing in degree of difficulty.
- **Mathematics** (40 items, 30 minutes) assessed both simple mathematical application skills, as well as more advanced skills of comprehension and problem solving. Test items included word problems, graphs, quantitative comparisons, and geometric figures. Three versions of the mathematics test were utilized in the second follow-up and varied in level of difficulty.

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<sup>2</sup> Dowd, K. et al.; v. 1; 1991; Chicago: NORC. ERIC ED 335-418.

<sup>3</sup> 41 students completed the Spanish-language questionnaire in the NELS:88 second follow-up. Because of the small number of questionnaires completed in Spanish, a separate flag was not created for these cases. The percentage of questionnaires completed in Spanish -- around 0.2% -- is similar to the percentage of HS&B seniors who opted to complete Spanish-language questionnaires in 1980/1982.

- **Science** (25 items, 20 minutes) contained questions drawn from the fields of life, earth and physical sciences. Emphasis was placed on the comprehension of underlying concepts and scientific reasoning ability.
- **History/Citizenship/Geography** (30 items, 14 minutes) assessed knowledge of important issues and events in American history. Citizenship items included questions on the operation and structure of the federal government and the rights and obligations of citizens. Geography questions touched on patterns of settlement and food production shared by various societies.

The National Opinion Research Center's subcontractor, the Educational Testing Service (ETS), developed the cognitive test battery for the second follow-up. Six forms of the cognitive test battery were produced in the second follow-up, each comprising a different combination of mathematics and reading difficulty levels. Each sample member's test form was determined by his or her scores on the base year and/or first follow-up mathematics and reading tests; freshened students and first follow-up non-respondents received the intermediate version of the second follow-up cognitive test battery. The purpose of the multilevel design of the second follow-up cognitive test battery was to guard against ceiling and floor effects which may occur when testing must span four years of schooling. This adaptive approach tailors the difficulty of the reading and mathematics tests to the ability of the respondent, thereby leading, given limitations in testing time, to a more accurate measurement than a single level design.

Properties of the tests and the test item reliabilities are discussed in the *forthcoming NELS:88 Base Year through Second Follow-Up Psychometric Report*, the *NELS:88 First Follow-Up Final Technical Report*, and the *Psychometric Report for the NELS:88 Base Year Test Battery*,<sup>4</sup> all obtainable from NCES.

## 2.2 Dropout Questionnaire

During data collection January through October 1992, a dropout questionnaire was administered to sample members who, based on data gathered through administration of a status screener, were not in an academic program leading to a high school diploma and had not received a GED by the spring of 1992. The dropout questionnaire collected data about the last school attended by the sample member, the school's climate, reasons for leaving school, and actions school personnel, parents, and friends took when the respondent stopped going to school. Respondents also reported on their likelihood of returning to and graduating from high school, and described their current activities, employment history, and future plans. The hour-long, self-administered questionnaire--available in either English or Spanish--was normally completed with an NORC interviewer present, at a group or single survey session. However, in some cases the dropout questionnaire was administered as a telephone interview.

In addition to the dropout questionnaire, an 85-minute cognitive test battery was administered to dropouts when possible. Because of the difficulty in collecting test data from dropouts, and because data from many dropouts was collected in telephone interviews which preclude testing, the NELS:88 second follow-up achieved a comparatively low 41.7 percent weighted cognitive test completion rate for dropouts.

The dropout questionnaire was designed to facilitate comparisons with the NELS:88 second follow-up student questionnaire, the first follow-up dropout questionnaire, and the HS&B 1982 dropout

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<sup>4</sup> Rock, D.A., and Pollack, J.M. April 1991.

questionnaire. This item overlap with the student questionnaire permits users to contrast factors such as school environment, family life, aspirations, and self-perceptions of students with the responses of dropouts. The overlap of 1982 and 1992 dropout items facilitates comparison of contemporary dropouts with those of a decade before.

### **2.3 Adapting Student and Dropout Questionnaires for Telephone Administration**

To adapt the second follow-up student and dropout questionnaires for telephone interviewing, two abbreviated versions of the instruments were administered during the final weeks of data collection. Adaptation of the student and dropout questionnaires for telephone administration was guided by the need to preserve each question's original meaning while wording each question so that it made sense when read aloud. One abbreviated version of the student and dropout questionnaires excluded a small number of questions which did not lend themselves to being read aloud. A second abbreviated version of the questionnaires was administered to sample members who explicitly refused to complete the full-length instrument and consisted mainly of locator information and key items. The mode of administration for the abbreviated instruments was primarily a telephone interview; however, a small percentage of abbreviated questionnaires were completed by personal interview.

### **2.4 New Student Supplement**

First-time NELS:88 participants--due to freshening or previous ineligibility or nonparticipation--completed the new student supplement questionnaire, which was available in English and Spanish. New student supplement data were also obtained for a number of first follow-up freshened students who had completed a student questionnaire but had not completed a new student supplement in 1990. The self-administered supplement took approximately 15 minutes to complete, and contained questions that gathered basic demographic information (such as birthdate, sex, family socioeconomic status, and race/ethnicity) about students and their families which was gathered by the base year questionnaire, but not repeated in the student questionnaire for later rounds.

### **2.5 Early Graduate Supplement**

NELS:88 participants who graduated from high school or who obtained equivalency certification such as the GED prior to data collection in the spring of 1992 completed the second follow-up early graduate supplement to the student questionnaire. The intent of this supplement was to document the reasons for and the circumstances of early graduation, the adjustments required to finish early, and respondents' activities compared with those of other school survey members. The items for the second follow-up early graduate supplement were modeled on those used in the HS&B sophomore cohort early graduate supplement administered in the HS&B first follow-up in 1982.

### **2.6 Contextual Components**

In addition to students, NELS:88 collected data from students' parents, teachers, and school administrators, in order to provide researchers with contextual sources with which to integrate and analyze the primary student data. Course offerings data were also collected for schools in the school effectiveness study. General information about instrument development and data collection procedures for these components is contained in Appendix A of the *NELS:88 Second Follow-Up Student Component Data User's Manual*. More information about the base year, first follow-up, or second follow-up school, teacher, and parent components may be found in the appropriate user's manuals for each file.



### III. Second Follow-up Data Collection

This section describes the data collection procedures for the student and dropout components of the NELS:88 second follow-up. The design of the second follow-up survey closely resembled that of the first follow-up survey and was executed in three phases which spanned two years. Self-administration and telephone administration were the primary modes of data collection for the student and dropout components of the second follow-up. Although data collection did not occur for the transcript component until the third phase of the study in 1992, pre-data collection activities related to the transcript component were conducted in the first and second phases of the study in 1991. Phase three of the study was conducted in 1992 and constituted the data collection effort. Figure 3-1 summarizes the activities conducted during the three phases of the second follow-up.

#### 3.1 Second Follow-Up Pre-Data Collection Activities

**Phase 1.** Conducted from January through June 1991, phase 1 included securing state, district, and school-level cooperation for the study as well as tracing sample members. State cooperation with NELS:88 was secured for all fifty states and the District of Columbia. District and school-level cooperation were secured for first follow-up schools with four or more sample members still in attendance in the spring of 1991.

Tracing sample members served two purposes: to locate sample members for data collection purposes, and to define the schools to be included in the second follow-up sampling process. As in the first follow-up, interviewers determined the enrollment status of sample members by tracing the sample members to their first follow-up or new school of attendance. If an interviewer was unable to confirm school enrollment for a cohort member through the first follow-up school or a new school, the interviewer traced the sample member to a home address to confirm that the student was enrolled in a school or that the student had left school. Confirmation of a sample member's enrollment status determined which type of questionnaire--student or dropout--the sample member would be administered during the data collection period.

The second purpose of tracing was to determine the school sample. The second follow-up study was designed such that only students attending a school included in the second follow-up school sample would receive the full complement of contextual data including school administrator, parent, and teacher reports. (For sample members outside of the sampled schools, only the parent data was collected of the contextual components.) To maximize the number of students to receive the full complement of contextual data, student tracing determined the number of sampled students at each school. The school sample was then drawn so that the greatest number of students would be included in the school sample and receive the full complement of contextual data.

**Phase 2.** From September to December 1991, phase 2 pre-data collection activities occurred for all components of the study, and some phase 1 activities continued. District and school-level cooperation were gained for any schools selected for the second follow-up sample for which cooperation was not gained in phase 1. Final district and school contacting results are summarized in Table 3.1-1. Tracing continued for sample members who were not located during phase 1, and enrollment was reverified for students who were traced to a school which was selected for the second follow-up school sample. Students attending a school not included in the second follow-up school sample and sample members who had left school were also traced again to their school of attendance or to a home address.

Figure 3-1: Second follow-up data collection phase diagram

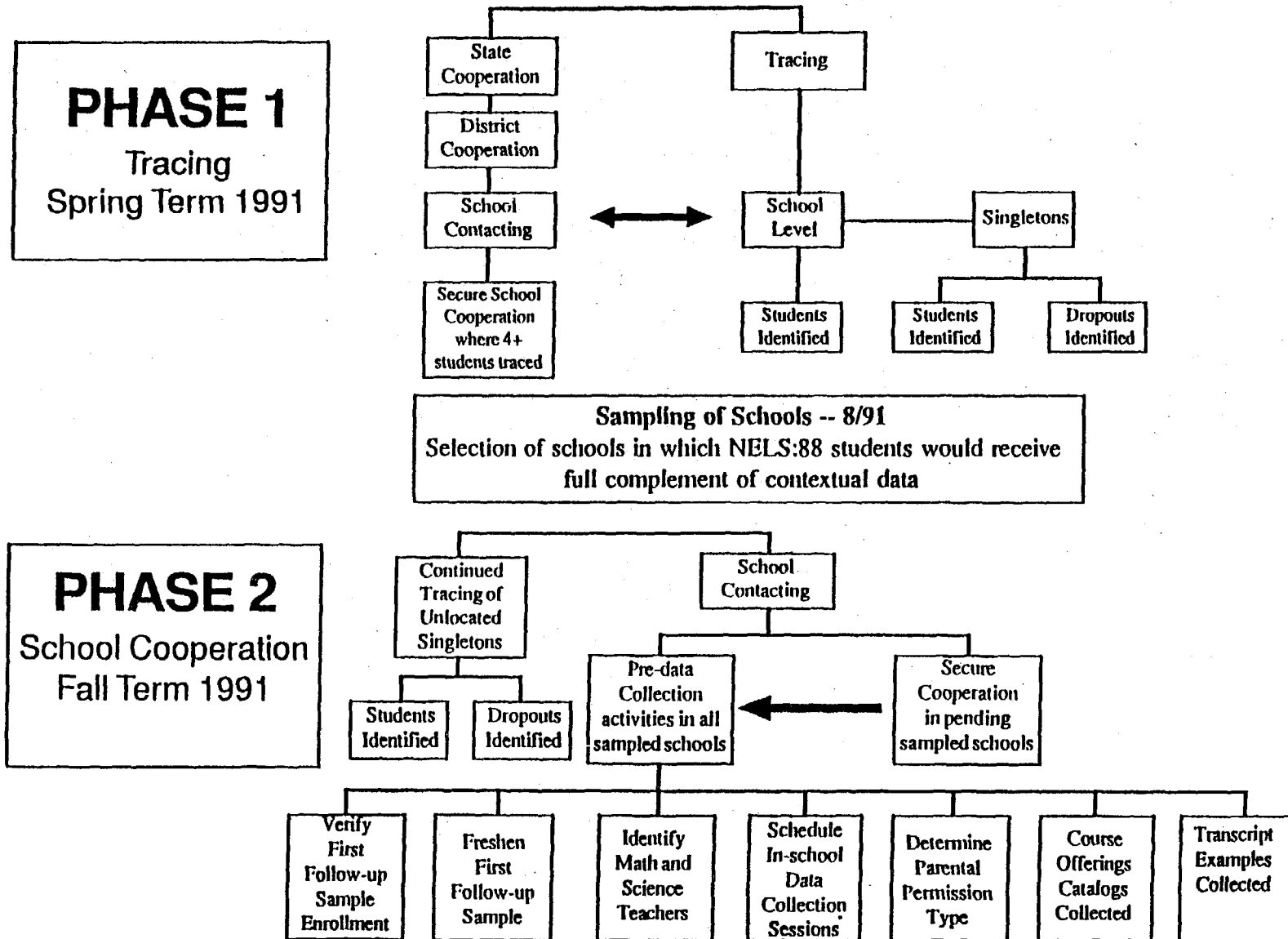
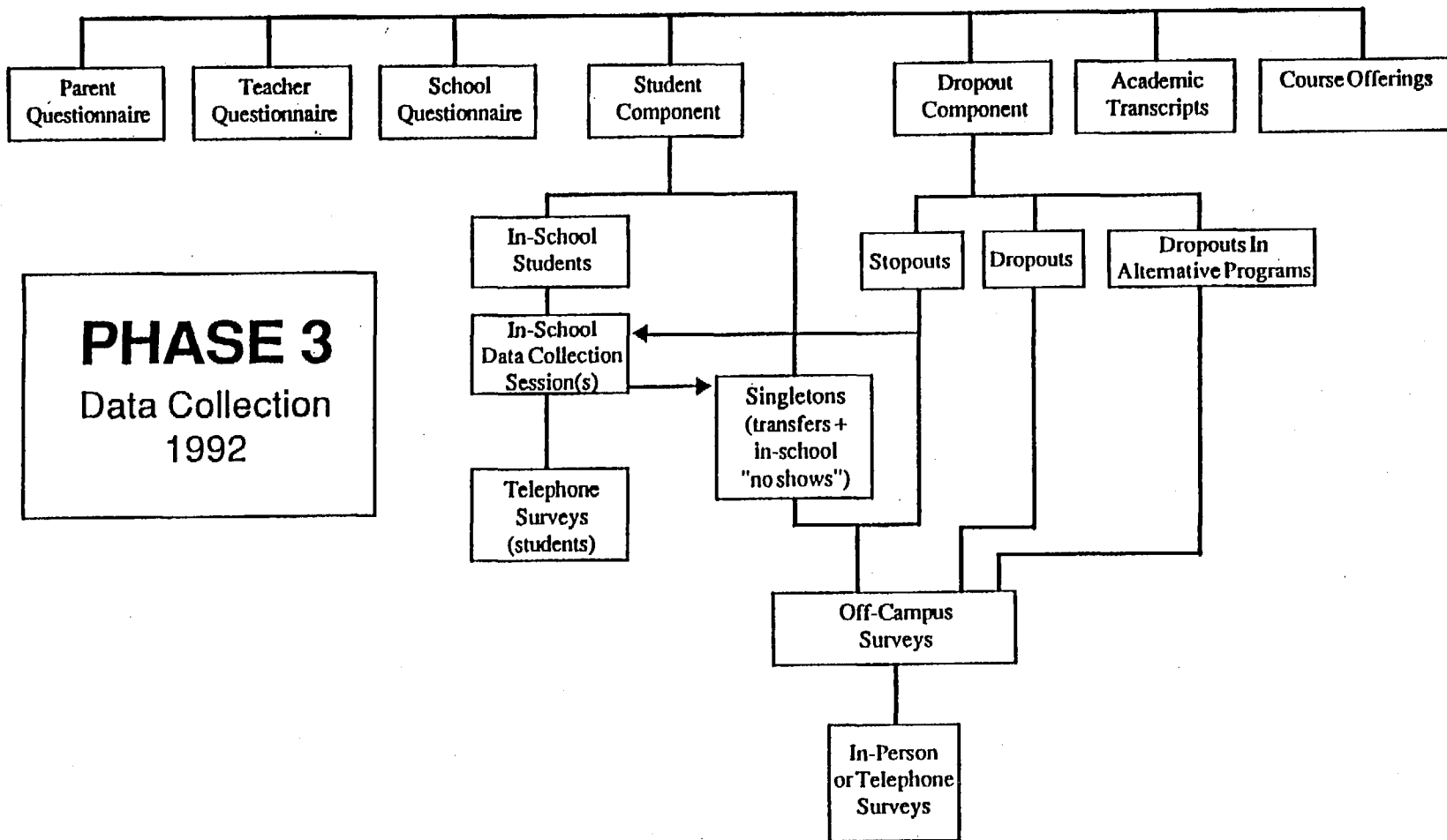


Figure 3-1 (cont.): Second follow-up data collection phase diagram



**Table 3.1-1**  
**Summary of NELS:88 second follow-up district/diocese and school contacting**

| District/Diocese Contacting: | Eligible Sample <sup>a</sup> | Agreed to Participate | Cooperation Rate |
|------------------------------|------------------------------|-----------------------|------------------|
| Public                       | 862                          | 853                   | 99.0%            |
| Catholic/Other Private       | 52                           | 52                    | 100.0%           |
| Total                        | 914                          | 905                   | 99.0%            |
| <b>School Contacting:</b>    |                              |                       |                  |
| Public                       | 1155                         | 1145                  | 99.1%            |
| Catholic/Other Private       | 232                          | 228                   | 98.3%            |
| Total                        | 1387                         | 1373                  | 99.0%            |

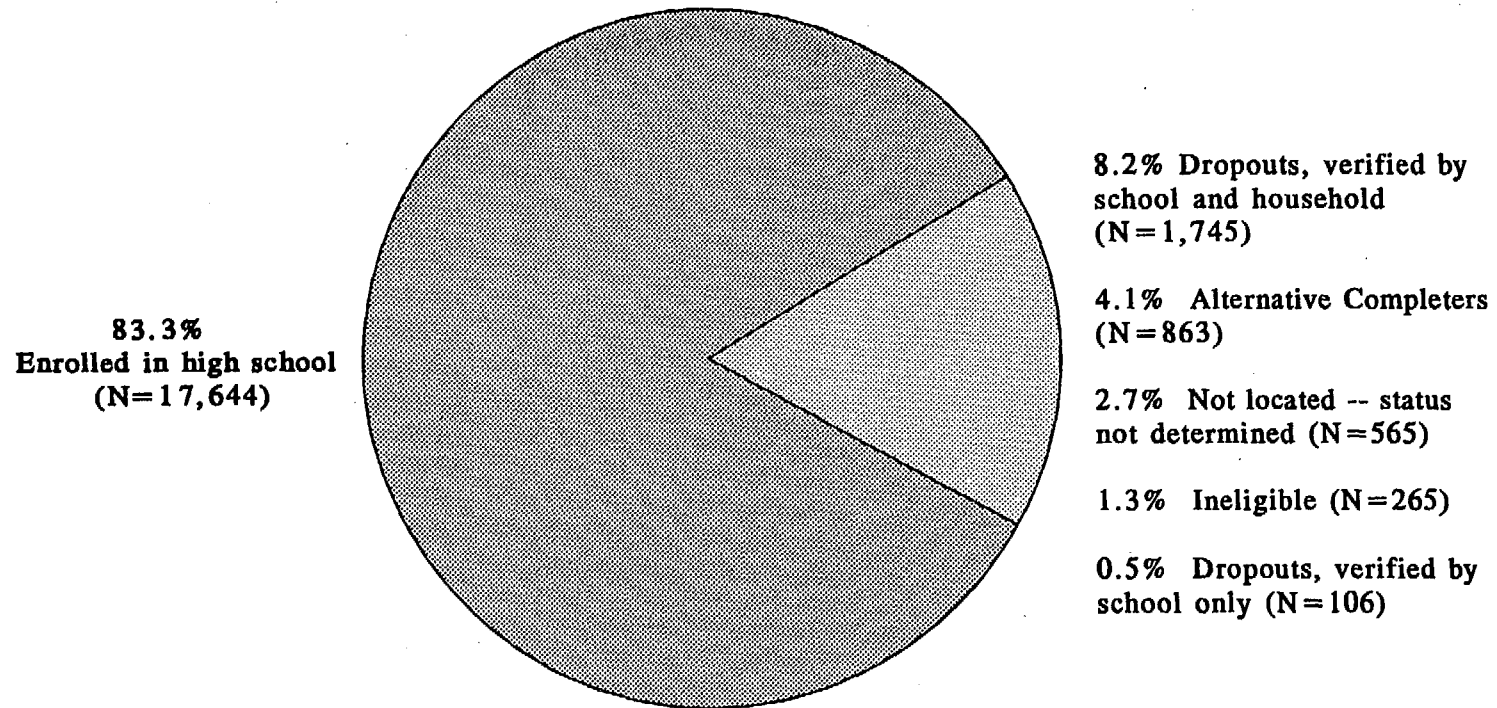
<sup>a</sup> This column represents the portion of the phase 1 sampled schools ( $N=1,500$ ) that had at least one core sample member still enrolled at the end of the school contacting phase (phase 2) of the study. These numbers reflect the schools at which cooperation with the study was gained rather than the final subset of NELS:88 schools whose students were included in the contextual sample.

Interviewers visited each of the second follow-up schools to conduct activities in preparation for data collection for all components of the study. For the student component, they scheduled in-school data collection sessions and worked with school personnel to identify any procedures necessary to obtain parental permission for surveying students. Using school rosters, interviewers freshened the student sample to allow a random sample of twelfth-graders who were unable to participate in the study previously a chance to be selected for the second follow-up. (Refer to Chapter III of this manual for a complete discussion of freshening the student sample.)

Data were collected for the contextual components (the parent, teacher, school administrator, academic transcripts, and course offerings and enrollments components). Interviewers collected parent address and telephone information for the parent survey. To identify the sample for the teacher survey, they compiled the names of mathematics and science teachers of the student sample members. Course catalogs were collected, and interviewers collected samples of student transcripts to inform data collection and data preparation for the high school transcript component.

**Final Tracing Results.** Figure 3-2 summarizes second follow-up tracing results. After the tracing of sample members was completed, of the 21,188 sample members, 97.3 percent ( $N=20,623$ ) of the second follow-up sample had been located. Of the 21,188 sample members, 83.3 percent were enrolled in high school, 8.2 percent were verified dropouts, 0.5 percent were identified by school officials as dropouts but were not confirmed as such, 4.1 percent were sample members who had already

**Figure 3-2: Second follow-up tracing results (N=21,188)**



completed an alternative program, 1.3 percent were deemed ineligible to participate in the second follow-up study (e.g., deceased or moved out of the country), and 2.7 percent could not be located. (Due to rounding, the above percentages sum to 100.1 percent.) Of those sample members found to be enrolled in high school, 87.9 percent of the sample were located at the school the student attended in the first follow-up, while the remaining 12.1 percent were located at a school other than their first follow-up school.

### **3.2 Second Follow-Up Data Collection Activities**

**Phase 3.** Data collection for the second follow-up was conducted from January through December 1992. Although the data collection periods of the individual components of the study were staggered, there was a high degree of overlap between the data collection periods of the individual components, and most data was collected from January through June 1992, the spring term of the 1991-1992 academic year. Transcripts were collected from August 1992 through March 1993.

Most of the components of the survey utilized more than one mode of data collection, usually self-administration and telephone administration of the survey instruments. In some cases abbreviated versions of the instruments were implemented.

### **3.3 Second Follow-Up Student Survey and Cognitive Tests**

**In-School Survey Sessions.** From January to June 1992, in-school survey sessions were held in all cooperating NELS:88 schools still enrolling second follow-up sample members. Second follow-up data collection procedures were very similar to those used in the first follow-up. Student questionnaires and four cognitive tests in math, science, reading, and social studies were administered in group data collection sessions of approximately 9 students.

Survey administration was usually conducted in a school classroom or library and consisted of several steps. Students first completed the student questionnaire, and, if applicable, the new student supplement or the early graduate supplement. Students who had transferred into or out of a school within the two weeks prior to the survey session were asked to report on their previous school of attendance. Transfer students who had been at the surveyed school for two or more weeks were asked to report on their current school. Students were asked to sign a form at the end of the questionnaire granting permission for the release of transcripts to the study.

After the students completed the student questionnaires, an 85 minute battery of cognitive tests was administered. The tests consisted of four timed sections devoted to mathematics, reading, science, and social studies (history/government). Once the test battery was completed, an attempt was made to retrieve missing (or inappropriately marked) questionnaire items before the student left the classroom.<sup>5</sup> At the end of the survey session, arrangements were made to conduct make-up sessions for students who were scheduled but unable to attend the initial survey session or whose schedules required that they leave before completing both instruments. The second follow-up study attempted to collect a complete questionnaire and cognitive test from students and dropouts; however, for some student sample members only an abbreviated version of the student or dropout questionnaire was collected, or the cognitive test was not collected at all.

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<sup>5</sup> At data collection sessions, interviewers reviewed the questionnaires to ensure that all critical items were completed. An oval indicating "no retrieval" was marked whenever the missing data could not be retrieved due to respondent refusal or inability to clarify a vague response.

**Off-Campus Survey Sessions.** Off-campus survey sessions, typically attended by one to three students, were conducted primarily from March to July 1992. Students who were not enrolled in sampled schools, who had missed in-school data collection sessions, or who were enrolled in schools that had refused to participate in the study were invited to off-campus sessions and administered the student questionnaire and cognitive tests. Dropouts were also asked to attend these sessions and were surveyed alongside sample members who were currently enrolled in school. Off-campus survey sessions in the second follow-up were nearly identical to those in the first follow-up. If a sample member was unable to attend an off-campus group survey session, he or she was surveyed either over the telephone or in-person. When the student (or dropout) questionnaire was administered over the telephone, cognitive test data were not collected from the sample member. Transcript release forms were mailed to telephone respondents for their signature.

### 3.4 Dropout Survey

The NELS:88 second follow-up dropout survey sought to interview all sample members who had left school prior to graduation, including both first follow-up dropouts who had not returned to school and sample members who dropped out after the first follow-up. All sample members appear on the student data file regardless of their spring 1992 enrollment status. Basic classification variables and test data appear for both students and dropouts, though dropout questionnaire data appear separately on the dropout component data file.

**School Enrollment Classification and Data Collection.** In order to determine which sample members should complete a dropout questionnaire, school enrollment status was classified for all sample members during the spring of 1992.

Four types of enrollment classifications were identified. The first were high school students who were enrolled in a school which offered programs ending in the granting of a diploma. These students were administered the student questionnaire and, when possible, the cognitive test battery. Early graduates were included in this classification, and were asked to report retrospectively on the school from which they graduated and to complete supplemental questions about their reasons for graduating early.

The second type were sample members who dropped out of high school but later re-enrolled in a high school program to obtain a high school diploma. These sample members were administered the student questionnaire and, when possible, the cognitive test battery.

The third type were sample members who dropped out of high school but went on to seek an equivalent to a high school diploma such as the General Educational Development test (GED). If an alternative completer had finished the requirements of his or her equivalency program, the individual was classified as a "completer" (in effect, an early graduate by alternative means) and the student questionnaire (including the early graduate supplement) was administered. If the alternative completer had not yet fulfilled the requirements for certification, the sample member was administered a dropout questionnaire. In both cases, the cognitive test battery was also administered when possible.

The fourth type were dropouts. These sample members had left their high school by the spring of 1992 and were not working toward an alternative certification. Dropouts were administered a dropout questionnaire and, when possible, the cognitive test battery.

Regardless of whether a dropout completed a student or dropout questionnaire, data collection efforts for the dropout component of the second follow-up were similar to those in the first follow-up

survey. Interviewers attempted to survey most dropouts in off-campus survey sessions with testing conditions similar to in-school sessions.

For analytical purposes, sample members classified as alternative completers can be included or compared with either high school completers or dropouts. Additionally, alternative completers can be examined separately, depending on the needs of the analyst. For a complete description of the dropout component, see *The NELS:88 Second Follow-Up: Dropout Component Data File User's Manual*.

### **3.5 School Effectiveness Study**

Since there was 97.8 percent overlap between school effectiveness study schools and NELS:88 core study schools, data were collected for students in these schools using the same data collection procedures as second follow-up cohort students. Most SES students also received an additional forty minute free-response cognitive test after they completed the eighty-five minute test battery. The subject area of the free-response test--either mathematics or science--was randomly selected for each school. Unlike the data collection procedures for the student cohort, SES students who were no longer attending the school with which they were associated were not traced or surveyed; however enrollment status was gathered for these students from the SES schools. The transcript, parent, school administrator, and course offerings and enrollment components were also conducted for the SES sample members. A more detailed discussion of the school effectiveness study will be presented in forthcoming documentation, which will accompany the release of those data.

### **3.6 Followback Study of Excluded Students**

In the first follow-up study, most classification changes were made for a sample of students who had been excluded from the base year study. Of the 618 base year ineligible sample members (BYIs), 580 were located and 312 were reclassified as eligible during the first follow-up. (Table 4.2.4-1 of the *NELS:88 Second Follow-Up Student Component Data File User's Manual* contains additional completion rate data for the BYI study.) In the second follow-up, the remaining ineligible students--BYIs who were ineligible in the first follow-up or more rarely, students who were eligible in the base year but who became ineligible in the first follow-up through the occurrence of some sort of incapacitation--were pursued as a part of the Followback Study of Excluded Students.

The Followback Study of Excluded Students (FSSES) of the NELS:88 second follow-up attempted to reassess the eligibility status and ascertain the enrollment status of students who: 1) had been excluded because of linguistic, mental, or physical obstacles to participation when the baseline sample of eighth graders was drawn in the 1987-88 school year, and were subsampled into the Base Year Ineligible Study in the first follow-up; 2) were eligible in the base year but became ineligible in the first follow-up; or, 3) were identified as ineligible when selected through the freshening process in the first follow-up. If the students had since become eligible for NELS:88, the followback study attempted to survey them.

The followback study continued the first follow-up base year ineligible study for several purposes. First, if the 5.3 percent of the potential base year sample declared ineligible differed in key characteristics or outcomes from the sample of students included in NELS:88, this difference could bias baseline results and subsequent longitudinal measurements. By learning more about these excluded students and their current school enrollment status, one might correct for potential undercoverage bias that could affect key national estimates, such as dropping out between eighth and twelfth grade.



Second, an individual's eligibility status could potentially change. A student excluded on language grounds in 1988 or 1990 could have gained sufficient proficiency in English by 1992 to complete the student questionnaire. Like the complementary activity of sample freshening, the followback study of excluded students helped to generate a nationally representative sample of twelfth-grade students.

Third, eligibility rules were modified in the first follow-up and retained in the second follow-up to allow completion of the student questionnaire in Spanish in addition to English. By giving 1988 and/or 1990 excluded students who could complete a questionnaire only in Spanish the opportunity to do so in 1992, the revised eligibility rules of the first follow-up were carried back to the base year cohort.

**Data collection procedures.** Data collection for the followback study of base year excluded students took place during the main study data collection effort between April and October 1992. Interviewers attempted to identify excluded students who were eligible to be added to the longitudinal sample in the second follow-up. They obtained the following information about the excluded student from the student's current school, school last attended, or the student's home:

- **Sex (if unknown):** male or female;
- **Race/ethnicity (if unknown):** white, Black, Hispanic, Asian/PI, American Indian, other;
- **School enrollment status:** student, dropout, or dropout in alternative program;
- **Eligibility:** English/Spanish language proficiency, lack of mental or physical disability (i.e., ability to complete a questionnaire), reading ability level of at least eighth grade

After collecting this information, interviewers attempted to determine whether or not the student was capable of meaningful participation in the survey under normal conditions. To make this assessment, interviewers were instructed to obtain reports from persons with first-hand knowledge of the student, such as special education, bilingual education, or language arts teachers or a guidance counselor. Interviewers often spoke with several staff members to identify the staff member who was most qualified to assess whether or not the student could participate in the second follow-up survey. Unless there were severe mental or physical handicaps or lack of facility with written English or Spanish and the member was unable to complete the survey instruments under normal circumstances, the student was considered eligible to participate in the study.

The results of data collection for FSES are summarized in Table 3.6-1. Eligibility information was gathered for 94.7 percent of the excluded sample members. For excluded students who were identified as eligible, student or dropout questionnaires were administered either in-person or over the telephone. Cognitive tests were administered to a small percentage of these students. For students who remained ineligible, school enrollment status and other key characteristics were obtained. For seniors who remained ineligible, high school transcripts were also collected. Data for these students are included on the transcript component data files.

### 3.7 Second Follow-Up Data Collection Results

Tables 3.7-1 and 3.7-2 summarize the data collection results for the student and dropout components of the NELS:88 second follow-up study. Panel completion rates reported in table 3.7-2 and represent the proportion of base year completers who were also first follow-up completers, for whom a second follow-up questionnaire was completed as well. (Eighth grade cohort members who failed to

participate in 1988, in 1990, or in both rounds, are excluded from the base for this statistic.) Completion rates in 1992 for 1988-90 participants are reported overall and by subgroups of interest.

However, one may wish to view panel maintenance and attrition from additional perspectives. For example, one may wish to consider what proportion of the 1990 first follow-up-retained 1988-eligible base year cohort has participated in all three waves of NELS:88 to date. When the panel so defined--that is, all 1990-retained 1988-eligible students and dropouts, including those who have died or suffered a grave impairment that has made them ineligible, and those who have been out-of-scope (out of the country) for either or both follow-up waves--the proportion who participated (that is, completed a student/dropout questionnaire) in all three (1988, 1990, and 1992) waves is 84 percent. Another statistic of interest is the proportion of base year participants successfully resurveyed in each follow-up round. Some 95 percent (94.7%) of base year questionnaire completers also completed a questionnaire in the first follow-up, and 93 percent (93.1%) of base year questionnaire completers participated in the second follow-up. About 90 percent (89.7%) of base year participants completed both the first (1990) and second (1992) follow-up questionnaires.

**Table 3.6-1 Results of the NELS:88 followback study of excluded students (FSES) N=370**

| ORIGIN AND ELIGIBILITY STATUS<br>AS OF THE SECOND FOLLOW-UP |                          |               |                                |               |                        |               |
|---|--------------------------|---------------|--------------------------------|---------------|------------------------|---------------|
|   | Base Year<br>Ineligibles |               | First Follow-Up<br>Ineligibles |               | Total in<br>FSES Study |               |
|   | N                        | %<br>of total | N                              | %             | N                      | %             |
| Eligible  | 74                       | 24.4%         | 28                             | 100.0%        | 102                    | 27.6%         |
| Ineligible  | 185                      | 61.1%         | 38                             | 100.0%        | 223                    | 60.3%         |
| Out-of-Scope  | 28                       | 9.2%          | 1                              | 100.0%        | 29                     | 7.8%          |
| Not Located   | 16                       | 5.3%          | 0                              | 0.0%          | 16                     | 4.3%          |
| <b>Total BYI<br/>Sample Members</b>                         | <b>303<sup>a</sup></b>   | <b>100.0%</b> | <b>67</b>                      | <b>100.0%</b> | <b>370</b>             | <b>100.0%</b> |

\* Of the original 674 Base Year Ineligibles, 56 were found to be sampling errors in the first and second follow-ups, 312 were deemed eligible for participation in the first follow-up, and 3 became deceased, leaving the total of 303 BYIs in the chart above.

Table 3.7-1 NELS:88 second follow-up component survey completion rates by selected characteristics

|                                | Student sample<br>Completion rates |            | Student 12th grade test <sup>a</sup><br>Completion rates |            | Dropout/Alternative <sup>b</sup><br>sample<br>Completion rates |                 | Dropout/Alternative<br>12th grade test <sup>c</sup><br>Completion rates |                 | School<br>questionnaire <sup>d</sup><br>Completion rates |            | School<br>questionnaire <sup>e</sup><br>Completion rates |            |
|--------------------------------|------------------------------------|------------|--|------------|--|-----------------|---|-----------------|--|------------|--|------------|
|                                | Weighted                           | Unweighted | Weighted   | Unweighted | Weighted   | Unweighted      | Weighted  | Unweighted      | Weighted   | Unweighted | Weighted   | Unweighted |
| <b>Total</b>                   | 91.0                               | 92.5       | 76.6   | 78.8       | 88.0   | 87.6            | 41.7  | 40.3            | NA   | 97.1       | 98.3   | 98.2       |
| Participated                   | 16,842                             |            | 13,267   |            | 2,378  |                 | 959   |                 | 1,326  |            | 15,409   |            |
| Selected                       | 18,209 <sup>f</sup>                |            | 16,842   |            | 2,714  |                 | 2,378   |                 | 1,366  |            | 15,695   |            |
| <b>School type<sup>g</sup></b> |                                    |            |  |            |  |                 |   |                 |  |            |  |            |
| Public                         | 94.7                               | 95.3       | 76.8   | 78.9       | NA   | NA <sup>h</sup> | NA  | NA <sup>h</sup> | NA   | 97.2       | 98.4   | 98.4       |
| Catholic                       | 98.4                               | 98.0       | 79.7   | 84.5       | NA   | NA              | NA  | NA              | NA   | 97.1       | 96.6   | 96.7       |
| Other private                  | 94.8                               | 95.5       | 73.1   | 75.6       | NA   | NA              | NA  | NA              | NA   | 96.0       | 98.5   | 97.2       |
| <b>Urbanicity<sup>g</sup></b>  |                                    |            |  |            |  |                 |   |                 |  |            |  |            |
| Urban                          | 95.0                               | 95.8       | 73.6   | 76.7       | NA   | NA <sup>h</sup> | NA  | NA <sup>h</sup> | NA   | 97.0       | 98.2   | 98.3       |
| Suburban                       | 94.4                               | 95.2       | 74.9   | 75.7       | NA   | NA              | NA  | NA              | NA   | 97.4       | 98.5   | 98.2       |
| Rural                          | 95.5                               | 95.5       | 82.4   | 85.3       | NA   | NA              | NA  | NA              | NA   | 96.6       | 99.8   | 98.0       |
| <b>Region<sup>g</sup></b>      |                                    |            |  |            |  |                 |   |                 |  |            |  |            |
| Northeast                      | 94.3                               | 94.7       | 77.6   | 76.7       | NA   | NA <sup>h</sup> | NA  | NA <sup>h</sup> | NA   | 94.7       | 97.9   | 96.8       |
| South                          | 95.4                               | 95.8       | 77.7   | 81.7       | NA   | NA              | NA  | NA              | NA   | 97.3       | 98.2   | 98.4       |
| Midwest                        | 96.1                               | 95.8       | 78.6   | 80.7       | NA   | NA              | NA  | NA              | NA   | 97.8       | 98.5   | 98.7       |
| West                           | 92.9                               | 95.4       | 72.2   | 74.2       | NA   | NA              | NA  | NA              | NA   | 98.3       | 98.7   | 98.6       |
| <b>Ethnicity</b>               |                                    |            |  |            |  |                 |   |                 |  |            |  |            |
| Asian/PI                       | 91.7                               | 92.7       | 75.2   | 75.5       | 74.7   | 82.4            | 47.6  | 35.7            | NA   | NA         | 98.2   | 98.9       |
| Hispanic                       | 86.6                               | 89.8       | 73.9   | 76.6       | 88.3   | 87.5            | 35.6  | 36.1            | NA   | NA         | 98.8   | 98.9       |
| Black                          | 88.1                               | 90.5       | 74.6   | 77.1       | 84.8   | 83.6            | 37.2  | 38.7            | NA   | NA         | 98.3   | 98.0       |
| White                          | 93.5                               | 94.2       | 77.8   | 80.1       | 89.7   | 89.5            | 44.2  | 42.4            | NA   | NA         | 98.3   | 98.0       |
| Am. Indian                     | 90.3                               | 86.5       | 74.0   | 74.3       | 97.6   | 95.8            | 51.5  | 49.3            | NA   | NA         | 98.7   | 98.7       |
| Refused/Missing <sup>i</sup>   | 28.5                               | 33.2       | 22.2   | 31.1       | 55.9   | 61.5            | 23.5  | 25.0            | NA   | NA         | 97.9   | 97.8       |

<sup>a</sup> 12th grade cognitive test coverage rate for each student who completed a questionnaire.

<sup>b</sup> Alternative completers could have completed either a student or dropout questionnaire, depending on status during data collection. 350 alternative sample members completed a student questionnaire, and 457 completed a dropout questionnaire.

<sup>c</sup> 12th grade cognitive test coverage rate for each dropout who completed a questionnaire.

<sup>d</sup> 12th grade school completion rate (for school questionnaire) of eligible contextual schools, where at least one student completed a questionnaire.

<sup>e</sup> 12th grade school questionnaire coverage rate for each student who completed a questionnaire and was enrolled in an eligible contextual school.

<sup>f</sup> 565 unlocatable cases were assumed to be eligible students for the purposes of calculating student completion rate, and are included in the total of 18,209.

<sup>g</sup> Refers to second follow-up school.

<sup>h</sup> Not Applicable -- Completion rates by school type, urbanicity, and region are calculated based on the school a student attended in the second follow-up. Because dropouts are not linked to schools on the public use magnetic tape, it is not possible to calculate dropout completion rates for these subgroups.

<sup>i</sup> Refused/Missing refers only to the status of a sample member's ethnicity. It does not refer to sample members who did not participate in the second follow-up.

**Table 3.7-2 NELS:88 second follow-up completion rates for base year-first follow-up panel participants by selected characteristics<sup>a</sup>**

|  | Student/Dropout questionnaire (BY, F1 and F2) Completion rates |            | Student/Dropout cognitive test <sup>b</sup> (BY, F1 and F2) Completion rates |            | Student/Dropout cognitive test <sup>c</sup> (BY and/or F2) Completion rates |            |
|--|--|------------|--|------------|---|------------|
|  | Weighted   | Unweighted | Weighted   | Unweighted | Weighted  | Unweighted |
| <b>Total</b>   | 94.7   | 95.1       | 69.6   | 72.2       | 99.0  | 99.0       |
| Participated   | 16,489 <sup>d</sup>  |            | 11,902   |            | 16,331  |            |
| Selected   | 17,337   |            | 16,489   |            | 16,489  |            |
| <b>School type<sup>e</sup></b>                           |  |            |  |            |   |            |
| Public   | 94.3   | 94.7       | 69.0   | 71.4       | 99.0  | 99.1       |
| Catholic   | 97.9   | 97.0       | 74.1   | 78.6       | 99.1  | 99.2       |
| Other private  | 97.4   | 97.0       | 73.0   | 73.7       | 99.2  | 98.7       |
| <b>Urbanicity<sup>e</sup></b>                            |  |            |  |            |   |            |
| Urban  | 93.5   | 95.1       | 64.3   | 69.5       | 98.4  | 98.8       |
| Suburban   | 95.5   | 95.3       | 69.1   | 70.1       | 99.0  | 98.9       |
| Rural  | 94.8   | 94.9       | 74.6   | 77.2       | 99.5  | 99.4       |
| <b>Region<sup>e</sup></b>                                |  |            |  |            |   |            |
| Northeast  | 94.8   | 95.1       | 70.3   | 71.3       | 99.0  | 98.6       |
| South  | 94.1   | 94.5       | 68.2   | 73.1       | 99.1  | 99.1       |
| Midwest  | 95.7   | 96.0       | 74.9   | 76.4       | 99.2  | 99.5       |
| West   | 94.6   | 95.1       | 63.7   | 65.7       | 98.5  | 98.7       |
| <b>Ethnicity</b>   |  |            |  |            |   |            |
| Asian/PI   | 93.3   | 95.0       | 71.5   | 71.9       | 99.6  | 99.6       |
| Hispanic   | 93.1   | 94.4       | 63.9   | 65.5       | 98.2  | 98.3       |
| Black  | 92.4   | 92.6       | 59.6   | 67.0       | 98.6  | 98.6       |
| White  | 95.5   | 95.7       | 72.1   | 74.2       | 99.2  | 99.2       |
| Am. Indian   | 94.1   | 91.3       | 64.8   | 64.0       | 99.7  | 99.4       |
| Refused/Missing <sup>f</sup>                             | 81.1   | 75.0       | 38.3   | 55.6       | 100.0   | 100.0      |
| <b>Minority schools<sup>e</sup></b>                      |  |            |  |            |   |            |
| Schools with more than 19% minority students             | 92.2   | 93.5       | 55.1   | 59.3       | 98.6  | 98.4       |
| Schools with less than or equal to 19% minority students | 95.0   | 95.3       | 71.0   | 73.5       | 99.1  | 99.1       |

<sup>a</sup> These panel completion rates are the proportion of base year-first follow-up completers for whom a second follow-up questionnaire was completed but excludes base year nonparticipants. Refer to section 3.7 of this appendix for information on alternative approaches to calculating panel completion rates.

<sup>b</sup> Cognitive test coverage rate for each sample member who has completed a BY student questionnaire, F1 and F2 student/dropout questionnaire.

<sup>c</sup> Cognitive test coverage rate for each sample member who has completed a BY student questionnaire and/or a F2 student/dropout questionnaire.

<sup>d</sup> Sample members who participated in the BY, F1 and F2.

<sup>e</sup> Refers to 8th-grade schools.

<sup>f</sup> Refused/Missing refers only to the status of a sample member's ethnicity. It does not refer to sample member nonparticipants.

## **Appendix O**

### **NELS:88 Base Year and First Follow-Up**

#### **Sample Design and Implementation**

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## I. Introduction

This appendix describes the design and procedures used for selecting schools and students into the NELS:88 base year and first follow-up samples. It provides information on the calculation of sample weights and the relative efficiency of the sample design. The appendix also provides information about procedures used to adjust sample weights for nonresponse.

## II. NELS:88 Sample Design

The following section describes the sample design of NELS:88, from its base year inception through the first follow-up. Beginning from a straightforward two-stage stratified sample, the complexities of the NELS:88 sample design have grown exponentially with each subsequent wave.

### 2.1.1 Base Year Sample Design<sup>1</sup>

The NELS:88 base-year survey employed a two-stage, stratified sample design, with schools as the first-stage unit and students within schools as the second-stage unit. Within each stratum, schools were selected with probabilities proportional to their estimated eighth grade enrollment to achieve virtual self-weighting. In addition, schools were oversampled in certain special strata so that policy-relevant subgroups would be adequately represented in the sample. Within each school approximately 26 students were to be randomly selected (typically, 24 regularly sampled students and two, on average, OBEMLA-supplement Hispanic and Asian/Pacific Islander oversampled students). In schools with fewer than 24 eighth graders, all eligible students were selected. Because of the incidence of small schools in the NELS:88 sample, the average within-school sample size for the base year was 25 students (or 23 participating students). From a national frame of about 39,000 schools with eighth grades, a target sample size of 1,032 schools was set. Some 1,052 schools--815 public and 237 private--participated and provided usable eighth grade student data.

NORC's sampling frame was the school database compiled by Quality Education Data, Inc. (QED) of Denver, Colorado. The QED list contained information about whether a school was urban, suburban, or rural. NORC used this information for stratification purposes. The QED list did not at that time contain information about the racial/ethnic composition of individual public schools usable for the NELS:88 sampling frame. Racial/ethnic composition data were obtained from Westat, Inc. in its capacity as an NORC subcontractor for the NELS:88 base year study. As part of their work on the National Assessment of Educational Progress (NAEP), Westat had obtained data from the Office of Civil Rights (OCR) and from other sources (e.g., district personnel) that identified those schools with a minority enrollment of greater than 19 percent. Use of this data set facilitated the explicit stratification and allocation of schools with very large percentages of black or Hispanic students. Stratification information on whether a school was public, Catholic (private), or other private was obtained from the QED list and lists of private schools.

### 2.1.2 First Follow-Up Sample Design

There were three basic objectives for the NELS:88 first follow-up sample design. First, the sample was to include approximately 21,500 students who were in the eighth-grade sample in 1988

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<sup>1</sup> Readers who desire more detail on the base year sample design should consult the *NELS:88 Base Year Sample Design Report*.

(including base year nonrespondents). This longitudinal cohort was to be distributed across 1,500 schools. Second, the sample was to constitute a valid probability sample of all students currently enrolled in the tenth grade in the 1989-1990 school year. This entailed freshening the sample with students who were tenth graders in 1990 but not in the eighth grade during the 1987-1988 school year. Third, the first follow-up was to include a sample of students who had been deemed ineligible for base year data collection (because physical, mental, or linguistic barriers prevented them from participating) so that those able to take part could be added to the first follow-up student sample, and demographic and school enrollment information could be obtained for them.

**Longitudinal Cohort.** The general sample design strategy for this component of the sample involved subsampling students selected for the base year with non-zero probabilities related to characteristics of their 1990 schools. Base year students who had dropped out of school between 1988 and 1990 were subsampled with certainty (their probabilities of selection were set equal to one). Base year students attending school in 1990 were subsampled with probabilities related to the number of other base year students attending the same school. Base year students who were reported to be attending a school with at least 10 other base year students were sampled with certainty. All other students were sampled with probabilities greater than zero, but less than one.

Including nonrespondents, the NELS:88 base year sample comprised 26,432 students. Of these, 96 were deemed out of scope for the 1990 first follow-up (including students who had died or moved out of the United States). Among the remaining 26,336 students, 348 were found to have dropped out of school;<sup>2</sup> all of these students were selected into the first follow-up with certainty (probability of selection equal to one).

It was determined that the remaining pool of 25,988 students were distributed among 3,967 schools.<sup>3</sup> As had been anticipated, the distribution of these students among schools was highly skewed. It was found that approximately 75 percent of the students (19,568 of 25,988) were attending approximately 23 percent (908 of 3,967) of the schools; each of these schools included at least 11 base year students. All of these 19,568 students were included in the first follow-up with certainty. The remaining 6,420 students were distributed among 3,059 schools with 10 or fewer members of the base year sample. Their sampling probabilities for the first follow-up depended on the number of base year students the school contained. The efficiency of this design relative to one with no subsampling at all was 66.5 percent.<sup>4</sup>

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<sup>2</sup> The 348 dropouts comprise 250 dropouts whose status was confirmed by the student's home, 58 sample members whom the school reported to have dropped out but field interviewers could not locate, and 40 students who were institutionalized. The latter group are not necessarily dropouts in the strict sense of the first follow-up dropout definition because in some cases they were receiving academic instruction. However, they were grouped with the dropouts to ensure that they would remain in the first follow-up sample with certainty.

<sup>3</sup> When the school a student was attending could not be identified, a separate "school" of size one was created. This was the case for 221 students who could not be located and ten students who were in home study. Hence, the number of actual schools was 3,736.

<sup>4</sup> The measure of efficiency was computed as  $1/(1 + RV) * 100\%$ , where RV is the relative variance of the weights required to compensate for the different rates of subsampling.



**Freshened Sophomore Sample.** The second sampling objective was to create a valid probability sample of students enrolled in tenth grade in the 1989-1990 school year; this goal was achieved by a process we have termed "freshening." The freshening procedure was carried out in four steps:

1. For each school that contained at least one base year tenth grade student selected for interview in 1990, a complete alphabetical roster of all tenth grade students was obtained.
2. For each base year sample member, we examined the next student on the list; if the base year student was the last one listed on the roster, we examined the first student on the roster (that is, the roster was "circularized").
3. If the student who was examined was enrolled in the eighth grade in the U.S. in 1988, then the freshening process terminated. If the designated student was not enrolled in the eighth grade in the U.S. in 1988, then that student was selected into the freshened sample.
4. Whenever a student was added to the freshened sample in step 3, the next student on the roster was examined and step 3 was repeated. The sequence of steps 3 and 4 was repeated (adding more students to the freshened sample) until a student who was in the eighth grade in the U.S. in 1988 was reached on the roster.

The freshening process could yield zero, one, or more than one new sample member in a given school. Altogether, 1,229 new students were added to the tenth grade sample--on average, just less than one student per school. Some of these freshened students were dropped in the subsampling process (described below) either because they themselves were not included in the subsample or because the base year student to whom they were linked was not included. Some 1,043 students selected through the freshening procedure remained in the final first follow-up sample.

**Subsampling the Eighth-Grade Cohort and Freshened Sophomore Samples.** After the initial selection of the longitudinal cohort, the combined longitudinal-freshened sample was further subsampled. The students dropped from the first follow-up as a result of subsampling were also excluded from the second follow-up. Two categories of sample members were subsampled: 1) students who had transferred out of the school from which they had initially been selected for the first follow-up sample; and 2) first follow-up nonrespondents who were classified as potential dropouts.

Transfer students were subsampled as a cost-saving measure. Because of the large number of transfer students and the high costs of obtaining questionnaires from them, NORC selected a 20 percent subsample of transfer students in the spring of 1990. Of the 1,991 transfers, 386 were retained and 1,605 were dropped from the sample.

A fifty percent subsample of "potential dropouts" was drawn after the end of the regular data collection period in the spring of 1990. The subsampling encompassed those students who had not been located in the data collection phase and those who had been absent on both survey and makeup days. Those selected into the subsample were the object of renewed follow-up efforts to identify any "hidden dropouts" in these categories of cases. There were 742 "potential dropout" cases, of whom 357 were retained in the sample and pursued in the final data collection period of the study. In the course of final data collection, we did indeed find that substantial numbers of these "potential dropouts" (75 of the 357 subsample members) were confirmed as having been dropouts at the time of their school's survey session, and were included as part of the first follow-up dropout study; the remaining 282 were identified as still in school.

As a result of this subsampling, the longitudinal cohort and the tenth-grade freshened student samples were reduced by 1,990 cases, yielding a first follow-up sample size of 20,706 (see Table 3.1.2-1).<sup>5</sup> While this number represents the number of sample members included on the public release data file, additional students--the 340 members of the sample of base year ineligible students found to be eligible or out-of-scope in the first follow-up were added to the second follow-up's re-release of the first follow-up sample files. Of the revised 20,840 sample, 855 represent the first follow-up freshened sample, 19,645 represent the longitudinal cohort that began with eighth graders in 1988, 312 represent the base year ineligible students later found to be eligible, and 28 represent the base year ineligible students found to be out-of-scope.

**Sample of Base Year Ineligibles.** The NELS:88 base year sample excluded students for whom the NELS:88 survey instruments would be unsuitable (i.e., mentally handicapped students and students not proficient in English) and students whose physical or emotional problems would have made participation in the survey unduly difficult. Data were obtained on the numbers of such ineligible students to facilitate inferences to the larger population that includes such persons. About 5.3 percent of the students at base year sample schools were excluded from participation. Of these, 57 percent were excluded because of mental disability, another 35 percent because of language barriers, and 8 percent because of physical disability. Further detail on sample eligibility in the base year is provided in the *NELS:88 Base Year Sample Design Report* and in the *NELS:88 First Follow-Up Final Technical Report*. Chapter III of the *NELS:88 Second Follow-Up: Student Component Data File User's Manual* includes additional detail about sample freshening, student subsampling, and base year sample ineligible students.

There were several reasons for adding a sample of ineligible students to the first follow-up design. One such consideration was a change in eligibility rules between base year and first follow-up. Because a Spanish translation of the first follow-up questionnaire was developed and because the requirement that standardized tests be administered was waived for those who could not complete them in English, it was feasible for some of the base year ineligible students to take part in the first follow-up who could not have taken part in the base year. Another consideration was the need to accommodate eligibility change,<sup>6</sup> as another means of providing for a probability sample of 1992 twelfth graders. Students whose ineligibility status had changed between 1988 and 1990 also could be surveyed in the first follow-up. However, even for those excluded base year students who still could not complete the NELS:88 instruments, collecting additional demographic information would help to better describe any undercoverage biases, while collecting school enrollment status information would facilitate a more accurate estimation of a national dropout rate between grades eight and ten.

Because the ineligible students had been excluded prior to the base year sample selection, NORC simulated the selection of a base year sample that included these ineligible students. Within each base year

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<sup>5</sup> The provisional first follow-up sample size of 20,706 has been amended to include 340 base year ineligible students who were reclassified as eligible or out of scope in the first follow-up. Additionally, data for 23 sampling errors found among the students freshened into the sample or out of scope in the first follow-up as well as four additional sampling errors have been deleted. Finally, 179 first follow-up freshened dropouts have been excluded from the public use files. Accordingly, the revised first follow-up sample size is 20,840.

<sup>6</sup> While in general the tendency is for certain classes of ineligible students to become eligible (for example, speakers of other languages come to be proficient in English), in rare instances eligible 1987-88 eighth graders had become ineligible in the first or second follow-ups (for example, because of mental or physical problems engendered by an accident). We have treated students who were outside the United States in the 1991-92 school year as out-of-scope for the second follow-up, but they retain their overall sample eligibility. Future waves of NELS:88 may wish to reassess their eligibility for participation in those data collection efforts.

**Table 2.1.2-1**  
**First follow-up sample by race breakdown<sup>a</sup>**

|                         | <b>First Follow-Up<br/>Initial Selections</b> | <b>Freshened<br/>Sample</b> | <b>Dropped in final<br/>Subsampling<sup>b</sup></b> | <b>Final<br/>Sample</b> |
|-------------------------|---|-----------------------------|---|-------------------------|
| All                     | 21,474  | 1,229                       | 1,997   | 20,706                  |
| Asian/Pacific Islanders | 1,367   | 89                          | 141   | 1,315                   |
| Hispanics               | 2,828   | 246                         | 323   | 2,751                   |
| American Indians        | 278   | 28                          | 32  | 274                     |
| Blacks                  | 2,265   | 235                         | 280   | 2,220                   |
| Whites                  | 14,349  | 554                         | 1,061   | 13,842                  |
| Missing/Refused         | 387   | 77                          | 160   | 304                     |

<sup>a</sup> Figures in this table represent the first follow-up constructed variable frequencies. This variable--race identified at the time of sampling--is not the same variable included on the data files and reported in the codebooks. This variable was used because it was the only race variable that was constructed for initial sample members dropped in final subsampling.

<sup>b</sup> 1,821 members of the eighth-grade longitudinal cohort and 169 freshened tenth graders were dropped in Phase 3 subsampling. In addition, 7 members of the eighth-grade longitudinal cohort were discarded because they were selected in error during the base year.

<sup>c</sup> This table is based on the original (1992-1993) release of the first follow-up student file. The second follow-up (1994) release of the first follow-up student data contains a slightly different sample number than the original release. Additional details about the sample numbers of the two releases are on page 4 of section 2.1.2, under the subheading "Subsampling the Eighth-Grade Cohort and Freshened Sophomore Samples."

sample school, we applied the same within-school sampling rates that had been used in selecting the base year sample students. A total of 674 ineligibles were selected for the simulated base year sample by the following procedure, with a final sample size of 653. The eligibility status of these students was reassessed, their school enrollment status and basic demographic characteristics were determined, and student questionnaire data were obtained from those deemed able to complete a questionnaire. These questionnaires will be released with data from the rest of the first follow-up sample in the final release of the second follow-up data on the 1994 electronic codebook. Student questionnaire data from those who were successfully surveyed will be included in that combined base year/first follow-up/second follow-up data release. (For details of the sampling methodology and composition of the base year ineligibles sample, see the *NELS:88 First Follow-Up Final Technical Report*; for a statement of the data analysis implications of undercoverage of the limited English language proficient population, see section 3.4.1 of this manual.)

## 2.2 Calculation of Weights

The general purpose of weighting survey data is to compensate for unequal probabilities of selection and to adjust for the effects of nonresponse. Weights are often calculated in two main steps. In the first step, unadjusted weights are calculated as the inverse of the probabilities of selection, taking into account all stages of the sample selection process. In the second step, these initial weights are

adjusted to compensate for nonresponse; such nonresponse adjustments are typically carried out separately within multiple weighting cells. This is the process that was applied to weighting NELS:88 data in all rounds.

### 2.2.1 Calculation of Base Year Sample Weights

The base year weights were based on the inverse of the probabilities of selection into the sample and on nonresponse adjustment factors computed within weighting cells. Two different weights were calculated to adjust for the fact that not all sample members have data for all instruments. The weight BYQWT applies to 24,599 student questionnaires (and is also used in conjunction with parent data), while BYADMWT applies to the 1,035 school administrator questionnaires (17 base year school principals failed to complete a school questionnaire). These weights project to the population of approximately 3,008,080 eligible eighth graders in public, Catholic, and other private schools in 1988.

The base year weighting procedures consisted of two basic stages:

**Stage 1.** Calculation of a preliminary base year weight based on the inverse of the product of the probabilities of selection for the base year sample.

**Stage 2.** Adjustment of this preliminary weight to compensate for "unit" nonresponse, that is, for noncompletion of an entire school questionnaire or student questionnaire. The unit varied depending upon the weight being adjusted.

The nonresponse-adjusted school weight was derived as the product of the school's preliminary weight times a nonresponse adjustment factor intended to adjust for the fact that some of the sampled schools did not return a completed questionnaire. The preliminary weight for students was based upon the inverse of the probability that the student's school was selected into the sample multiplied by the inverse of the probability that the student was sampled within the school. The nonresponse-adjusted student weight was derived as the product of the student's preliminary weight times a nonresponse adjustment factor intended to adjust for the fact that some of the sampled students did not participate, that is, did not return a completed questionnaire. Statistical properties of the base year weights are presented in Table 2.2.1-1.

Each school appearing on the NELS:88 base year school file, and each student appearing on the NELS:88 student file, has a value for the final weight variable. The weight represents the probability of selection into the sample, in addition to a factor that adjusts for nonresponse. Thus, the weight serves the purpose of allowing a particular case to represent other nonsampled cases within its sampling stratum, and to represent nonresponding cases similar to it in various respects. Because separate final student and school weights have been provided, the construction of each will be considered separately in the following discussion.

**Base Year School Weights.** The final school weight, BYADMWT, was derived using a multistage process. First, an initial weight--which represented the inverse of the school's selection probability--was attached to each school record in a file containing records for all eligible schools in the NELS:88 sample. A logistic regression procedure was used to estimate (in terms of a probability of nonresponding) the degree to which each of the responding schools resembled a nonresponding school. This estimated probability of nonresponse was the first adjustment factor applied to a school's weight.

**Table 2.2.1-1**  
**NELS:88 base year statistical properties of sample case weights**

| <b>Weight</b>                             | <b>School<br/>BYADMWT</b> | <b>Student<br/>BYQWT</b> |
|---|---------------------------|--------------------------|
| Mean                                      | 37.46                     | 122.29                   |
| Variance                                  | 2,109.17                  | 4,359.16                 |
| Standard deviation                        | 45.92                     | 66.02                    |
| Coefficient of variation ( $\times 100$ ) | 122.59                    | 53.99                    |
| Minimum                                   | 1.54                      | 2.44                     |
| Maximum                                   | 387.30                    | 836.91                   |
| Skewness                                  | 2.69                      | 2.18                     |
| Kurtosis                                  | 9.47                      | 16.32                    |
| Sum                                       | 38,774.12                 | 3,007,779                |
| Number of cases                           | 1,035                     | 24,595                   |

Next, a polishing procedure--multi-dimensional raking--further adjusted the weights to sum to known population totals within strata. Estimating the nonresponse probability for each of the responding schools was possible because key background information on almost all of the nonresponding schools was available.

The final result of these procedures was a weight for each of the responding schools adjusted to compensate for nonresponse. For the purpose of adjusting the school weight, a nonresponding school was defined as a school for which both school administrator questionnaire data and student questionnaire data were unavailable.

**Base Year Student Weights.** The final student weight, BYQWT, was also derived using a multistage process. A design weight for each eligible student on a participating school's sample roster represented the student's probability of selection within the school. A student-level nonresponse adjustment factor was calculated by forming weighting cells based upon the combination of certain levels of variables representing school type, region, ethnicity, and gender. For each student, the product of a preliminary school weight and the student's design weight was formed. (The preliminary school weight was slightly different from BYADMWT. BYADMWT was adjusted to accommodate the 17 schools for which school administrator questionnaire data were unavailable though student questionnaire data had been obtained. The preliminary school weight eliminated this step in the adjustment process. Thus, it is appropriate for application to the 1,052 schools with student questionnaire data available.) This product was summed for participating and nonparticipating students within weighting cells. The ratio of the sums for all sampled students to participating students was used as the nonresponse adjustment factor for each student's design weight.

### 2.2.2 Calculation of First Follow-Up Sample Weights

Two weights were developed for the overall NELS:88 first follow-up sample. The first, or *basic*, weight applies to all members of the first follow-up sample who completed a first follow-up questionnaire,

regardless of their participation status in the base year. The basic weight (F1QWT) allows projections to the population consisting of all persons who were either in the eighth grade during the 1987-88 school year or in the tenth grade during the 1989-90 school year. Thus, this population encompasses both populations of prime analytic interest--the population of 1990 tenth graders (including those who were not eighth graders in 1988) and the 1988 eighth-grade population (excluding any additional 1990 tenth graders). By selecting the appropriate sample members, analysts can use this basic weight to make unbiased projections to the first of these populations (i.e., 1990 tenth graders). The second, or *panel*, weight applies to all members of the first follow-up sample with complete data from both rounds of the study. The panel weight (F1PNLWT) can be used to make projections to the other key analytic population--1988 eighth graders (excluding those ineligible for base year data collection).

**Basic First Follow-Up Weight (F1QWT).** Calculation of the basic weight required somewhat different procedures for the three groups of the full first follow-up sample--1988 eighth graders deemed eligible for the base year survey, 1990 tenth graders who were not in the eighth grade in 1988, and 1988 eighth graders who were deemed ineligible for participation in the base year but were considered eligible to participate in the first follow-up.

**Eligible 1988 Eighth Graders.** With a few exceptions, those individuals who were eligible for the base year survey and selected into the base year sample in 1988 remained eligible for the first follow-up sample. (The exceptions involved cohort members who died, left the country, or suffered grave impairments between 1988 and 1990.)

The first step in constructing a basic weight for these sample cases involved developing a design weight that reflected the selection probabilities for each case. Each case selected for the base year sample (including base year nonparticipants) was assigned a base year design weight (BYDW) based on his or her probability of selection into the base year sample. The base year design weight reflected both the probability of selecting the base year school (inflated to adjust for school-level nonresponse) and the probability of selecting the student given that the school had been selected and agreed to participate. The base year design weight does not adjust for student-level nonresponse. The base year design weight was then multiplied by the inverse of the case's probability of selection for the first follow-up sample; the latter probability took into account the subsampling done during the first follow-up. More formally, the first follow-up design weight (FFUDW) for student  $i$  was defined as:

$$FFUDW_i = BYDW_i \times (1/P_{1i}),$$

in which  $P_{1i}$  represents the probability of selection for the first follow-up sample.

The next step was to adjust the design weight for first follow-up nonresponse. Weighted response rates were computed for subgroups of this portion of the first follow-up sample. (The weight used was the first follow-up design weight.) The subgroups were:

- a. Out of sequence students (i.e., those who were not in tenth grade in 1990);
- b. Dropouts identified at the time of initial first follow-up sampling;
- c. Students who had transferred out of the first follow-up school from which they were selected;
- d. Potential dropouts;
- e. Other students initially classified as attending schools with 3 or fewer base year students;
- f. Other students initially classified as attending schools with 4 or more base year students.

The product of the inverse of the relevant response rate and the first follow-up design weight served as a preliminary adjusted weight. These preliminary weights were then further adjusted to meet overall and marginal targets for the sums of the weights. The target for a given marginal category was the sum of the final base year weights for all base year sample cases in that category. The categories were based on base year school type (public, Catholic, NAIS private, and other private), student sex (male and female), race/ethnicity (non-Hispanic White, American Indian, Hispanic, Asian, non-Hispanic Black, and unknown), and base year region (Northeast, Midwest, South, and West). The preliminary adjusted first follow-up weights were further adjusted until the sum of the weights for each marginal category (e.g., males) was equal to the corresponding sum of the final base year weights for that group. This final adjustment procedure is referred to as multidimensional raking.<sup>7</sup>

1990 Tenth Graders who were not 1988 Eighth Graders. All members of this population who are included in the first follow-up sample were selected through the freshening process. This process linked each 1990 tenth grader who was not a 1988 eighth grader to a student who was an eighth grader in 1988. The first follow-up design weight (FFUDW) for each student in the freshening sample is therefore equal to the first follow-up design weight of the base year student to whom he or she was linked. For purposes of variance estimation, both students are considered members of the same stratum and school.

The nonresponse adjustment for this portion of the sample involved two steps. First, the first follow-up design weight (FFUDW) for responding students in the freshening sample was inflated by a factor equal to the inverse of the weighted response rate for this portion of the sample. (The first follow-up design weight was the weight used in computing this response rate.) Second, the marginal distributions of the weights of the respondents were adjusted, by raking, to match the corresponding distributions for all cases selected through freshening (including nonrespondents). The two dimensions used in the raking procedure were sex and race/ethnicity (non-Hispanic White, American Indian, Hispanic, Asian, non-Hispanic Black, and unknown as the categories).

1988 Ineligible Eighth Graders who were Eligible for the First Follow-Up. A number of students who were not capable of participating in the base year were eligible for participation in the first follow-up. F1QWTs for these students were calculated during the course of the second follow-up weighting process and were developed using several of the second follow-up procedures. These procedures are discussed in more detail in section 3.2 of this manual.

The first follow-up design weight was obtained by dividing the base year design weight by .42 to allow for the subsampling that was done for this group. Nonresponse adjustment cells were defined based on a combination of their base year and first follow-up status (see step 2 in section 3.2 of this manual), gender and race (API/Hispanic, other). Each respondent's first follow-up design weight was then multiplied by the inverse of the weighted response rate (using the first follow-up design weight) for their cell. This adjusted weight serves as their F1QWT.

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<sup>7</sup> Multidimensional raking was also used in the base year weighting process. Although it is generally true that the base year weight for a student should be less than the first follow-up weight, this relationship may sometimes be reversed. This is a consequence of the raking procedure. The use of raking may also sometimes produce a reversal of the ordering for panel weights (described in the next section) relative to the basic first follow-up weight; that is, the first follow-up panel weight for an individual may be less than the individual's basic first follow-up weight.

**First Follow-Up Panel Weight (F1PNLWT).** The panel weight was developed only for those cases who were selected for both the base year and first follow-up samples and who provided complete data in both rounds. The same procedures used in developing the basic first follow-up weight for 1988 eighth graders selected for the base year sample were applied to the subset of them for whom complete data were obtained in both rounds. As with the basic first follow-up weight, the target sum of weights for the panel weight was the sum of the final base year weights for all base year sample cases who remained eligible for the first follow-up sample. The same six nonresponse adjustment groups and multidimensional raking procedures used in calculating the basic first follow-up weight were also used in calculating the panel weight.

**Results of Weighting.** To check the sample case weights, we analyzed the statistical properties of the weights; Table 2.2.2-1 displays the mean, variance, standard deviation, coefficient of variation, minimum, maximum, skewness, and kurtosis for both of the weights included on first follow-up data files.

Users should note that compared to the base year questionnaire weight (BYQWT), the first follow-up questionnaire (F1QWT) and panel (F1PNLWT) weights are larger, on average, and more variable. (For BYQWT, refer to Table 2.2.1-1 above.) This mostly reflects the effect of subsampling students at different rates depending upon the number of other NELS:88 students with whom they were clustered in their first follow-up schools.

**Table 2.2.2-1**  
**NELS:88 first follow-up statistical properties of sample weights**

| WEIGHT                                    | F1QWT     | F1PNLWT   |
|---|-----------|-----------|
| Mean                                      | 165.88    | 172.62    |
| Variance                                  | 46,249.54 | 52,603.86 |
| Standard Deviation                        | 215.06    | 229.36    |
| Coefficient of Variation ( $\times 100$ ) | 129.65    | 132.86    |
| Minimum                                   | 2.14      | 2.26      |
| Maximum                                   | 6,996.81  | 7,479.71  |
| Skewness                                  | 10.89     | 11.22     |
| Kurtosis                                  | 205.24    | 214.14    |
| Sum                                       | 3,217,069 | 3,007,813 |
| Number of Cases                           | 19,394    | 17,424    |

<sup>a</sup> This table is based on the original (1992-1993) release of the first follow-up student file. The second follow-up (1994) release of the first follow-up student data contains a slightly different sample number than the original release. Additional details about the sample numbers of the two releases are on page 4 of section 2.1.2, under the subheading "Subsampling the Eighth-Grade Cohort and Freshened Sophomore Samples."



### **2.3 Standard Errors and Design Effects**

Component-specific tables of standard errors and design effects for the base year, first follow-up, and second follow-up surveys are included in the data file user's manual for each component.

## **Appendix P**

### **NCES NELS:88 Publications**

## NCES NELS:88 Publications

### ANALYSIS REPORTS.

- Hafner, A., Ingels, S.J., Schneider, B., and Stevenson, D.L. *A Profile of the American Eighth Grader*, June 1990; NCES 90-458.
- Hoachlander, E.G. *A Profile of Schools Attended by Eighth Graders in 1988*, September 1991; NCES 91-129.
- Bradby, D. *Language Characteristics and Academic Achievement: A Look at Asian and Hispanic Eighth Graders in NELS:88*, February 1992; NCES 92-479.
- Horn, L., and Hafner, A. *A Profile of American Eighth-Grade Mathematics and Science Instruction*, June 1992; NCES 92-486.
- Horn, L., and West, J. *A Profile of Parents of Eighth Graders*, July 1992; NCES 92-488.
- Kaufman, P., and Bradby, D. *Characteristics of At-Risk Students in NELS:88*, August 1992; NCES 92-042.
- McMillen, M. *Eighth to Tenth Grade Dropouts*, 1992; NCES 92-006.
- Owings, J., and Peng, S. *Transitions Experienced by 1988 Eighth Graders*, 1992. NCES 92-023.
- Green, P.J. *High School Seniors Look to the Future, 1972 and 1992*, 1993; NCES 93-473.
- McMillen, M., Hausken, E., Kaufman, P., Ingels, S., Dowd, K., Frankel, M. and Qian, J. *Dropping Out of School: 1982 and 1992*, Issue Brief Series, 1993; NCES 93-901.
- Rasinski, K.A., Ingels, S.J., Rock, D.A., Pollack, J. *America's High School Sophomores: A Ten Year Comparison, 1980 - 1990*, 1993; NCES 93-087.
- Green, P.J., Dugoni, B.L., Ingels, S.J. *Trends among High School Seniors, 1972-1992*, forthcoming, 1994; NCES 94-380.
- Green, P.J., Dugoni, B.L., Ingels, S.J., and Camburn, E. *A Profile of the American High School Senior in 1992*, forthcoming, 1994; NCES 94-384.
- Hoffer, T. *High School Seniors' Instructional Experiences in Science and Mathematics*, forthcoming, 1995; NCES and NSF.
- Ingels, S.J., Plank, S.B., Schneider, B., and Scott, L.A. *A Profile of the American High School Sophomore in 1990*, 1994; NCES 94-086.
- Myers, D., and Heiser, N. *Students' School Transition Patterns between Eighth and Tenth Grades Based on NELS:88*, forthcoming, 1994; NCES 94-137.

Rasinski, K.A. *The Effect of High School Vocational Education on Academic Achievement Gain and High School Persistence: Evidence from NELS:88*, 1994; Report to the Office of Research, U.S. Department of Education.

Rock, D.A., Owings, J.A., and Lee, R. *Changes in Math Proficiency Between 8th and 10th Grades*. Statistics in Brief series, 1994, NCES 93-455.

Scott, L.A., Rock, D.A., Pollack, J.M., and Ingels, S.J. *Two Years Later: Cognitive Gains and School Transitions of NELS:88 Eighth Graders*, forthcoming, 1994; NCES 94-436.

#### RELEASED E.D. TABULATIONS.

Rasinski, K.A., and West, J. *NELS:88: Eighth Graders' Reports of Courses Taken During the 1988 Academic Year by Selected Student Characteristics*, July 1990; NCES 90-459.

Rock, D.A., Pollack, J.M., and Hafner, A. *The Tested Achievement of the National Education Longitudinal Study of 1988 Eighth-Grade Class*, April 1991; NCES 91-460.

#### USER'S MANUALS/TECHNICAL REPORTS/METHODOLOGY MONOGRAPHS.

Ingels, S.J., et al. *NELS:88 Base Year Field Test Report*. 1987. Chicago: NORC. ERIC ED 289-897.

Ingels, S.J., Abraham, S., Rasinski, K.A., Karr, R., Spencer, B.D., and Frankel, M.R. *NELS:88 Base Year Data File User's Manuals:*

STUDENT COMPONENT: March 1990; NCES 90-464

PARENT COMPONENT: March 1990; NCES 90-466

SCHOOL COMPONENT: March 1990; NCES 90-482

TEACHER COMPONENT: March 1990; NCES 90-484

Ingels, S.J., Rasinski, K.A., Frankel, M.R., Spencer, B.D., and Buckley, P. *NELS:88 Base Year Final Technical Report*, 1990; Chicago: NORC.

Spencer, B.D., Frankel, M.R., Ingels, S.J., Rasinski, K.A., and Tourangeau, R. *NELS:88 Base Year Sample Design Report*, August 1990; NCES 90-463.

Dowd, K.L., et al. *NELS:88 Second Follow-Up Field Test Report*. 1991. Chicago: NORC. ERIC ED 335-418.

Rock, D.A., and Pollack, J.M. *Psychometric Report for the NELS:88 Base Year Test Battery*, April 1991; NCES 91-468.

Kaufman, P., and Rasinski, K.A. *Quality of Responses of Eighth-Grade Students to the NELS:88 Base Year Questionnaire*, September 1991; NCES 91-487.

Ingels, S.J., Scott, L.A., Lindmark, J.T., Frankel, M.R., and Myers, S.L. *NELS:88 First Follow-Up Data File User's Manuals*:

STUDENT COMPONENT: April 1992; NCES 92-030  
SCHOOL COMPONENT: May 1992; NCES 92-084  
DROPOUT COMPONENT: November 1992; NCES 92-083  
TEACHER COMPONENT: November 1992; NCES 92-085

Ingels, S.J., Scott, L.A., Rock, D.A., Pollack, J.M., Rasinski, K.A. *NELS:88 First Follow-Up Final Technical Report*, forthcoming 1994; Washington, D.C.: NCES 94-632.

Ingels, S.J., Dowd, K.L., Baldrige, J.D., Stipe, J.L., Bartot, V.H., Frankel, M.R. *NELS:88 Second Follow-Up: Student Component Data File User's Manual*, 1994; NCES 93-374.

Ingels, S.J., Dowd, K.L., Stipe, J.L., Baldrige, J.D., Bartot, V.H., Frankel, M.R. *NELS:88 Second Follow-Up: Dropout Component Data File User's Manual*, 1994; NCES 93-375.

Ingels, S.J., Thalji, L., Pulliam, P., Bartot, V.H., Frankel, M.R. *NELS:88 Second Follow-Up: Parent Component Data File User's Manual*, 1994; NCES 94-378.

Ingels, S.J., Thalji, L., Pulliam, P., Bartot, V.H., Frankel, M.R. *NELS:88 Second Follow-Up: Teacher Component Data File User's Manual*, 1994; NCES 94-379.

Ingels, S.J., Thalji, L., Pulliam, P., Bartot, V.H., Frankel, M.R. *NELS:88 Second Follow-Up: School Component Data File User's Manual*, 1994; NCES 94-376.

Ingels, S.J., Dowd, K.L., Taylor, J.R., Bartot, V.H., Frankel, M.R. *NELS:88 Second Follow-Up: Transcript Component Data File User's Manual*, 1994; NCES 94-377.

Ingels, S.J., and Dowd, K.L. *Conducting Trend Analyses: HS&B and NELS:88 Sophomore Cohort Dropouts*, forthcoming, 1994; Washington, D.C.: NCES 94-494.

Ingels, S.J., and Baldrige, J.B. *Conducting Trend Analyses: NLS-72, HS&B, and NELS:88 Seniors*, forthcoming 1994; Washington, D.C.: NCES 94-495.

Ingels, S.J., Taylor, J.R. *Conducting Cross-Cohort Comparisons Using HS&B, NAEP, and NELS:88 Academic Transcript Data*, forthcoming, 1994; Washington, D.C.: NCES.

Ingels, S.J., and Dowd, K.L. *NELS:88 Second Follow-Up Questionnaire Content Areas and Research Issues*, forthcoming, 1994, Washington, D.C.: NCES 94-497.

Rock, D.A., and Pollack, J.M. *NELS:88 Base Year through Second Follow-Up Psychometric Report*, forthcoming, 1995; Washington, D.C.: NCES 94-382.

Ingels, S.J. *Excluded Students and Undercoverage in NELS:88: Characteristics of Base Year Ineligible Students; Changes in Eligibility Status after Four Years*, forthcoming, 1995; Washington, D.C.: NCES.

**UPCOMING NELS:88 REPORTS AND TECHNICAL DOCUMENTATION.**

***Technical Report: NELS:88 Second Follow-Up Final Technical Report***

***Technical Report: NELS:88 Second Follow-Up Sample Design Report***

***Selected Methodological Monographs***

***Technical Report: NELS:88 Second Follow-Up School Effectiveness Study Data File User's Manual***

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