



U.S. Department of Education
Institute of Education Sciences
NCES 2006-078

National Household Education Surveys Program of 2005

Public-Use Data File User's Manual, Volume IV

Adult Education Survey



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TABLE OF CONTENTS

Chapter	Page
Introduction	1
[See Volume 1 for Chapters 1 through 5 and Appendixes A, B, and C.]	
6 Guide to the Data File and Codebook	3
6.1 Content and Organization of the Data File.....	3
6.1.1 System Variables	3
6.1.2 Household Membership Variables	4
6.1.3 Questionnaire Item Variables	4
6.1.4 Household Characteristics Variables.....	5
6.1.5 Derived Variables.....	5
6.1.6 Weighting and Variance Estimation Variables	13
6.1.7 Imputation Flag Variables	15
6.1.8 Numeric and Character Variables.....	16
6.2 Guide to the Codebook.....	16
6.3 Public-Use and Restricted-Use Data Files	16
7 Data Considerations and Anomalies	19
7.1 Data Considerations	19
7.1.1 Truncation of Age	19
7.1.2 Non-Inclusion of Adults Due to Language Barriers.....	19
7.1.3 Deletion of Courses by Respondents.....	19
7.1.4 Truncation of Adults' Reported Earnings and EARNFLAG.....	20
7.1.5 Course Weighting Factors	20
7.1.6 Derived Variables and Cross-Sectional Time Series Analyses	20
7.2 Data Anomalies.....	21
7.2.1 Participation in Post-Master's or Post-Doctoral Certificate Programs.....	21
7.2.2 Discrepancies Between Reported Age Moved and Highest Level of Education Completed Before Moved	21
References	23

TABLE OF CONTENTS—Continued

Appendixes		Page
Appendix D:	NHES:2005 Adult Education Contents in Position Order.....	D-1
Appendix E:	SAS Code for Derived Variables	E-1
Appendix F:	Adult Education Data File Codebook.....	F-1
Appendix G:	Industry and Occupation Coding Manual.....	G-1
Appendix H:	Major Field of Study Coding Manual	H-1
 Figures		
6-1	Example of the codebook format	17

INTRODUCTION

The National Household Education Surveys Program (NHES) was developed by the National Center for Education Statistics (NCES) and incorporates random digit dial (RDD) telephone surveys of households in the United States. The 2005 administration (NHES:2005) was conducted by Westat from January 3 through April 24, 2005. In the NHES:2005 Screener, household members were enumerated and demographic and educational information that determined eligibility for three distinct topical surveys was collected. The NHES:2005 surveys are as follows:

- Early Childhood Program Participation Survey (ECPN-NHES:2005), which gathered information on the nonparental care arrangements and educational programs of preschool children, consisting of care by relatives, care by persons to whom they were not related, and participation in day care centers and preschool programs including Head Start;
- After-School Programs and Activities Survey (ASPA-NHES:2005), which addressed relative and nonrelative care during the after-school hours of elementary and middle school-age children, as well as participation in school-based and center-based after-school programs, after-school activities, and self-care; and
- Adult Education Survey (AE-NHES:2005), in which data were collected about participation in the following types of formal adult educational activities: English as a second language, basic skills and high school completion, postsecondary degree and diploma programs, apprenticeships, work-related courses, and personal interest courses. Information on informal learning activities for personal interest was gathered as well.

Three populations of interest corresponded to the three surveys that composed NHES:2005:

- Children from birth through age 6 who were not yet enrolled in kindergarten or above, of interest in either the infant/toddler path (ages 0 through 2) or the preschool path (ages 3 through 6) of the ECPN-NHES:2005 survey;
- School-age children in kindergarten through grade eight, up to age 15, of interest in the ASPA-NHES:2005 survey; and
- Adults (persons age 16 or older), who were not enrolled in grade 12 or below, not institutionalized, and not on active duty in the U.S. armed forces, of interest in the AE-NHES:2005 survey.

This manual, the *National Household Education Surveys Program of 2005: Public-Use Data File User's Manual, Volume IV, Adult Education Survey*, provides documentation and guidance for users of the data file for the AE-NHES:2005 survey. This volume contains a description of the content and organization of the data file, including useful information regarding questionnaire items and the various derived variables found on the file. The reader should especially note the discussion of data considerations and anomalies in chapter 7. Included as appendices are the data file layout, SAS code that was used to create derived variables, the codebook for the AE-NHES:2005 data file, and the manuals used for coding major field of study, industry, and occupation.

Volume IV is meant to be read in conjunction with Volume I of the *National Household Education Surveys Program of 2005: Public-Use Data File User's Manual*. More information about the purpose of the study, the sample design, the ECPP and ASPA surveys, the data collection instruments, and data collection and data processing procedures is contained in Volume I. Detailed information about ECPP-NHES:2005 and ASPA-NHES:2005 can be found in Volumes II and III, respectively.

Some users of the AE-NHES:2005 survey data may wish to make comparisons with data from the last adult education survey conducted, namely the Adult Education and Lifelong Learning Survey of NHES:2001. Therefore, it is important to point out some differences between the different survey administration years. Some items from AELL-NHES:2001 were dropped in 2005. Items were dropped largely due to lack of utility reported by experts consulted about the survey content, low variability in response, and survey administration time constraints. The most significant change from 2001 was that items pertaining to distance learning were removed from sections addressing each type of adult education and incorporated into a stand-alone section on distance learning. In addition, the Work-Related Informal Learning Activities section was deleted and replaced with a section on Informal Learning Activities for Personal Interest. Other items that were dropped included questions about certifications or licensures; the name, city, and state where an adult educational activity was being/had been undertaken; whether the respondent would participate in a specific type of activity again; and whether the school where the respondent had been enrolled in a college or vocational program was also his/her employer. Also, welfare and other household family support items were dropped from AE-NHES:2005. Data users also can make comparisons with data from other waves of data collection, i.e. adult education surveys from 1991, 1995, and 1999.

Some new items were added to the AE survey in 2005. Additions included a new question asking whether English as a Second Language classes were part of a family literacy program such as Even Start or Head Start. A question was added to the College and University Degree Programs section asking about the type of institution where the program was being taken, i.e., a 2-year or 4-year institution. Questions about learning disabilities and vision or hearing impairments were added to the background section.

Finally, a skip pattern was changed between the two cycles so that one of the variables in the Remaining Background section, CUREMP, is no longer directly comparable. In AELL-NHES:2001, only respondents who reported that they did not work in the past 12 months (IBWORK12) were skipped out of this question. However, for AE-NHES:2005, respondents who reported that they did not work during the past 12 months (IBWORK12) and those who reported that they did not work during the past week (IBWORK) and were not on leave or vacation from work during the past week (IBLEAVE) were skipped out of this question. That is, the question regarding currently working for an employer or oneself was skipped for those who did not work in the previous week (or were not on leave) since it had been established already that they were not currently working.

6. GUIDE TO THE DATA FILE AND CODEBOOK

6.1 Content and Organization of the Data File

This section describes the content of the public-use data file constructed for the Adult Education Survey of the National Household Education Surveys Program (AE-NHES:2005), which includes data from interviews with 8,904 adult respondents, of whom 4,732 were participants in formal educational activities (including full-time postsecondary programs) and 4,172 were not. This file contains data from all completed AE interviews. There is one record for each interview. The file is organized so that logically related sets of variables are grouped together. The data items are listed in the file in the following order: system variables, household membership variables, questionnaire item variables, household characteristics variables, derived variables, weighting and variance estimation variables, and imputation flag variables.

A list of all the variables in the data file is shown in appendix D. The VARIABLE NAME column displays the unique identifier for each variable in the data file. The VARIABLE LABEL column displays a short description associated with the variable. The FORMAT column indicates if a variable has a numeric ("N") or a character ("C") format. All of the variables in the AE survey file, except MAINRSLT, CRDIPLM1-4, and VODIPLM1-3, have numeric formats. The LENGTH column indicates the length of the variable by the number of digits. The length descriptor also includes the number of digits found after the decimal point for noninteger numeric variables (e.g., weight variables). The position of the variable on the file is indicated in the START and END columns.

The value "-1" for any variable on the file indicates that a case was part of a legitimate skip. For example, in the section on English as a Second Language (ESL) classes, participants in ESL classes who were not working skipped ESPROVEM ("Was the instructional provider also your employer?") and were given a -1 value for the variable. Analysts may want to recode these cases to facilitate their analyses. For example, in a study of employer provision of ESL, the -1 cases for ESPROVEM ("Was the instructional provider also your employer?") could be set to 2 (no) for respondents who said they were not employed at the time they took ESL classes (ESWORK = 2).

The public-use data file is provided on CD-ROM and is available on the Internet at <http://nces.ed.gov/nhes>.

6.1.1 System Variables

Each record starts with a variable for case identification number: BASMID. Following the identification variable is MAINRSLT, which identifies the completion status of the interview, and ENGLSPAN, which tells whether the interview was conducted in English or Spanish.

BASMID is the unique 12-digit identifier variable for the interview. It is composed of the 8-digit household identifier, the 2-digit household member person number of the subject of the interview, and the final 2-digit interview number, which in the NHES:2005 surveys is always 01.

MAINRSLT (main result) is the variable that holds the final completion code for the interview.

The values for MAINRSLT are as follows:

CP = Complete AE interview; sampled as participant, completed as participant
CU = Complete AE interview; sampled as nonparticipant, completed as nonparticipant
CX = Complete AE interview; sampled as participant, completed as nonparticipant
CZ = Complete AE interview; sampled as nonparticipant, completed as participant

ENGLSPAN is the variable that indicates whether the interview was conducted in English or in Spanish.

The values for ENGLSPAN are as follows:

1 = Interview was conducted in English
2 = Interview was conducted in Spanish

6.1.2 Household Membership Variables

In each household in which an adult was sampled for the AE survey, all household members were enumerated in the Screener interview. Data collected for each household member included age and sex of each household member (item S6). These data are provided in the AE data file; data users do not have to access the Screener data. The household member information is stored on the public-use data file in the following order: information about the sampled adult and information on all other household members up to a maximum of seven. The variables appear on the data file as follows:

AAGE2004 is the age of the sampled adult as of December 31, 2004.

SEX is the sex of the sampled adult.

AGE(*n*) is the age of other household members

SEX(*n*) is the sex of other household members where *n* is the person number assigned to the household member ranging from 1 to 7.

6.1.3 Questionnaire Item Variables

The questionnaire item variables appear on the file in the same order as they were asked. The items on participation status in any educational activities and high school diploma status appear in the Screener and the AE questionnaire. The responses given by the adult himself/herself, whether in the Screener (if the sampled adult was the Screener respondent) or in the AE interview, are contained in the data file.

Some variables have been excluded from the file for confidentiality reasons. These include the names of household members, verbatim string responses that might identify persons or places, and the individual ZIP Codes (STFZIP). Some of these variables are included in a separate restricted-use data file (see section 6.3). The AE survey questionnaire appears with the Screener, the After-School Programs and Activities Survey (ASPA-NHES:2005), and the Early Childhood Program Participation Survey (ECPN-NHES:2005) questionnaires in Volume I, appendix A; variable names are provided to the left of each question. Those followed by “/R” appear only on a restricted-use data file that may be obtained through a special licensing agreement with NCES. Go to the NCES website at <http://nces.ed.gov/pubsearch/licenses.asp> to learn more about getting a license.

“Code all that apply” questions allowed the respondent to select more than one of the answer categories given. As the responses were given, the interviewer coded the number appearing on the screen that corresponded to each response given. The numbered responses were recoded into one variable for each response category as “yes/no” codes. If the respondent gave the particular response, the associated variable was coded “yes.” Otherwise, the associated variable was coded “no.” There were four “code all that apply” questions in the AE survey: “In what types of college degree programs were you enrolled?” (AD2); “Which certificate was that?” (AD4); “In what types of vocational or technical diploma programs were you enrolled?” (AE2); and “Which of the following races do you consider yourself to be? You may name more than one. Are you...” (AL4).

6.1.4 Household Characteristics Variables

Household characteristics variables are variables that reflect characteristics of the household as a unit. These questions were asked at the end of the first interview in the household. For example, questions were asked about whether the home was owned or rented (HOWNHOME), whether someone in the household worked for a child care center (CNTRWORK), and whether someone in the household cared for or baby-sat someone else’s child or children on a regular basis, in the home or elsewhere (CHCRWORK). Also included were questions on household income (HINCMRNG, HINCM50K, HINCOME). These household items appear on the file in the same order as they were asked.

6.1.5 Derived Variables

Derived variables were developed and included in the public-use data file to aid users in their analyses. The derived variables fall into three categories: questionnaire item variables, counter variables, and variables linked to other data sources. Questionnaire item-derived variables were created by combining two or more items from the questionnaire. Household counter-derived variables were created by counting the number of persons enumerated in the household with specific characteristics or numbers of courses or programs. Linked-derived variables were created by using the respondent’s ZIP Code to extract data from the 2000 Census of Population Summary File 3 (SF3).

The derived variables appear together on the file in their own section in alphabetical order. They are listed here in the same order with an explanation of how they were derived. Because the derived variables are in alphabetical order, those that are substantively related may not be proximate to one another either on the file or in this discussion. The actual SAS code to create these variables is found in appendix E with the exception of household counter variables which were created in CATI, CENREG

(census region), which was drawn from the sampling frame, and linked ZIP Code variables. All unique NHES:2005 ZIP Codes were matched to ZIP Codes on the SF3 to determine urbanicity, the percentage of Black or Hispanic residents in the ZIP Code, and the percentage of persons under age 18 in the ZIP Code living in poverty. The AE derived variables are as follows:

AELABOR indicates the adult's labor force status. Adults are classified as working full-time, working part-time, unemployed and looking for work, or not in the labor force.

The values of AELABOR are as follows:

- 1 = Employed full-time (35 hours or more weekly)
- 2 = Employed part-time (less than 35 hours weekly)
- 3 = Unemployed and looking for work
- 4 = Not in the labor force

AEPARANY indicates whether the adult participated in any type of adult education activities in the previous 12 months including full-time college/university or vocational/technical credential programs.

The values of AEPARANY are as follows:

- 1 = Yes
- 0 = No

AEPARTIC indicates whether the adult participated in adult education activities in the previous 12 months, excluding full-time college/university or vocational/technical credential programs.

The values of AEPARTIC are as follows:

- 1 = Yes
- 0 = No

ANYDE indicates whether the adult participated in adult education activities over the previous 12 months using any type of distance education method. For those who did not participate in any adult education activities over the previous 12 months, this variable was coded as -1, inapplicable.

The values of ANYDE are as follows:

- 1 = Inapplicable
- 1 = Yes
- 0 = No

ANYSUPP1 indicates whether the respondent's employer provided support for adult education, including providing classes at the workplace, providing classes during regular work hours, or paying for classes, programs, or courses. Adults were coded -1, nonparticipant, if they were not participants in ESL classes, basic skills education, college or university credential programs, vocational or technical diploma programs, work-related courses, or personal interest courses. Adults were coded 0 (no) if they were participants in educational activities and did not work during the time they took the courses.

The values of ANYSUPP1 are as follows:

-1 = Nonparticipant
1 = Yes
0 = No

BSPARTIC indicates whether the adult participated in ESL or ABE/GED classes in the previous 12 months.

The values of BSPARTIC are as follows:

1 = Yes
0 = No

BSSUPP indicates whether the respondent's employer provided support for basic skills education, including providing instruction, providing classes at the workplace, providing classes during regular work hours, or paying for classes. Adults were coded 0 (no) if they were participants in basic skills education and did not work during the time they took the basic skills education. Adults were coded -1, nonparticipant, if they were not participants in basic skills education.

The values of BSSUPP are as follows:

-1 = Nonparticipant
1 = Yes
0 = No

CENREG identifies the census region for each record. This variable was drawn from the sampling frame.

The following states and the District of Columbia are in each census region:

Northeast: CT, MA, ME, NH, NJ, NY, PA, RI, VT
South: AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV
Midwest: IA, IL, IN, KS, MI, MN, MO, ND, NE, OH, SD, WI
West: AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY

The values of CENREG are as follows:

1 = Northeast
2 = South
3 = Midwest
4 = West

COLSUPP1 indicates whether the respondent's employer provided support for college or university degree programs, including providing programs at the workplace, providing programs during regular work hours, or paying for degree programs. Adults were coded 0 (no) if they were participants in college or university degree programs and did not work during the time they took the degree programs. Adults were coded -1, nonparticipant, if they were not participants in college or university degree programs.

The values of COLSUPP1 are as follows:

- 1 = Nonparticipant
- 1 = Yes
- 0 = No

CRDIPART is a composite variable that indicates whether the adult participated in college or university degree programs or vocational/technical diploma or certificate programs in either part-time or full-time status in the past 12 months.

The values of CRDIPART are as follows:

- 1 = Yes
- 0 = No

CRNEW indicates the number of college or university degree programs in which the respondent participated in the past 12 months. Nonparticipants in college or university degree programs were set to -1, nonparticipant. Verbatim strings for major subject or field of study CRMAJOR(*n*), don't know (-8), and refused (-7) responses were counted for this variable. Note that text strings for major subjects and fields of study are available only on the restricted-use data file.

CRSUPP1 indicates whether the respondent's employer provided support for college or university credential programs. Adults were coded -1, inapplicable, if they were not participants in college or university or vocational/technical credential programs.

The values of CRSUPP1 are as follows:

- 1 = Nonparticipant
- 1 = Yes
- 0 = No

EDUCLEVL is a measure of the educational attainment of adults. If the respondent indicated that his/her highest level of schooling was vocational or technical after high school or 1 or 2 years of college, he/she was assigned to the "some college, associate's degree, or voc/tech school" category (whereas in HIGHEDUC, those respondents were assigned to the category "high school diploma or its equivalent").

The values of EDUCLEVL are as follows:

- 1 = Less than high school diploma
- 2 = High school diploma or its equivalent
- 3 = Some college, associate's degree, or voc/tech school
- 4 = Bachelor's degree or higher

ESSUPP indicates whether the respondent's employer provided support for ESL classes, including providing instruction, providing classes at the workplace, providing classes during regular work hours, or paying for classes. Adults were coded 0 (no) if they were participants in ESL classes and did

not work during the time they took ESL classes. Adults were coded -1, nonparticipant, if they were not participants in ESL classes.

The values of ESSUPP are as follows:

- 1 = Nonparticipant
- 1 = Yes
- 0 = No

HH18OVER indicates the number of household members age 18 and older.

HHTOTAL indicates the total number of household members.

HHUNDR6 indicates the number of household members younger than age 6.

HHUNDR10 indicates the number of household members younger than age 10.

HHUNDR13 indicates the number of household members younger than age 13.

HHUNDR18 indicates the number of household members younger than age 18.

HHUNDR21 indicates the number of household members younger than age 21.

HIGHEDUC was derived from IBGRADE and IBDIPL. In cases in which the respondent indicated that his/her highest level of schooling was vocational or technical after high school or 1 to 2 years of college, IBDIPL was used to ascertain that the respondent obtained a high school diploma or its equivalent.

The values of HIGHEDUC are as follows:

- 1 = Less than high school diploma
- 2 = High school diploma or its equivalent
- 3 = Associate's degree
- 4 = Bachelor's degree or higher

INFMPERS indicates whether the adult participated in any informal learning activities for personal interest over the previous 12 months.

The values of INFMPERS are as follows:

- 1 = Yes
- 0 = No

OCCGRP is a recode of FSOC, the final NHES occupation code that has a set of 20 categories aggregated from Standard Occupational Classification (SOC) categories. In OCCGRP, these 20 occupation groups are classified into three categories. A fourth category accounts for those not employed in the previous 12 months.

The values of OCCGRP are as follows:

- 1 = Professional/managerial/administrative
- 2 = Sales, service, and clerical
- 3 = Trades and labor
- 4 = Not employed in the past 12 months

RACEETHN classifies the race and ethnicity of the adult in a single measure. If the respondent identified his or her ethnicity as Hispanic, RACEETHN is Hispanic regardless of whether race was identified as White, Black, or other race(s).

The values of RACEETHN are as follows:

- 1 = White, non-Hispanic
- 2 = Black, non-Hispanic
- 3 = Hispanic
- 4 = All other races and multiple races, non-Hispanic

RACEETH2 is an alternative measure of the respondent's race and ethnicity with a separate category for Asian or Pacific Islander, non-Hispanic.

The values of RACEETH2 are as follows:

- 1 = White, non-Hispanic
- 2 = Black, non-Hispanic
- 3 = Hispanic
- 4 = Asian or Pacific Islander, non-Hispanic
- 5 = All other races and multiple races, non-Hispanic

SAACTY indicates whether the adult participated in personal interest courses in the previous 12 months.

The values of SAACTY are as follows:

- 1 = Yes
- 2 = No

SANEW indicates the number of personal interest courses in which the respondent has participated. Nonparticipants in personal interest courses were set to inapplicable (-1). Verbatim strings for course names (FCNAME(*n*) & FCREAS(*n*) = 2), don't know (-8), and refused (-7) responses were counted for this variable. Note that course names are available only on the restricted-use data file.

SASUPP indicates whether the respondent's employer provided support for personal interest courses, including providing instruction, providing classes at the workplace, providing classes during regular work hours, or paying for courses. Adults were coded 0 (no) if they were participants in personal interest courses and did not work during the time they took the courses. If adults were not participants in personal interest courses, they were coded -1, nonparticipant.

The values of SASUPP are as follows:

- 1 = Nonparticipant
- 1 = Yes
- 0 = No

SATIME shows the total hours of participation in personal interest courses. It is a *continuous* variable. Time reported in units other than total hours was converted to total hours. Adults were coded -1, inapplicable, if they were not participants in personal interest courses.

VOCSUPP1 indicates whether the respondent's employer provided support for vocational or technical diploma programs, including providing programs at the workplace, providing programs during regular work hours, or paying for programs. Adults were coded 0 (no) if they were participants in vocational or technical diploma programs and did not work during the time they took the diploma programs. Adults were coded -1, nonparticipant, if they were not participants in vocational or technical diploma programs.

The values of VOCSUPP1 are as follows:

- 1 = Nonparticipant
- 1 = Yes
- 0 = No

VONEW indicates the number of vocational or technical diploma programs in which the respondent participated. Nonparticipants in vocational or technical diploma programs were set to -1, nonparticipant. Verbatim strings for major subject or field of study VOMAJOR(*n*), don't know (-8), and refused (-7) responses were counted for this variable. Note that text strings for major subjects and fields of study are available only on the restricted-use data file.

WRACTY indicates whether the adult participated in work-related courses in the previous 12 months.

The values of WRACTY are as follows:

- 1 = Yes
- 2 = No

WRNEW indicates the number of career or job-related courses in which the respondent participated. Nonparticipants in career- or job-related courses were set to inapplicable (-1). Verbatim strings for course names (FCNAME(*n*) & FCREAS(*n*) = 1 OR 3), don't know (-8), and refused (-7) responses were counted for this variable. Note that course names are available only on the restricted-use data file.

WRSUPP indicates whether the respondent's employer provided support for work-related courses, including providing instruction, providing classes at the workplace, providing classes during regular work hours, or paying for courses. Adults were coded 0 (no) if they were participants in work-related courses and did not work during the time they took the courses. Adults were coded -1, inapplicable, if they were not participants in work-related courses.

The values of WRSUPP are as follows:

- 1 = Nonparticipant
- 1 = Yes
- 0 = No

WRTIME shows the total hours of participation in work-related courses. It is a *continuous* variable. Time reported in units other than total hours was converted to total hours. Adults were coded -1, inapplicable, if they were not participants in work-related courses.

Linked ZIP Code variables. These variables provide information on the characteristics of the ZIP Code area in which the adult's household is located, using data from the 2000 Census of Population Summary File SF3.

ZIP18PO2 is a linked-derived variable that categorizes the percentage of families in the subject's ZIP Code who have children under age 18 and had incomes in 1999 below the poverty line.

The values for ZIP18PO2 are as follows:

- 1 = Less than 5 percent
- 2 = 5 to 9 percent
- 3 = 10 to 19 percent
- 4 = 20 percent or more

ZIPBLHI2 is a linked-derived variable that categorizes the percentage of persons in the subject's ZIP Code in 2000 who were Black or Hispanic.

The values for ZIPBLHI2 are as follows:

- 1 = Less than 6 percent
- 2 = 6 to 15 percent
- 3 = 16 to 40 percent
- 4 = 41 percent or more

ZIPURB is a linked-derived variable that categorizes the subject's ZIP Code as urban or rural. The "urban" classification comprises all areas located within an urbanized area (UA) or urban cluster (UC). The "rural" classification comprises all areas outside of UAs and UCs. The specific density and distance requirements for UAs and UCs are defined in the *Federal Register*, Vol. 67, No. 51.

Since a ZIP Code can cut across geographic areas that are classified into either or both of the two categories, the ZIPURB variable is defined as the category that had the largest number of persons in 2000, based on data from the 2000 Census of Population. For example, if a ZIP Code has 5,000 persons in areas in the urban category and 1,200 persons in areas in the rural category, it is assigned a ZIPURB code of 1 ("Urban").

The values for ZIPURB are as follows:

- 1 = Urban
- 2 = Rural

6.1.6 Weighting and Variance Estimation Variables

The first variable in this section of the file is FAWT. It is the variable that should be used as the weight variable to estimate the characteristics of adults. This weight contains all of the adjustments for the probabilities of selection, nonresponse, and undercoverage as described in Volume I, chapter 3 of this manual.

Following FAWT are WRWGT and SAWGT. Data were collected from AE participants for up to four work-related courses and up to two personal interest courses. If an adult took more than four work-related courses, four were randomly selected for data collection. If an adult took more than two personal interest courses, two were randomly selected for data collection. For some analyses, the sampled work-related courses and the sampled personal interest courses must be weighted to be representative of all work-related or personal interest courses taken by the adult.

Some analysts may have an interest in conducting analyses using individual course data. The AE-NHES:2005 survey is based on a sample of adults, and not a sample of courses, meaning that the data are representative of adults and not of courses. Statements about the experiences of adults in these two types of courses like, "On average, adults in work-related courses paid x dollars out of their own pockets for each work-related course they took," can be supported by the data. The unit of analysis here is adults and the discussion focuses on an adult-based estimate using totals from the courses reported by the adult. Statements describing the universe of available courses like, "The average work-related course has a tuition of x dollars," cannot be supported by the data. The implied unit of analysis here is the course. A key reason the data are not representative of courses is that more than one adult could have taken the same course and it is not possible to adjust for these multiplicities since there is no way of identifying such occurrences. In such a situation, the course would be counted as existing multiple times, providing an erroneously high count of courses. Thus, the sum of the weights across all sampled courses would be an estimate of the number of enrollments (that is, occupied seats) in all courses, and not the number of courses.

In order to generate estimates describing the experiences adults had when taking work-related or personal interest courses, a work-related course weight and a personal interest course weight are provided. They are designed to make the courses sampled for the adult represent all of the courses (sampled and not sampled) taken by the adult.

Course weights are also needed for other types of analyses regarding work-related courses and personal interest courses. For instance, analysts may have an interest in making person-based estimates that use totals from the courses reported, for example, total or mean time spent in courses or total or mean amount spent for course-related costs. Again, because the courses were sampled for some respondents, course weights are needed to fully represent the time or cost.

The course weight to be used for work-related courses is WRWGT; the course weight to be used for personal interest courses is SAWGT. The course weight is the ratio of the total number of courses of a given type reported by the respondent to the number of courses for which data were collected. If a

respondent took seven work-related courses, then WRWGT equals 1.75 (7/4). If a person took six personal interest courses, then SAWGT equals 3.00 (6/2). If the person took few courses and subsampling was not necessary, the course weight equals 1.0.

The course weights are based on the number of courses reported and sampled, regardless of whether one or more courses were deleted (usually because a respondent indicated that a course took place more than 12 months previously). There were 4 cases in which more than 4 work-related courses were initially reported, requiring sampling of courses, and one or more sampled work-related courses were deleted. Also, there were 4 cases in which more than 2 personal-interest courses were initially reported, requiring sampling of courses, and one or more sampled personal-interest courses were deleted. In such cases, the course weights, WRWGT and SAWGT, appear to be inconsistent with WRNEW and SANEW and the number of courses for which data are given in the data file.

The course weight is applied to variables associated with courses in order to represent the total courses taken by the adult, the total amount spent, the total time spent in courses, and so on. The application of the weight results in a new **variable** that represents the total for all the person's courses, taking into account the subsampling of courses. Note that the course weight is used to create a **variable**, and is not intended for use in the same way as full sample weights in analysis. Users have to use FAWT in conjunction with the course weighting factors. This procedure is illustrated in the following example.

Example: An example of the application of the work-related course weight (WRWGT) can be seen in the derived variable WRTIME, the total time spent in work-related courses. To form this variable, the time variables for work-related courses (WRCLSHR1, WRCLSHR2, etc.) were added together and the sum was multiplied by the work-related course weight (WRWGT). (This variable is described on page 12 and the code used to create the derived variable appears on page E-5.)

The calculated variable WRTIME can be analyzed like any other variable in the file by using the person weight (FAWT) in the procedure statement (e.g., a SAS PROC or an SPSS procedure) to estimate the characteristic.

As noted above, the sum of the course weights estimates the numbers of enrollments (occupied seats) and not the number of courses. Analysts can also use the course weights to estimate a statistic across enrollments (seats).

Example: The analyst creates a derived variable that is the number of sampled work-related courses for which the adult received tuition assistance from his or her employer. Applying the course weight to this derived variable, the analyst creates a new variable representing the number of work-related course seats that received this type of employer support. A statement of such a finding would be, "Of all course seats in work-related courses, x percent were enrollments for which adults received tuition assistance from their employers." It would not be correct to state that "Employers provided tuition assistance for x percent of courses."

The calculation of standard errors for estimates produced in analyses using variables constructed with course weights is the same as in all other analyses using the AE data set. Since the same full sample weight (FAWT) is used in the analysis procedure, the method used to calculate variances for the estimates, whether using a Taylor series approach or a replication approach, is identical to all other analyses.

For many analyses related to courses, the use of course weights is not needed. If it is of interest to know whether any of the classes taken by an adult had a particular characteristic (e.g., if the estimate of interest is the proportion of adults taking work-related courses that had costs associated with them), then course weights are not needed. In this example, a variable should be created that indicates, for each adult, whether any of the work-related courses had a cost; this variable would be derived from whether the first work-related course had a cost, whether the second work-related course had a cost, and so on, up to the total of four work-related courses. The course weight makes no difference in this example, because the analysis is focused on whether **any** of the courses had a specific characteristic, and not on a total. On the other hand, if the analysis of interest pertains to adult-level totals (e.g., the average amount spent by adults on work-related courses), then the course weights are needed. Failure to use the course weight in such an example would lead to underestimation, since the non-sampled courses would not be reflected in the total expense for each adult.

The 80 replicate weights, FAWT1 to FAWT80, are the next variables in this section. These replicate weights can be used by various statistical software packages, like WesVar (using the JK1 method), SUDAAN, Stata, and AM, to produce estimates of the sampling errors of the estimates. More details on how the replicate weights were created and how they can be used are given in Volume I, chapter 3.

The remaining two variables in this section are APSU and ASTRATUM. These variables are provided to enable users to compute sampling errors using Taylor Series approximations, such as the SUDAAN procedure (Shah et al. 1995). The methods used to construct the values for APSU and ASTRATUM are also discussed in Volume I, chapter 3. Volume I, chapter 3 also contains information about calculating approximate sampling errors without using replication or Taylor-series procedures; the approach for calculating approximate sampling errors does not require specialized software for complex survey data analysis.

6.1.7 Imputation Flag Variables

Item nonresponse occurred when some, but not all, of the responses were missing from an otherwise cooperating respondent. To help users of the NHES:2005 data, the missing data were imputed, that is, obtained from a donor case using statistical procedures. For each variable on the AE public-use file with imputed data, an imputation flag variable was created. This flag can be used to identify imputed values. If there is no imputation flag, then no imputation was performed on that variable. In Volume I, section 3.7, the meaning of values assigned to the imputation flags is discussed.

The naming convention for the imputation flag variables is to drop the last letter of the variable name and replace it with an "F." For example, the imputation flag for SEX is SEF. This naming convention holds true for all AE variables except two types of cases: variables that originally end in "F" or that would be confused with other variables if the last letter were to be dropped, and variables that end in a number. In the first instance, an "F" is added to the end of the variable name after the original ending "F" and a letter prior to the original ending "F" is dropped if necessary to keep the variable name to eight characters. For example, the imputation flag for PISELF is PISEFF. In the second instance, the letter immediately preceding the number is dropped and replaced with an "F." For example, the imputation flag for AGE4 is AGF4. The imputation flags appear on the file in the same order as the variables to which they refer.

6.1.8 Numeric and Character Variables

All of the variables in the AE survey file, except MAINRSLT, CRDIPLM1, CRDIPLM2, CRDIPLM3, and CRDIPLM4 have numeric formats.

6.2 Guide to the Codebook

The codebook, shown in appendix F, contains complete descriptions of the contents of the data file. The codebook contains system variables, household membership variables, questionnaire variables, household characteristic variables, derived variables, weighting and variance estimation variables, and imputation flag variables. The codebook provides all the pertinent information for all variables in the file, including the variable name, the question wording, the position and format of the variable in the file, and the responses to the item. The unweighted frequency, unweighted percent, weighted frequency, and weighted percent are provided with each response. Figure 6-1 provides a description of each of the items appearing in a codebook entry.

6.3 Public-Use and Restricted-Use Data Files

This manual is designed to assist users of the public-use AE data file. The public-use file contains all the variables detailed above but does not contain certain variables excluded from the file for confidentiality reasons. These include the names of household members, verbatim string responses that could identify persons, and respondents' individual ZIP Codes (STFZIP). Some of these variables (e.g., verbatim strings of other-specify categories, STFZIP) that are excluded from the public-use file are included on a separate restricted-use file. Variables that appear only on the restricted-use data file are indicated with “/R” on the AE survey questionnaire in Volume I, appendix A. The restricted-use data file also contains additional ZIP Code variables from the 2000 Census of Population Summary File SF3 that were used in the creation of ZIP Code variables that appear on the public-use data file. The restricted-use data file may be obtained through a special licensing agreement with NCES. Go to the NCES website at <http://nces.ed.gov/pubsearch/licenses.asp> to learn more about getting a license.

Figure 6-1. Example of the codebook format

- (1) AA7. Were you self-employed at any time in the past 12 months?
- (2) Variable Name : IBSELFEM AA7-SELF-EMPLOYED IN THE PAST 12 MONTHS
- (3) Record Number : 1
- (4) Position : 69-70
- (5) Format : N2.0

(6) Response	(7) Codes	(8) Frequency	(9) Percent	(10) Weighted Frequency	(11) Weighted Percent
1 YES	1	1,275	14.3	31,052,674	20.4
2 NO	2	4,665	52.4	121,397,118	79.6
RESERVED CODE: -1 INAPPLICABLE	-1	2,964	33.3	59,157,215	
		8,904	100.0%	211,607,007	100.0%

- (1) Questionnaire number and question wording: This is the exact question wording as it appeared in the questionnaire.
- (2) Variable Name: This is the variable name associated with each item. It is the unique identifier present in the SAS, SPSS, or STATA data file. The variable name is followed by a short label, which is associated with each of the variables. This label also appears in the SAS, SPSS, or STATA data file. Labels contain the questionnaire item numbers. Labels that begin with the letter “D” indicate a derived variable.
- (3) Record: Record number gives the record on which the variable is located.
- (4) Position: This provides the starting and ending position of the variable in the raw data file.
- (5) Format: This provides the variable type, its width, and the number of positions after the decimal point, if necessary. A data type of “N” represents numeric variables and “C” represents character variables. In this example, IBSELFEM is a numeric variable with a length of 2 and no decimals.
- (6) Response: This column provides the response categories for the variable.
- (7) Codes: This column provides the actual numeric/character codes present in the data files.
- (8) Frequency: This column displays the unweighted frequency counts for this variable. The counts for missing values are also included for the unweighted values.
- (9) Percent: This column displays the unweighted frequency counts from the previous column as percentages. This column also contains percentages for missing values.
- (10) Weighted Frequency: This column displays the frequency counts weighted up to the population.
- (11) Weighted Percent: This column displays the percentages of frequency counts weighted up to the population. This column does not include percentages for missing values.

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7. DATA CONSIDERATIONS AND ANOMALIES

The purpose of this section is to bring to the user's attention certain data considerations and data anomalies in the Adult Education Survey of the National Household Education Surveys Program (AE-NHES:2005) data, to describe the nature of those anomalies, and, where appropriate, to identify possible ways to take them into account when analyzing the data. In most surveys, some real or apparent inconsistencies are observed. These may result from unusual circumstances, respondent interpretations of the questions, or other factors. Those listed here were identified during the editing and review of these data and represent anomalies known at the time this manual was prepared. Other anomalies may exist in the data.

7.1 Data Considerations

Data considerations are features of the data file of which users should be aware. In general, these are features of the questionnaire, survey procedures, or data file conventions that are documented here for the purpose of bringing them to the attention of analysts.

7.1.1 Truncation of Age

A very small percentage of adults are over the age of 90. Because such late age is a rare characteristic, age variables were truncated at 90 to protect respondent confidentiality. Persons whose ages were over 90 were coded as being 90 years of age. This top coding was performed for the following variables in the AE public-use data file: AAGE2004, AGE1, AGE2, AGE3, AGE4, and AGE5.

7.1.2 Non-Inclusion of Adults Due to Language Barriers

In AE-NHES:2005, interviews were conducted in English and Spanish. As a result, adults who do not speak English or Spanish could not be interviewed. Therefore, analysts should be aware of possible underreporting of participation in English as a Second Language classes as a result of this coverage limitation. About 0.44 percent of sampled adults could not be interviewed for the NHES:2005 because of language barriers.

7.1.3 Deletion of Courses by Respondents

In the AE interview, up to four work-related courses and up to two personal interest courses were sampled for the purpose of obtaining detailed course-level information. Rarely, a sampled course was marked for deletion if, for example, the respondent remembered that the course had been taken over 12 months prior. In course segments corresponding to deleted sampled courses, all variables were set to -1. However, when courses were deleted, no new courses were sampled as substitutes for the deleted

courses. Therefore, there are cases in which the count of work-related or personal interest courses (variables WRNEW and SANNEW, respectively) exceeds the number of courses with valid data (i.e., not = -1). There were 63 cases of deleted sampled courses in the work-related courses section and 33 cases in the personal interest courses section. The counter variables WRNEW (with a range of 1 to 20) and SANNEW (with a range of 1 to 19) reflect the original total numbers of courses minus the deleted courses.

For example, if a respondent reported six work-related courses, four were sampled. If the respondent deleted two courses because they occurred more than 12 months prior, there would be course variable values for two courses (the two sampled courses that were not deleted) and the value of WRNEW would be four (the six original courses minus the two deleted courses).

7.1.4 Truncation of Adults' Reported Earnings and EARNFLAG

EARNAMT (adults' earnings, AL25) was truncated at \$150,000 per year to limit the potential for disclosing the identities of adults participating in the survey. For cases in which adults' earnings were reported in units other than per year, yearly earnings were approximated assuming full-year employment, and EARNUNT (AL25) was set to 6 (per year).

7.1.5 Course Weighting Factors

WRWGT and SAWGT are course weighting factors that take into account that work-related courses and personal interest courses were subsampled for many respondents. If respondents took more than four work-related courses, four were sampled for detailed questions. If respondents took more than two personal interest courses, two were sampled. The course weighting factors account for this subsampling and are discussed further in section 6.1.6.

7.1.6 Derived Variables and Cross-Sectional Time Series Analyses

Due to the deletions of specific questions from the AE survey questionnaire, certain derived variables may not be directly comparable with similar derived variables from prior waves of data collection. For example, with the deletion of the questions pertaining to the employer providing instruction for college or university degree or certificate programs (CRPROVEM) and vocational or technical diploma, degree, or certificate programs (VOPROVEM), the derived variables ANYSUPP1, COLSUPP1, CRSUPP1, and VOCSUPP1 differ slightly from corresponding derived variables (ANYSUPP, COLSUPP, CRSUPP, AND VOCSUPP) found in prior waves of data collection such as AELL-NHES:2001. These derived variables are essentially the same across the time periods (i.e., utilize similar input variables), with the exception that the most recent period variables do not have the employer instructional provision variables for college or vocational programs. The numeral 1 was added to the NHES:2005 variable names to differentiate the derived variables between time points.

7.2 Data Anomalies

Data anomalies include responses out of the expected range and real or apparent inconsistencies in the data. The following anomalies are documented here for the purpose of bringing them to the analyst's attention.

7.2.1 Participation in Post-Master's or Post-Doctoral Certificate Programs

There were 9 respondents who reported participating in post-master's or post-doctoral certificate programs in the past 12 months, even though their highest level of education reported at AA1 (educational level) was a bachelor's degree. Another two respondents reported their highest level of educational attainment as graduate school but no degree, but also reported enrollment in a post-master's or post-doctoral certificate program. Finally, there were three respondents who reported receipt of a master's degree who also reported enrollment in a post-doctoral certificate program.

7.2.2 Discrepancies Between Reported Age Moved and Highest Level of Education Completed Before Moved

There were 14 respondents who provided inconsistent responses between the age at which they moved to the U.S. and their highest level of education completed prior to moving. For example, one respondent reported being 20 years old when he/she moved to the U.S. but reported his/her highest level of education completed before moving as a Ph.D.

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- U.S. Department of Commerce. (2002). *Census of Population and Housing, 2000: Summary File 3 [CD-ROM], Technical Documentation*. Washington, DC: Bureau of the Census.

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APPENDIX D

NHES:2005 ADULT EDUCATION CONTENTS IN POSITION ORDER

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Order	Variable name	Variable label	Format	Length	Start column	End column
1	BASPID	ADULT CASE IDENTIFICATION	N	12	1	12
2	MAINRSLT	RESULT CODE FOR EXTENDED	C	2	13	14
3	ENGLSPAN	WHETHER EXTENDED IN ENGLISH OR SPANISH	N	2	15	16
4	AAGE2004	AGE AS OF 12/31/2004	N	2	17	18
5	SEX	RESPONDENT'S SEX AT SCREENER	N	2	19	20
6	AGE1	OTHER HH MEM - #1'S AGE AT SCREENER	N	2	21	22
7	SEX1	OTHER HH MEM - #1'S SEX AT SCREENER	N	2	23	24
8	AGE2	OTHER HH MEM - #2'S AGE AT SCREENER	N	2	25	26
9	SEX2	OTHER HH MEM - #2'S SEX AT SCREENER	N	2	27	28
10	AGE3	OTHER HH MEM - #3'S AGE AT SCREENER	N	2	29	30
11	SEX3	OTHER HH MEM - #3'S SEX AT SCREENER	N	2	31	32
12	AGE4	OTHER HH MEM - #4'S AGE AT SCREENER	N	2	33	34
13	SEX4	OTHER HH MEM - #4'S SEX AT SCREENER	N	2	35	36
14	AGE5	OTHER HH MEM - #5'S AGE AT SCREENER	N	2	37	38
15	SEX5	OTHER HH MEM - #5'S SEX AT SCREENER	N	2	39	40
16	AGE6	OTHER HH MEM - #6'S AGE AT SCREENER	N	2	41	42
17	SEX6	OTHER HH MEM - #6'S SEX AT SCREENER	N	2	43	44
18	AGE7	OTHER HH MEM - #7'S AGE AT SCREENER	N	2	45	46
19	SEX7	OTHER HH MEM - #7'S SEX AT SCREENER	N	2	47	48
20	IBGRADE	AA1-HIGHEST GRADE/YEAR SCHOOL COMPLETED	N	2	49	50
21	IBGRAD1	AA1-ACTUAL GRADE 0-8 COMPLETED	N	2	51	52
22	IBGRAD2	AA1-ACTUAL GRADE 9-11 COMPLETED	N	2	53	54
23	IBVOC DIP	AA1OV-RECEIVED VOC/TECH DIPLOMA	N	2	55	56
24	IBDIPL	AA2-HAS HS DIPLOMA/GED	N	2	57	58
25	IBUSDIPL	AA2OV-RECEIVED HS DIPLOMA/GED IN U.S.	N	2	59	60
26	IBDIPLYR	AA3-HS DIPLOMA/GED IN LAST 12 MONTHS	N	2	61	62
27	IBHSREQ	AA4-COMPLETED HS REQUIREMENTS	N	2	63	64
28	IBGEDCLS	AA5-TOOK CRSE/TUTOR TO PREPARE FOR GED	N	2	65	66
29	IBWORK12	AA6-WORK AT JOB IN PAST 12 MONTHS	N	2	67	68
30	IBSELFEM	AA7-SELF-EMPLOYED IN THE PAST 12 MONTHS	N	2	69	70
31	IBOTHEMP	AA8-WORKED FOR ANOTHER EMPLOYER ALSO	N	2	71	72
32	IBEMPNUM	AA9-NUMBER EMPLOYERS IN PAST 12 MONTHS	N	2	73	74
33	IBLANG	AA10-FIRST LANGUAGE LEARNED TO SPEAK	N	2	75	76
34	IBSPEAK	AA11-LANG SPOKEN MOST AT HOME NOW	N	2	77	78
35	ESLANG	AB1-TOOK ESL CLASSES	N	2	79	80
36	ESNOW	AB2-CURRENTLY TAKING ESL CLASSES	N	2	81	82
37	ESREAS	AB3-ESL FOR WORK OR PERSONAL REASONS	N	2	83	84
38	ESCHIL	AB4A-HELP CHILDREN WITH SCHOOL WORK	N	2	85	86
39	ESUSCIT	AB4B-GET U.S. CITIZENSHIP	N	2	87	88
40	ESJOB	AB4C-GET A NEW JOB	N	2	89	90
41	ESRAISE	AB4D-GET RAISE OR PROMOTION	N	2	91	92
42	ESCOLVOC	AB4E-ATTEND COLLEGE OR VOC SCHOOL	N	2	93	94
43	ES PUBAST	AB4F-MEET REQ MNT FOR PUBLIC ASSISTANCE	N	2	95	96
44	ESFEEL	AB4G-IMPROVE WAY FEEL ABOUT SELF	N	2	97	98
45	ESLIFE	AB4H-IMPROVE DAILY TASK	N	2	99	100
46	ESPR TYP	AB5-TYPE OF INSTRUCTION PROVIDER	N	2	101	102
47	ESPROVEM	AB6-INSTRUCTION PROVIDER WAS EMPLOYER	N	2	103	104
48	ESCOLL	AB7-EARNED COLLEGE CREDIT	N	2	105	106
49	ESFMLIT	AB8-ESL CLASSES PART FAM LITERACY PRGM	N	2	107	108
50	ESHRYR	AB9-TOTAL HRS ATTEND ESL CLASSES	N	7.2	109	115
51	ESTUITON	AB12A-PERSONAL EXPENSES FOR TUITION/FEES	N	4	116	119
52	ESMATLS	AB12B-PERSONAL EXPENSES FOR BOOKS/MTLS	N	4	120	123
53	ESINCBK	AB13-TUITION & FEES INCLUDE BOOKS/MTLS	N	2	124	125

Order	Variable name	Variable label	Format	Length	Start column	End column
54	ESWORK	AB14-WORK WHILE TAKING ESL CLASSES	N	2	126	127
55	ESEMPREQ	AB15-EMPLOYER REQUIRED TO TAKE ESL	N	2	128	129
56	ESEMPUG	AB16-EMPLOYER SUGGESTED TO TAKE ESL	N	2	130	131
57	ESWRKPL	AB17-TOOK ESL CLASSES AT WORKPLACE	N	2	132	133
58	ESWRKHR	AB18-TOOK ESL CLASSES DURING WORK HRS	N	2	134	135
59	ESEMPAID	AB19-BEING PAID WHILE TAKING ESL CLASSES	N	2	136	137
60	ESEMPUI	AB20A-EMPLOYER PAID TUITION/FEEES	N	2	138	139
61	ESEMPMAT	AB20B-EMPLOYER PAID BOOKS/MTLS	N	2	140	141
62	ESEVER	AB21-EVER TAKEN ESL CLASSES	N	2	142	143
63	READENGL	AB22-HOW WELL READS ENGLISH	N	2	144	145
64	WRITENGL	AB23-HOW WELL WRITES ENGLISH	N	2	146	147
65	BSIMPROV	AC1A-BASIC SKILLS CLASSES	N	2	148	149
66	BSGED	AC1B-GED PREPARATION CLASSES	N	2	150	151
67	BSHSEQUV	AC1C-OTHER HS EQUIVALENCY PROGRAM	N	2	152	153
68	BSNOW	AC2-CURRENTLY TAKING ABE/GED CLASSES	N	2	154	155
69	BSREAS	AC3-ABE/GED FOR WORK OR PERSONAL REASONS	N	2	156	157
70	BSCHIL	AC4A-HELP CHILDREN WITH SCHOOL WORK	N	2	158	159
71	BSJOB	AC4B-GET A NEW JOB	N	2	160	161
72	BSRAISE	AC4C-GET RAISE OR PROMOTION	N	2	162	163
73	BSCOLVOC	AC4D-ATTEND COLLEGE OR VOC SCHOOL	N	2	164	165
74	BSPUBAST	AC4E-MEET REQmnt FOR PUBLIC ASSISTANCE	N	2	166	167
75	BSFEEL	AC4F-IMPROVE WAY FEEL ABOUT SELF	N	2	168	169
76	BSLIFE	AC4G-IMPROVE DAILY TASK	N	2	170	171
77	BSPRYP	AC5-TYPE OF INSTRUCTION PROVIDER	N	2	172	173
78	BSPROVEM	AC6-INSTRUCTION PROVIDER WAS EMPLOYER	N	2	174	175
79	BSFMLIT	AC7-ABE/GED PART OF FAM LITERACY PRGM	N	2	176	177
80	BSHRYR	AC8-TOTAL HRS ATTENDED ABE/GED	N	7.2	178	184
81	BSTUITON	AC11A-PERSONAL EXPENSES FOR TUITION/FEEES	N	4	185	188
82	BSMATLS	AC11B-PERSONAL EXPENSES FOR BOOKS/MTLS	N	4	189	192
83	BSINCBK	AC12-TUITION/FEEES INCLUDE BOOKS/MTLS	N	2	193	194
84	BSWORK	AC13-WORK WHILE TAKING ABE/GED	N	2	195	196
85	BSEMPREQ	AC14-EMPLOYER REQUIRED TO TAKE ABE/GED	N	2	197	198
86	BSEMPUG	AC15-EMPLOYER SUGGESTED TO TAKE ABE/GED	N	2	199	200
87	BSWRKPL	AC16-TOOK ABE/GED AT WORKPLACE	N	2	201	202
88	BSWRKHR	AC17-TOOK ABE/GED DURING REG WORK HR	N	2	203	204
89	BSEMPAID	AC18-PAID WHILE TAKING ABE/GED	N	2	205	206
90	BSEMPUI	AC19A-EMPLOYER PAID TUITION/FEEES	N	2	207	208
91	BSEMPMAT	AC19B-EMPLOYER PAID BOOKS/MTLS	N	2	209	210
92	BSEVER	AC20-EVER TAKEN ABE/GED CLASSES	N	2	211	212
93	CRDEGREE	AD1-COL OR UNIV DEGREE PROGRAM	N	2	213	214
94	CRTYASC	AD2-TYPE OF PRGM-ASSOCIATE'S DEGREE	N	2	215	216
95	CRTYBCH	AD2-TYPE OF PRGM-BACHELOR'S DEGREE	N	2	217	218
96	CRTYMAS	AD2-TYPE OF PRGM-MASTER'S DEGREE	N	2	219	220
97	CRTYDOC	AD2-TYPE OF PRGM-DOCTORATE	N	2	221	222
98	CRTYPRF	AD2-TYPE OF PRGM-PROFESSIONAL DEGREE	N	2	223	224
99	CRTYOTH	AD2-TYPE OF PRGM-ANOTHER DEGREE	N	2	225	226
100	CRPOSTDG	AD3-ENROLLED IN POST-DEGREE PROGRAM	N	2	227	228
101	CRPOSBAC	AD4-POST-BACCALAUREATE CERTIFICATE	N	2	229	230
102	CRPOSMAS	AD4-POST-MASTER'S CERTIFICATE	N	2	231	232
103	CRPOSDOC	AD4-POST-DOCTORAL CERTIFICATE	N	2	233	234
104	CRDIPLM1	TYPE OF COL/UNIV DEGREE PRGM AT AD2-1	C	2	235	236

Order	Variable name	Variable label	Format	Length	Start column	End column
105	CRCIPF1	MAJOR FIELD OF STUDY-1	N	2	237	238
106	CRREAS1	AD6-PRGM FOR WORK OR PERS REASONS-1	N	2	239	240
107	CRCERT1	AD7-GET/KEEP CERTIFICATE/LICENSE-1	N	2	241	242
108	CRSTRM1	AD8-CRED START MONTH-1	N	2	243	244
109	CRSTRTY1	AD8-CRED START YEAR-1	N	4	245	248
110	CRCOMP1	AD9-CRED COMPLETION MONTH-1	N	2	249	250
111	CRCOMPY1	AD9-CRED COMPLETION YEAR-1	N	4	251	254
112	CRINST1	AD10-PROGRAM TAKEN 2/4 YEAR COLLEGE -1	N	2	255	256
113	CRPTFT1	AD11-ENROLL PART-TIME/FULL-TIME/BOTH-1	N	2	257	258
114	CRENRNU1	AD12-HOW LONG ENROLLED IN PRGM-1	N	2	259	260
115	CRENRUN1	AD12-UNIT ENROLLED IN PRGM-1	N	2	261	262
116	CRCRDHR1	AD13-TOTAL CREDIT HRS ENROLLED-1	N	2	263	264
117	CRCLSHR1	AD14-TOTAL CLASSROOM HRS-1	N	3	265	267
118	CRTUITO1	AD15A-PERSONAL EXPENSE FOR TUIT/FEES-1	N	5	268	272
119	CRMATLS1	AD15B-PERSONAL EXPENSE FOR BKS/MTLS-1	N	5	273	277
120	CRINCBK1	AD16-TUITION/FEES INCLUDE BOOKS/MTLS-1	N	2	278	279
121	CRWORK1	AD17-WORK WHILE TAKING PRGM-1	N	2	280	281
122	CREMPRE1	AD18-EMPLOYER REQUIRED TO TAKE PRGM-1	N	2	282	283
123	CREMP1	AD19-EMPLOYER SUGGESTED TO TAKE PRGM-1	N	2	284	285
124	CRWRKPL1	AD20-TOOK PRGM AT WORKPLACE-1	N	2	286	287
125	CRWRKHR1	AD21-TOOK PRGM DURING WORK HRS-1	N	2	288	289
126	CREMPAI1	AD22-BEING PAID WHILE TAKING PRGM-1	N	2	290	291
127	CREMPTU1	AD23A-EMPLOYER PAID TUITION/FEES-1	N	2	292	293
128	CREMPMA1	AD23B-EMPLOYER PAID BOOKS/MTLS-1	N	2	294	295
129	CRDIPLM2	TYPE OF COL/UNIV DEGREE PRGM AT AD2-2	C	2	296	297
130	CRCIPF2	MAJOR FIELD OF STUDY-2	N	2	298	299
131	CRREAS2	AD6-PRGM FOR WORK OR PERS REASONS-2	N	2	300	301
132	CRCERT2	AD7-GET/KEEP CERTIFICATE/LICENSE-2	N	2	302	303
133	CRSTRM2	AD8-CRED START MONTH-2	N	2	304	305
134	CRSTRTY2	AD8-CRED START YEAR-2	N	4	306	309
135	CRCOMP2	AD9-CRED COMPLETION MONTH-2	N	2	310	311
136	CRCOMPY2	AD9-CRED COMPLETION YEAR-2	N	4	312	315
137	CRINST2	AD10-PROGRAM TAKEN 2/4 YEAR COLLEGE -2	N	2	316	317
138	CRPTFT2	AD11-ENROLL PART-TIME/FULL-TIME/BOTH-2	N	2	318	319
139	CRENRNU2	AD12-HOW LONG ENROLLED IN PRGM-2	N	2	320	321
140	CRENRUN2	AD12-UNIT ENROLLED IN PRGM-2	N	2	322	323
141	CRCRDHR2	AD13-TOTAL CREDIT HRS ENROLLED-2	N	2	324	325
142	CRCLSHR2	AD14-TOTAL CLASSROOM HRS-2	N	3	326	328
143	CRTUITO2	AD15A-PERSONAL EXPENSE FOR TUIT/FEES-2	N	5	329	333
144	CRMATLS2	AD15B-PERSONAL EXPENSE FOR BKS/MTLS-2	N	5	334	338
145	CRINCBK2	AD16-TUITION/FEES INCLUDE BOOKS/MTLS-2	N	2	339	340
146	CRWORK2	AD17-WORK WHILE TAKING PRGM-2	N	2	341	342
147	CREMPRE2	AD18-EMPLOYER REQUIRED TO TAKE PRGM-2	N	2	343	344
148	CREMP2	AD19-EMPLOYER SUGGESTED TO TAKE PRGM-2	N	2	345	346
149	CRWRKPL2	AD20-TOOK PRGM AT WORKPLACE-2	N	2	347	348
150	CRWRKHR2	AD21-TOOK PRGM DURING WORK HRS-2	N	2	349	350
151	CREMPAI2	AD22-BEING PAID WHILE TAKING PRGM-2	N	2	351	352
152	CREMPTU2	AD23A-EMPLOYER PAID TUITION/FEES-2	N	2	353	354
153	CREMPMA2	AD23B-EMPLOYER PAID BOOKS/MTLS-2	N	2	355	356
154	CRDIPLM3	TYPE OF COL/UNIV DEGREE PRGM AT AD2-3	C	2	357	358
155	CRCIPF3	MAJOR FIELD OF STUDY-3	N	2	359	360
156	CRREAS3	AD6-PRGM FOR WORK OR PERS REASONS-3	N	2	361	362

Order	Variable name	Variable label	Format	Length	Start column	End column
157	CRCERT3	AD7-GET/KEEP CERTIFICATE/LICENSE-3	N	2	363	364
158	CRSTRM3	AD8-CRED START MONTH-3	N	2	365	366
159	CRSTRY3	AD8-CRED START YEAR-3	N	4	367	370
160	CRCOMP3	AD9-CRED COMPLETION MONTH-3	N	2	371	372
161	CRCOMPY3	AD9-CRED COMPLETION YEAR-3	N	4	373	376
162	CRINST3	AD10-PROGRAM TAKEN 2/4 YEAR COLLEGE -3	N	2	377	378
163	CRPTFT3	AD11-ENROLL PART-TIME/FULL-TIME/BOTH-3	N	2	379	380
164	CRENRNU3	AD12-HOW LONG ENROLLED IN PRGM-3	N	2	381	382
165	CRENRUN3	AD12-UNIT ENROLLED IN PRGM-3	N	2	383	384
166	CRCRDHR3	AD13-TOTAL CREDIT HRS ENROLLED-3	N	2	385	386
167	CRCLSHR3	AD14-TOTAL CLASSROOM HRS-3	N	3	387	389
168	CRTUITO3	AD15A-PERSONAL EXPENSE FOR TUIT/FEES-3	N	5	390	394
169	CRMATLS3	AD15B-PERSONAL EXPENSE FOR BKS/MTLS-3	N	5	395	399
170	CRINCBK3	AD16-TUITION/FEES INCLUDE BOOKS/MTLS-3	N	2	400	401
171	CRWORK3	AD17-WORK WHILE TAKING PRGM-3	N	2	402	403
172	CREMPRE3	AD18-EMPLOYER REQUIRED TO TAKE PRGM-3	N	2	404	405
173	CREMP3U3	AD19-EMPLOYER SUGGESTED TO TAKE PRGM-3	N	2	406	407
174	CRWRKPL3	AD20-TOOK PRGM AT WORKPLACE-3	N	2	408	409
175	CRWRKHR3	AD21-TOOK PRGM DURING WORK HRS-3	N	2	410	411
176	CREMPAI3	AD22-BEING PAID WHILE TAKING PRGM-3	N	2	412	413
177	CREMPTU3	AD23A-EMPLOYER PAID TUITION/FEES-3	N	2	414	415
178	CREMPMA3	AD23B-EMPLOYER PAID BOOKS/MTLS-3	N	2	416	417
179	CRDIPLM4	TYPE OF COL/UNIV DEGREE PRGM AT AD2-4	C	2	418	419
180	CRCIPF4	MAJOR FIELD OF STUDY-4	N	2	420	421
181	CRREAS4	AD6-PRGM FOR WORK OR PERS REASONS-4	N	2	422	423
182	CRCERT4	AD7-GET/KEEP CERTIFICATE/LICENSE-4	N	2	424	425
183	CRSTRM4	AD8-CRED START MONTH-4	N	2	426	427
184	CRSTRY4	AD8-CRED START YEAR-4	N	4	428	431
185	CRCOMP4	AD9-CRED COMPLETION MONTH-4	N	2	432	433
186	CRCOMPY4	AD9-CRED COMPLETION YEAR-4	N	4	434	437
187	CRINST4	AD10-PROGRAM TAKEN 2/4 YEAR COLLEGE -4	N	2	438	439
188	CRPTFT4	AD11-ENROLL PART-TIME/FULL-TIME/BOTH-4	N	2	440	441
189	CRENRNU4	AD12-HOW LONG ENROLLED IN PRGM-4	N	2	442	443
190	CRENRUN4	AD12-UNIT ENROLLED IN PRGM-4	N	2	444	445
191	CRCRDHR4	AD13-TOTAL CREDIT HRS ENROLLED-4	N	2	446	447
192	CRCLSHR4	AD14-TOTAL CLASSROOM HRS-4	N	3	448	450
193	CRTUITO4	AD15A-PERSONAL EXPENSE FOR TUIT/FEES-4	N	5	451	455
194	CRMATLS4	AD15B-PERSONAL EXPENSE FOR BKS/MTLS-4	N	5	456	460
195	CRINCBK4	AD16-TUITION/FEES INCLUDE BOOKS/MTLS-4	N	2	461	462
196	CRWORK4	AD17-WORK WHILE TAKING PRGM-4	N	2	463	464
197	CREMPRE4	AD18-EMPLOYER REQUIRED TO TAKE PRGM-4	N	2	465	466
198	CREMP3U4	AD19-EMPLOYER SUGGESTED TO TAKE PRGM-4	N	2	467	468
199	CRWRKPL4	AD20-TOOK PRGM AT WORKPLACE-4	N	2	469	470
200	CRWRKHR4	AD21-TOOK PRGM DURING WORK HRS-4	N	2	471	472
201	CREMPAI4	AD22-BEING PAID WHILE TAKING PRGM-4	N	2	473	474
202	CREMPTU4	AD23A-EMPLOYER PAID TUITION/FEES-4	N	2	475	476
203	CREMPMA4	AD23B-EMPLOYER PAID BOOKS/MTLS-4	N	2	477	478
204	CRVOC DIP	AE1-VOCATIONAL OR TECHNICAL DIPL PRGM	N	2	479	480
205	VOVOC	AE2-TYPE OF PRGM-VOCATIONAL DIPLOMA	N	2	481	482
206	VOTECH	AE2-TYPE OF PRGM-TECHNICAL DIPLOMA	N	2	483	484
207	VOASSOC	AE2-TYPE OF PRGM-ASSOCIATE'S DEGREE	N	2	485	486
208	VOOTH DIP	AE2-TYPE OF PRGM-ANOTHER DIPLOMA	N	2	487	488

Order	Variable name	Variable label	Format	Length	Start column	End column
209	VODIPLM1	TYPE OF VOC/TECH DIPLOMA PRGM AT AE2-1	N	2	489	490
210	VOCIPF1	MAJOR FIELD OF STUDY-1	N	2	491	492
211	VOREAS1	AE4-PRGM FOR WORK OR PERS REASONS-1	N	2	493	494
212	VOCERT1	AE5-GET/KEEP CERTIFICATE/LICENSE-1	N	2	495	496
213	VOSTRTM1	AE6-VOCA START MONTH-1	N	2	497	498
214	VOSTRTY1	AE6-VOCA START YEAR-1	N	4	499	502
215	VOCOMPM1	AE7-VOCA COMPLETION MONTH-1	N	2	503	504
216	VOCOMPY1	AE7-VOCA COMPLETION YEAR-1	N	4	505	508
217	VOPTFT1	AE8-ENROLL PART-TIME/FULL-TIME/BOTH-1	N	2	509	510
218	VOENRNU1	AE9-HOW LONG ENROLLED IN PRGM-1	N	2	511	512
219	VOENRUN1	AE9-UNIT ENROLLED IN PRGM-1	N	2	513	514
220	VOCRSNU1	AE10-NUMBER OF COURSES TOOK IN PRGM-1	N	2	515	516
221	VOCRDHR1	AE11-TOTAL CREDIT HRS ENROLLED-1	N	2	517	518
222	VOCLSHR1	AE12-TOTAL CLASSROOM HRS-1	N	3	519	521
223	VOTUITO1	AE13A-PERSONAL EXPENSE FOR TUIT/FEES-1	N	5	522	526
224	VOMATLS1	AE13B-PERSONAL EXPENSE FOR BKS/MTLS-1	N	5	527	531
225	VOINCBK1	AE14-TUITION/FEES INCLUDE BOOKS/MTLS-1	N	2	532	533
226	VOWORK1	AE15-WORK WHILE TAKING PRGM-1	N	2	534	535
227	VOEMPRE1	AE16-EMPLOYER REQUIRED TO TAKE PRGM-1	N	2	536	537
228	VOEMPSU1	AE17-EMPLOYER SUGGESTED TO TAKE PRGM-1	N	2	538	539
229	VOWRKPL1	AE18-TOOK PRGM AT WORKPLACE-1	N	2	540	541
230	VOWRKHR1	AE19-TOOK PRGM DURING WORK HRS-1	N	2	542	543
231	VOEMPA1	AE20-BEING PAID WHILE TAKING PRGM-1	N	2	544	545
232	VOEMPTU1	AE21A-EMPLOYER PAID TUITION/FEES-1	N	2	546	547
233	VOEMPMA1	AE21B-EMPLOYER PAID BOOKS/MTLS-1	N	2	548	549
234	VODIPLM2	TYPE OF VOC/TECH DIPLOMA PRGM AT AE2-2	N	2	550	551
235	VOCIPF2	MAJOR FIELD OF STUDY-2	N	2	552	553
236	VOREAS2	AE4-PRGM FOR WORK OR PERS REASONS-2	N	2	554	555
237	VOCERT2	AE5-GET/KEEP CERTIFICATE/LICENSE-2	N	2	556	557
238	VOSTRTM2	AE6-VOCA START MONTH-2	N	2	558	559
239	VOSTRTY2	AE6-VOCA START YEAR-2	N	4	560	563
240	VOCOMPM2	AE7-VOCA COMPLETION MONTH-2	N	2	564	565
241	VOCOMPY2	AE7-VOCA COMPLETION YEAR-2	N	4	566	569
242	VOPTFT2	AE8-ENROLL PART-TIME/FULL-TIME/BOTH-2	N	2	570	571
243	VOENRNU2	AE9-HOW LONG ENROLLED IN PRGM-2	N	2	572	573
244	VOENRUN2	AE9-UNIT ENROLLED IN PRGM-2	N	2	574	575
245	VOCRSNU2	AE10-NUMBER OF COURSES TOOK IN PRGM-2	N	2	576	577
246	VOCRDHR2	AE11-TOTAL CREDIT HRS ENROLLED-2	N	2	578	579
247	VOCLSHR2	AE12-TOTAL CLASSROOM HRS-2	N	3	580	582
248	VOTUITO2	AE13A-PERSONAL EXPENSE FOR TUIT/FEES-2	N	5	583	587
249	VOMATLS2	AE13B-PERSONAL EXPENSE FOR BKS/MTLS-2	N	5	588	592
250	VOINCBK2	AE14-TUITION/FEES INCLUDE BOOKS/MTLS-2	N	2	593	594
251	VOWORK2	AE15-WORK WHILE TAKING PRGM-2	N	2	595	596
252	VOEMPRE2	AE16-EMPLOYER REQUIRED TO TAKE PRGM-2	N	2	597	598
253	VOEMPSU2	AE17-EMPLOYER SUGGESTED TO TAKE PRGM-2	N	2	599	600
254	VOWRKPL2	AE18-TOOK PRGM AT WORKPLACE-2	N	2	601	602
255	VOWRKHR2	AE19-TOOK PRGM DURING WORK HRS-2	N	2	603	604
256	VOEMPA2	AE20-BEING PAID WHILE TAKING PRGM-2	N	2	605	606
257	VOEMPTU2	AE21A-EMPLOYER PAID TUITION/FEES-2	N	2	607	608
258	VOEMPMA2	AE21B-EMPLOYER PAID BOOKS/MTLS-2	N	2	609	610
259	VODIPLM3	TYPE OF VOC/TECH DIPLOMA PRGM AT AE2-3	N	2	611	612
260	VOCIPF3	MAJOR FIELD OF STUDY-3	N	2	613	614

Order	Variable name	Variable label	Format	Length	Start column	End column
261	VOREAS3	AE4-PRGM FOR WORK OR PERS REASONS-3	N	2	615	616
262	VOCERT3	AE5-GET/KEEP CERTIFICATE/LICENSE-3	N	2	617	618
263	VOSTRTM3	AE6-VOCA START MONTH-3	N	2	619	620
264	VOSTRTY3	AE6-VOCA START YEAR-3	N	4	621	624
265	VOCOMPM3	AE7-VOCA COMPLETION MONTH-3	N	2	625	626
266	VOCOMPY3	AE7-VOCA COMPLETION YEAR-3	N	4	627	630
267	VOPTFT3	AE8-ENROLL PART-TIME/FULL-TIME/BOTH-3	N	2	631	632
268	VOENRNU3	AE9-HOW LONG ENROLLED IN PRGM-3	N	2	633	634
269	VOENRUN3	AE9-UNIT ENROLLED IN PRGM-3	N	2	635	636
270	VOCRSNU3	AE10-NUMBER OF COURSES TOOK IN PRGM-3	N	2	637	638
271	VOCRDHR3	AE11-TOTAL CREDIT HRS ENROLLED-3	N	2	639	640
272	VOCLSHR3	AE12-TOTAL CLASSROOM HRS-3	N	3	641	643
273	VOTUITO3	AE13A-PERSONAL EXPENSE FOR TUIT/FEES-3	N	5	644	648
274	VOMATLS3	AE13B-PERSONAL EXPENSE FOR BKS/MTLS-3	N	5	649	653
275	VOINCBK3	AE14-TUITION/FEES INCLUDE BOOKS/MTLS-3	N	2	654	655
276	VOWORK3	AE15-WORK WHILE TAKING PRGM-3	N	2	656	657
277	VOEMPRES3	AE16-EMPLOYER REQUIRED TO TAKE PRGM-3	N	2	658	659
278	VOEMPSU3	AE17-EMPLOYER SUGGESTED TO TAKE PRGM-3	N	2	660	661
279	VOWRKPL3	AE18-TOOK PRGM AT WORKPLACE-3	N	2	662	663
280	VOWRKHR3	AE19-TOOK PRGM DURING WORK HRS-3	N	2	664	665
281	VOEMPAI3	AE20-BEING PAID WHILE TAKING PRGM-3	N	2	666	667
282	VOEMPTU3	AE21A-EMPLOYER PAID TUITION/FEES-3	N	2	668	669
283	VOEMPMA3	AE21B-EMPLOYER PAID BOOKS/MTLS-3	N	2	670	671
284	APPRENTI	AF1-APPRENTICESHIP PROGRAM	N	2	672	673
285	APEMPLOY	AF3A-EMPLOYER PROVIDED	N	2	674	675
286	APUNION	AF3B-LABOR UNION PROVIDED	N	2	676	677
287	APSTAGOV	AF3C-LOCAL OR STATE GOV PROVIDED	N	2	678	679
288	APFEDGOV	AF3D-FED GOVERNMENT PROVIDED	N	2	680	681
289	APOTHER	AF3E-SOMEONE ELSE PROVIDED	N	2	682	683
290	APSTRTMM	AF4-APPR PRGM START MONTH	N	2	684	685
291	APSTRTY	AF4-APPR PRGM START YEAR	N	4	686	689
292	APCOMPMM	AF5-APPR PRGM COMPLETION MONTH	N	2	690	691
293	APCOMPYY	AF5-APPR PRGM COMPLETION YEAR	N	4	692	695
294	APCLSHR	AF6-TOTAL CLASSROOM INST HRS	N	3	696	698
295	APCOLCR	AF7-EARNED COLLEGE CREDIT	N	2	699	700
296	APTUITON	AF8A-PERSONAL EXPENSE FOR TUITION/FEES	N	5	701	705
297	APMATLS	AF8B-PERSONAL EXPENSE FOR BOOKS/MTLS	N	5	706	710
298	APINCBK	AF9-TUITION/FEES INCLUDE BOOKS/MTLS	N	2	711	712
299	FCACTY	AG1-TOOK ANY COURSES	N	2	713	714
300	FCACTOTH	AG2-TOOK ANY OTHER COURSES	N	2	715	716
301	WRCRS1	WORK-RELATED COURSE CODE-1	N	3	717	719
302	WRCLSHR1	AG5-WORK-RELATED COURSE TOTAL HRS/YR-1	N	3	720	722
303	WRCURR1	AH1-CURRENTLY TAKING COURSE-1	N	2	723	724
304	WRRSSKI1	AH2A-MAINT OR IMPROVE SKILLS/KNWLDG-1	N	2	725	726
305	WRNWSKI1	AH2B-LEARN NEW SKILLS OR METHODS-1	N	2	727	728
306	WRRSRAI1	AH2C-GET A RAISE OR PROMOTION-1	N	2	729	730
307	WRRSNEW1	AH2D-GET A NEW JOB-1	N	2	731	732
308	WRRSCER1	AH2E-GET/KEEP CERTIFICATE/LICENSE-1	N	2	733	734
309	WRRSREQ1	AH2F-BECAUSE IT WAS REQUIRED-1	N	2	735	736
310	WRPRTYP1	AH3-TYPE OF INSTRUCTION PROVIDER-1	N	2	737	738
311	WRPROVE1	AH4-INSTRUCTION PROVIDER WAS EMPLOYER-1	N	2	739	740
312	WRCRED1	AH5-EARNED COLLEGE CREDIT-1	N	2	741	742

Order	Variable name	Variable label	Format	Length	Start column	End column
313	WRCEU1	AH6-EARNED CEU-1	N	2	743	744
314	WRJOBK1	AH7-HOW USEFUL SKILLS IN JOB-1	N	2	745	746
315	WRTUITO1	AH8A-PERSONAL EXPENSE FOR TUIT/FEES-1	N	5	747	751
316	WRMATLS1	AH8B-PERSONAL EXPENSES FOR BKS/MTLS-1	N	5	752	756
317	WRINCBK1	AH9-TUITION/FEES INCLUDE BOOKS/MTLS-1	N	2	757	758
318	WRWORK1	AH10-WORK WHILE TAKING COURSE-1	N	2	759	760
319	WREMPRE1	AH11-EMPLOYER REQUIRED TO TAKE CRSE-1	N	2	761	762
320	WREMPSU1	AH12-EMPLOYER SUGGESTED TO TAKE CRSE-1	N	2	763	764
321	WRWRKPL1	AH13-TOOK COURSE AT WORKPLACE-1	N	2	765	766
322	WRWRKHR1	AH14-TOOK COURSE DURING WORK HRS-1	N	2	767	768
323	WREMPA1	AH15-BEING PAID WHILE TAKING COURSE-1	N	2	769	770
324	WREMPU1	AH16A-EMPLOYER PAID TUITION/FEES-1	N	2	771	772
325	WREMPMA1	AH16B-EMPLOYER PAID BOOKS/MTLS-1	N	2	773	774
326	WRCRS2	WORK-RELATED COURSE CODE-2	N	3	775	777
327	WRCLSHR2	AG5-WORK-RELATED COURSE TOTAL HRS/YR-2	N	3	778	780
328	WRCURR2	AH1-CURRENTLY TAKING COURSE-2	N	2	781	782
329	WRRSSKI2	AH2A-MAINT OR IMPROVE SKILLS/KNWLDG-2	N	2	783	784
330	WRNWSKI2	AH2B-LEARN NEW SKILLS OR METHODS-2	N	2	785	786
331	WRRSRAI2	AH2C-GET A RAISE OR PROMOTION-2	N	2	787	788
332	WRRSNEW2	AH2D-GET A NEW JOB-2	N	2	789	790
333	WRRSCER2	AH2E-GET/KEEP CERTIFICATE/LICENSE-2	N	2	791	792
334	WRRSREQ2	AH2F-BECAUSE IT WAS REQUIRED-2	N	2	793	794
335	WRPRTYP2	AH3-TYPE OF INSTRUCTION PROVIDER-2	N	2	795	796
336	WRPROVE2	AH4-INSTRUCTION PROVIDER WAS EMPLOYER-2	N	2	797	798
337	WRCRED2	AH5-EARNED COLLEGE CREDIT-2	N	2	799	800
338	WRCEU2	AH6-EARNED CEU-2	N	2	801	802
339	WRJOBK2	AH7-HOW USEFUL SKILLS IN JOB-2	N	2	803	804
340	WRTUITO2	AH8A-PERSONAL EXPENSE FOR TUIT/FEES-2	N	5	805	809
341	WRMATLS2	AH8B-PERSONAL EXPENSES FOR BKS/MTLS-2	N	5	810	814
342	WRINCBK2	AH9-TUITION/FEES INCLUDE BOOKS/MTLS-2	N	2	815	816
343	WRWORK2	AH10-WORK WHILE TAKING COURSE-2	N	2	817	818
344	WREMPRE2	AH11-EMPLOYER REQUIRED TO TAKE CRSE-2	N	2	819	820
345	WREMPSU2	AH12-EMPLOYER SUGGESTED TO TAKE CRSE-2	N	2	821	822
346	WRWRKPL2	AH13-TOOK COURSE AT WORKPLACE-2	N	2	823	824
347	WRWRKHR2	AH14-TOOK COURSE DURING WORK HRS-2	N	2	825	826
348	WREMPA2	AH15-BEING PAID WHILE TAKING COURSE-2	N	2	827	828
349	WREMPU2	AH16A-EMPLOYER PAID TUITION/FEES-2	N	2	829	830
350	WREMPMA2	AH16B-EMPLOYER PAID BOOKS/MTLS-2	N	2	831	832
351	WRCRS3	WORK-RELATED COURSE CODE-3	N	3	833	835
352	WRCLSHR3	AG5-WORK-RELATED COURSE TOTAL HRS/YR-3	N	3	836	838
353	WRCURR3	AH1-CURRENTLY TAKING COURSE-3	N	2	839	840
354	WRRSSKI3	AH2A-MAINT OR IMPROVE SKILLS/KNWLDG-3	N	2	841	842
355	WRNWSKI3	AH2B-LEARN NEW SKILLS OR METHODS-3	N	2	843	844
356	WRRSRAI3	AH2C-GET A RAISE OR PROMOTION-3	N	2	845	846
357	WRRSNEW3	AH2D-GET A NEW JOB-3	N	2	847	848
358	WRRSCER3	AH2E-GET/KEEP CERTIFICATE/LICENSE-3	N	2	849	850
359	WRRSREQ3	AH2F-BECAUSE IT WAS REQUIRED-3	N	2	851	852
360	WRPRTYP3	AH3-TYPE OF INSTRUCTION PROVIDER-3	N	2	853	854
361	WRPROVE3	AH4-INSTRUCTION PROVIDER WAS EMPLOYER-3	N	2	855	856
362	WRCRED3	AH5-EARNED COLLEGE CREDIT-3	N	2	857	858
363	WRCEU3	AH6-EARNED CEU-3	N	2	859	860
364	WRJOBK3	AH7-HOW USEFUL SKILLS IN JOB-3	N	2	861	862

Order	Variable name	Variable label	Format	Length	Start column	End column
365	WRTUITO3	AH8A-PERSONAL EXPENSE FOR TUIT/FEES-3	N	5	863	867
366	WRMATLS3	AH8B-PERSONAL EXPENSES FOR BKS/MTLS-3	N	5	868	872
367	WRINCBK3	AH9-TUITION/FEES INCLUDE BOOKS/MTLS-3	N	2	873	874
368	WRWORK3	AH10-WORK WHILE TAKING COURSE-3	N	2	875	876
369	WREMPRE3	AH11-EMPLOYER REQUIRED TO TAKE CRSE-3	N	2	877	878
370	WREMPSU3	AH12-EMPLOYER SUGGESTED TO TAKE CRSE-3	N	2	879	880
371	WRWRKPL3	AH13-TOOK COURSE AT WORKPLACE-3	N	2	881	882
372	WRWRKHR3	AH14-TOOK COURSE DURING WORK HRS-3	N	2	883	884
373	WREMPA3	AH15-BEING PAID WHILE TAKING COURSE-3	N	2	885	886
374	WREMPU3	AH16A-EMPLOYER PAID TUITION/FEES-3	N	2	887	888
375	WREMPMA3	AH16B-EMPLOYER PAID BOOKS/MTLS-3	N	2	889	890
376	WRCRS4	WORK-RELATED COURSE CODE-4	N	3	891	893
377	WRCLSHR4	AG5-WORK-RELATED COURSE TOTAL HRS/YR-4	N	3	894	896
378	WRCURR4	AH1-CURRENTLY TAKING COURSE-4	N	2	897	898
379	WRRSSK4	AH2A-MAINT OR IMPROVE SKILLS/KNWLDG-4	N	2	899	900
380	WRNWSK4	AH2B-LEARN NEW SKILLS OR METHODS-4	N	2	901	902
381	WRRSRA4	AH2C-GET A RAISE OR PROMOTION-4	N	2	903	904
382	WRRSNEW4	AH2D-GET A NEW JOB-4	N	2	905	906
383	WRRSCER4	AH2E-GET/KEEP CERTIFICATE/LICENSE-4	N	2	907	908
384	WRRSREQ4	AH2F-BECAUSE IT WAS REQUIRED-4	N	2	909	910
385	WRPRTYP4	AH3-TYPE OF INSTRUCTION PROVIDER-4	N	2	911	912
386	WRPROVE4	AH4-INSTRUCTION PROVIDER WAS EMPLOYER-4	N	2	913	914
387	WRCRED4	AH5-EARNED COLLEGE CREDIT-4	N	2	915	916
388	WRCEU4	AH6-EARNED CEU-4	N	2	917	918
389	WRJOBK4	AH7-HOW USEFUL SKILLS IN JOB-4	N	2	919	920
390	WRTUITO4	AH8A-PERSONAL EXPENSE FOR TUIT/FEES-4	N	5	921	925
391	WRMATLS4	AH8B-PERSONAL EXPENSES FOR BKS/MTLS-4	N	5	926	930
392	WRINCBK4	AH9-TUITION/FEES INCLUDE BOOKS/MTLS-4	N	2	931	932
393	WRWORK4	AH10-WORK WHILE TAKING COURSE-4	N	2	933	934
394	WREMPRE4	AH11-EMPLOYER REQUIRED TO TAKE CRSE-4	N	2	935	936
395	WREMPSU4	AH12-EMPLOYER SUGGESTED TO TAKE CRSE-4	N	2	937	938
396	WRWRKPL4	AH13-TOOK COURSE AT WORKPLACE-4	N	2	939	940
397	WRWRKHR4	AH14-TOOK COURSE DURING WORK HRS-4	N	2	941	942
398	WREMPA4	AH15-BEING PAID WHILE TAKING COURSE-4	N	2	943	944
399	WREMPU4	AH16A-EMPLOYER PAID TUITION/FEES-4	N	2	945	946
400	WREMPMA4	AH16B-EMPLOYER PAID BOOKS/MTLS-4	N	2	947	948
401	WROREQ	AH17A-REQUIRED BY EMPLOYER	N	2	949	950
402	WROCOLL	AH17B-TAUGHT BY COLLEGE/UNIVERSITY	N	2	951	952
403	WROPAY	AH17C-EMPLOYER PAID ALL/PART OF COST	N	2	953	954
404	WROTIME	AH17D-EMPLOYER GAVE TIME OFF WITH PAY	N	2	955	956
405	WROCERT	AH17E-TO GET/KEEP CERTIFICATE/LICENSE	N	2	957	958
406	SACRS1	PERSONAL INTEREST COURSE CODE-1	N	3	959	961
407	SACLSHR1	AG5-PERSONAL INT COURSE TOTAL HRS/YR-1	N	3	962	964
408	SACURR1	A11-CURRENTLY TAKING COURSE-1	N	2	965	966
409	SAPRTYP1	A12-TYPE OF INSTRUCTION PROVIDER-1	N	2	967	968
410	SAPROVE1	A13-INSTRUCTION PROVIDER WAS EMPLOYER-1	N	2	969	970
411	SACRED1	A14-EARNED COLLEGE CREDIT-1	N	2	971	972
412	SACEU1	A15-EARNED CEUS-1	N	2	973	974
413	SATUITO1	A16A-PERSONAL EXPENSES FOR TUIT/FEES-1	N	5	975	979
414	SAMATLS1	A16B-PERSONAL EXPENSES FOR BKS/MTLS-1	N	5	980	984
415	SAINCBK1	A17-TUITION/FEES INCLUDE BOOKS/MTLS-1	N	2	985	986
416	SAWORK1	A18-WORK WHILE TAKING COURSE-1	N	2	987	988

Order	Variable name	Variable label	Format	Length	Start column	End column
417	SAWRKPL1	AI9-TOOK COURSE AT WORKPLACE-1	N	2	989	990
418	SAWRKHR1	AI10-TOOK COURSE DURING WORK HRS-1	N	2	991	992
419	SAEMPAI1	AI11-BEING PAID WHILE TAKING COURSE-1	N	2	993	994
420	SAEMPTU1	AI12A-EMPLOYER PAID TUITION/FEES-1	N	2	995	996
421	SAEMPMA1	AI12B-EMPLOYER PAID BOOKS/MTLS-1	N	2	997	998
422	SACRS2	PERSONAL INTEREST COURSE CODE-2	N	3	999	1001
423	SACLSHR2	AG5-PERSONAL INT COURSE TOTAL HRS/YR-2	N	3	1002	1004
424	SACURR2	AI1-CURRENTLY TAKING COURSE-2	N	2	1005	1006
425	SAPRTYP2	AI2-TYPE OF INSTRUCTION PROVIDER-2	N	2	1007	1008
426	SAPROVE2	AI3-INSTRUCTION PROVIDER WAS EMPLOYER-2	N	2	1009	1010
427	SACRED2	AI4-EARNED COLLEGE CREDIT-2	N	2	1011	1012
428	SACEU2	AI5-EARNED CEUS-2	N	2	1013	1014
429	SATUITO2	AI6A-PERSONAL EXPENSES FOR TUIT/FEES-2	N	5	1015	1019
430	SAMATLS2	AI6B-PERSONAL EXPENSES FOR BKS/MTLS-2	N	5	1020	1024
431	SAINCBK2	AI7-TUITION/FEES INCLUDE BOOKS/MTLS-2	N	2	1025	1026
432	SAWORK2	AI8-WORK WHILE TAKING COURSE-2	N	2	1027	1028
433	SAWRKPL2	AI9-TOOK COURSE AT WORKPLACE-2	N	2	1029	1030
434	SAWRKHR2	AI10-TOOK COURSE DURING WORK HRS-2	N	2	1031	1032
435	SAEMPAI2	AI11-BEING PAID WHILE TAKING COURSE-2	N	2	1033	1034
436	SAEMPTU2	AI12A-EMPLOYER PAID TUITION/FEES-2	N	2	1035	1036
437	SAEMPMA2	AI12B-EMPLOYER PAID BOOKS/MTLS-2	N	2	1037	1038
438	SAOREQ	AI13A-REQUIRED BY EMPLOYER	N	2	1039	1040
439	SAOCOLL	AI13B-TAUGHT BY COLLEGE/UNIVERSITY	N	2	1041	1042
440	SAOPAY	AI13C-EMPLOYER PAID ALL/PART OF COST	N	2	1043	1044
441	SAOTIME	AI13D-EMPLOYER GAVE TIME OFF WITH PAY	N	2	1045	1046
442	DEVIDTCD	AJ1A-INSTRUC USING VID TAPE, CD, OR DVD	N	2	1047	1048
443	DETVRAD	AJ1B-INSTRUC USING TV OR RADIO	N	2	1049	1050
444	DEWWW	AJ1C-INSTRUC USING INTERNET OR WWW	N	2	1051	1052
445	DECOMP	AJ1D-INSTRUC USING COMP OR VIDEO CONF	N	2	1053	1054
446	DEMAIL	AJ1E-INSTRUC BY MAIL, E.G. CORRESP CRSE	N	2	1055	1056
447	DEPHONE	AJ1F-INSTRUC BY TELEPHONE OR VMAIL	N	2	1057	1058
448	DEOTH	AJ1G-INSTRUC USING OTHER TECHNOLOGY	N	2	1059	1060
449	DEESL	AJ2A-DIST ED FOR ESL CLASSES	N	2	1061	1062
450	DEBASIC	AJ2B-DIST ED FOR ABE/GED CLASSES	N	2	1063	1064
451	DECOLL	AJ2C-DIST ED FOR COL/UNIV DEGR PROGS	N	2	1065	1066
452	DEVOCA	AJ2D-DIST ED FOR VOC/TECH DIPL PROGS	N	2	1067	1068
453	DEAPPR	AJ2E-DIST ED FOR APPRENTICESHIP PROGS	N	2	1069	1070
454	DEWORK	AJ2F-DIST ED FOR WORK-RELATED COURSES	N	2	1071	1072
455	DEPERS	AJ2G-DIST ED FOR PERS-INTEREST COURSES	N	2	1073	1074
456	PICOMP	AK1A-LRND OWN USING COMP SOFTW TUTORIALS	N	2	1075	1076
457	PISELF	AK1B-LRND OWN USING BOOKS, AUD/VID, TV	N	2	1077	1078
458	PIMAG	AK1C-READ HOW-TO OR CONS MAGS/OTH PUBL	N	2	1079	1080
459	PICLUB	AK1D-ATTENDED BK, SPRT, HLTH CLUB/GRP	N	2	1081	1082
460	PISHOW	AK1E-ATTENDED CONV OR CONF	N	2	1083	1084
461	PIOTH	AK1F-DONE OTHER TYPE OF INFRM LRNG	N	2	1085	1086
462	ADOBMM	AL1-MONTH OF BIRTH	N	2	1087	1088
463	ADOBY	AL1-YEAR OF BIRTH	N	4	1089	1092
464	AHISPANI	AL3-HISPANIC ORIGIN	N	2	1093	1094
465	AWHITE	AL4-WHITE	N	2	1095	1096
466	ABLACK	AL4-BLACK OR AFRICAN AMERICAN	N	2	1097	1098
467	AAMIND	AL4-AMERICAN INDIAN OR ALASKAN NATIVE	N	2	1099	1100

Order	Variable name	Variable label	Format	Length	Start column	End column
468	AASIAN	AL4-ASIAN	N	2	1101	1102
469	APACI	AL4-NATIVE HAWAIIAN OR PACIFIC ISLANDER	N	2	1103	1104
470	ARACEOTH	AL4-SOME OTHER RACE	N	2	1105	1106
471	AMARSTAT	AL5-CURRENT MARITAL STATUS	N	2	1107	1108
472	ALIVWITH	AL5OV-LIVING WITH PARTNER	N	2	1109	1110
473	LRNDISB	AL6A-HAS LRNG DISAB SUCH AS ADD/ADHD	N	2	1111	1112
474	VISHEAR	AL6B-HAS A VISION OR HEARING DISAB	N	2	1113	1114
475	ADISAB05	AL7-LONG TERM PROBLEMS THAT LIMITED YOU	N	2	1115	1116
476	ABORNUS	AL8-COUNTRY OF ORIGIN	N	2	1117	1118
477	AMOVEAGE	AL8OV-AGE WHEN MOVED TO U.S.	N	2	1119	1120
478	USGRADE	AL9-HIGHEST GRADE BEFORE MOVING TO U.S.	N	2	1121	1122
479	ASTUENG	AL10-STUDY ENGLISH BEFORE CAME TO U.S.	N	2	1123	1124
480	IBWORK	AL11-WORKED LAST WEEK	N	2	1125	1126
481	IBLEAVE	AL12-ON LEAVE OR VACATION LAST WEEK	N	2	1127	1128
482	PAYHRS	AL13-HRS PER WEEK WORKED FOR PAY	N	2	1129	1130
483	IBWORKMO	AL14-MONTHS WORKED FOR PAY IN PAST YEAR	N	2	1131	1132
484	JOBLOOK	AL15-LOOKING FOR WORK IN PAST 4 WEEKS	N	2	1133	1134
485	JOBAGN	AL16A-CHECKED WITH EMPLOYMENT AGENCY	N	2	1135	1136
486	JOBEMPL	AL16B-CHECKED WITH EMPLOYER DIRECTLY	N	2	1137	1138
487	JOBREL	AL16C-CHECKED WITH FRIENDS OR RELATIVES	N	2	1139	1140
488	JOBANSAD	AL16D-PLACED OR ANSWERED JOB ADS	N	2	1141	1142
489	JOBACTY	AL17-MAIN ACT DONE MOST OF LAST WEEK	N	2	1143	1144
490	JOBEVER	AL18-EVER WORKED AT A JOB FOR PAY	N	2	1145	1146
491	JOBLSTYY	AL19-YEAR LAST WORKED FOR PAY OR INCOME	N	4	1147	1150
492	JOBNXTYR	AL20-PLAN TO WORK FOR PAY NEXT YEAR	N	2	1151	1152
493	FNAICS	INDUSTRY CODE	N	2	1153	1154
494	AOWNBUS	AL22-RESPONDENT'S OWN BUSINESS	N	2	1155	1156
495	FSOC	OCCUPATION CODE	N	2	1157	1158
496	CUREMP	AL24-CURRENTLY WORKS FOR EMPLOYER	N	2	1159	1160
497	EARNAMT	AL25-AMOUNT OF EARNINGS	N	9.2	1161	1169
498	EARNUNT	AL25-UNIT OF EARNINGS	N	2	1170	1171
499	CONREQ05	AL26-REQUIRED CONTINUING EDUCATION	N	2	1172	1173
500	CNTRWORK	PW2/AM1-ANYONE WORK FOR CHILD CARE CTR	N	2	1174	1175
501	CHCRWORK	PW3/AM2-NON-CTR CHILD CARE/BABYSITTING	N	2	1176	1177
502	HOWNHOME	PW4/AM3-OWN, RENT HOME/OTHR ARRANGMNT	N	2	1178	1179
503	HOTHNUM	PW5/AM4-OTHR PHONE NMBRS/HOME USE	N	2	1180	1181
504	HNUMUSE	PW7/AM6-# OF OTHR PHONE NMBRS/HOME USE	N	2	1182	1183
505	HINCMRNG	PW18/AM12-TOTAL HH INCOME RANGE	N	2	1184	1185
506	HINCM50K	PW19/AM120V-HH INCOME BELOW/ABOVE \$50K	N	2	1186	1187
507	HINCOME	PW19/AM120V-TOTAL HH INCOME RANGE 2	N	2	1188	1189
508	AELABOR	D-LABOR FORCE STATUS	N	2	1190	1191
509	AEPARANY	D-PARTICIPATION-ALL TYPES OF AE	N	2	1192	1193
510	AEPARTIC	D-PARTICIPATION-EXCL FULL-TIME CRED	N	2	1194	1195
511	ANYDE	D-ANY DISTANCE EDUCATION	N	2	1196	1197
512	ANYSUPP1	D-EMPLOYER SUPPORT-ANY AE	N	2	1198	1199
513	BSPARTIC	D-PARTICIPATION-ABE/GED CLASSES	N	2	1200	1201
514	BSSUPP	D-EMPLOYER SUPPORTED ABE/GED CLASSES	N	2	1202	1203
515	CENREG	D-CENSUS REGION	N	2	1204	1205
516	COLSUPP1	D-EMPLOYER SUPPORT-COL/UNIV PRGM	N	2	1206	1207
517	CRDIPART	D-PARTICIPATION-CREDENTIAL PROGRAMS	N	2	1208	1209
518	CRNEW	D-TOTAL NUM OF COLLEGE DEGREE PROGRAMS	N	2	1210	1211
519	CRSUPP1	D-EMPLOYER SUPPORT-ANY CRED PRGM	N	2	1212	1213

Order	Variable name	Variable label	Format	Length	Start column	End column
520	EDUCLEVL	D-HIGHEST LEVEL OF EDUCATION	N	2	1214	1215
521	ESSUPP	D-EMPLOYER SUPPORT-ESL CLASSES	N	2	1216	1217
522	HH18OVER	D-NUMBER OF HH MEMBERS AGE 18 AND OLDER	N	2	1218	1219
523	HHTOTAL	D-TOTAL NUMBER OF HOUSEHOLD MEMBERS	N	2	1220	1221
524	HHUNDR6	D-# OF HH MEMBERS YOUNGER THAN AGE 6	N	2	1222	1223
525	HHUNDR10	D-# OF HH MEMBERS YOUNGER THAN AGE 10	N	2	1224	1225
526	HHUNDR13	D-# OF HH MEMBERS YOUNGER THAN AGE 13	N	2	1226	1227
527	HHUNDR18	D-# OF HH MEMBERS YOUNGER THAN AGE 18	N	2	1228	1229
528	HHUNDR21	D-# OF HH MEMBERS YOUNGER THAN AGE 21	N	2	1230	1231
529	HIGHEDUC	D-HIGHEST DEGREE OR CREDENTIAL OBTAINED	N	2	1232	1233
530	INFMPERS	D-PARTICIPATION-INFORMAL LEARNING ACTIV	N	2	1234	1235
531	OCCGRP	D-OCCUPATION GROUP	N	2	1236	1237
532	RACEETHN	D-RACE/ETHNICITY	N	2	1238	1239
533	RACEETH2	D-RACE/ETHNICITY-2	N	2	1240	1241
534	SAACTY	D-PERSONAL INTEREST COURSES	N	2	1242	1243
535	SANEW	D-TOTAL NUMBER OF CRS FOR PERS REASONS	N	2	1244	1245
536	SASUPP	D-EMPLOYER SUPPORT - PERSONAL CRS	N	2	1246	1247
537	SATIME	D-TOTAL HOURS FOR PERSONAL CRS	N	8.2	1248	1255
538	VOCSUPP1	D-EMPLOYER SUPPORT-VOC/TECH PRGM	N	2	1256	1257
539	VONEW	D-TOTAL NUM OF VOC/TECH PROGRAMS	N	2	1258	1259
540	WRACTY	D-WORK-RELATED COURSES	N	2	1260	1261
541	WRNEW	D-TOTAL NUM OF CRS FOR WORK-REL REASONS	N	2	1262	1263
542	WRSUPP	D-EMPLOYER SUPPORT-WORK-REL CRS	N	2	1264	1265
543	WRTIME	D-TOTAL HOURS FOR WORK-REL CRS	N	8.2	1266	1273
544	ZIP18PO2	D-PERCENT UNDER 18 BELOW POV LINE	N	2	1274	1275
545	ZIPBLH12	D-PERCENT BLACK OR HISPANIC	N	2	1276	1277
546	ZIPURB	D-LIVE IN URBAN OR RURAL AREA	N	2	1278	1279
547	FAWT	FINAL AE INTV WEIGHT	N	10	1280	1289
548	WRWGT	WORK-RELATED COURSE WEIGHTING FACTOR	N	4.2	1290	1293
549	SAWGT	PERS INTEREST COURSE WEIGHTING FACTOR	N	4.2	1294	1297
550	FAWT1	FINAL AE INTV WEIGHT, REPL1	N	10.3	1298	1307
551	FAWT2	FINAL AE INTV WEIGHT, REPL2	N	10.3	1308	1317
552	FAWT3	FINAL AE INTV WEIGHT, REPL3	N	10.3	1318	1327
553	FAWT4	FINAL AE INTV WEIGHT, REPL4	N	10.3	1328	1337
554	FAWT5	FINAL AE INTV WEIGHT, REPL5	N	10.3	1338	1347
555	FAWT6	FINAL AE INTV WEIGHT, REPL6	N	10.3	1348	1357
556	FAWT7	FINAL AE INTV WEIGHT, REPL7	N	10.3	1358	1367
557	FAWT8	FINAL AE INTV WEIGHT, REPL8	N	10.3	1368	1377
558	FAWT9	FINAL AE INTV WEIGHT, REPL9	N	10.3	1378	1387
559	FAWT10	FINAL AE INTV WEIGHT, REPL10	N	10.3	1388	1397
560	FAWT11	FINAL AE INTV WEIGHT, REPL11	N	10.3	1398	1407
561	FAWT12	FINAL AE INTV WEIGHT, REPL12	N	10.3	1408	1417
562	FAWT13	FINAL AE INTV WEIGHT, REPL13	N	10.3	1418	1427
563	FAWT14	FINAL AE INTV WEIGHT, REPL14	N	10.3	1428	1437
564	FAWT15	FINAL AE INTV WEIGHT, REPL15	N	10.3	1438	1447
565	FAWT16	FINAL AE INTV WEIGHT, REPL16	N	10.3	1448	1457
566	FAWT17	FINAL AE INTV WEIGHT, REPL17	N	10.3	1458	1467
567	FAWT18	FINAL AE INTV WEIGHT, REPL18	N	10.3	1468	1477
568	FAWT19	FINAL AE INTV WEIGHT, REPL19	N	10.3	1478	1487
569	FAWT20	FINAL AE INTV WEIGHT, REPL20	N	10.3	1488	1497
570	FAWT21	FINAL AE INTV WEIGHT, REPL21	N	10.3	1498	1507

Order	Variable name	Variable label	Format	Length	Start column	End column
571	FAWT22	FINAL AE INTV WEIGHT, REPL22	N	10.3	1508	1517
572	FAWT23	FINAL AE INTV WEIGHT, REPL23	N	10.3	1518	1527
573	FAWT24	FINAL AE INTV WEIGHT, REPL24	N	10.3	1528	1537
574	FAWT25	FINAL AE INTV WEIGHT, REPL25	N	10.3	1538	1547
575	FAWT26	FINAL AE INTV WEIGHT, REPL26	N	10.3	1548	1557
576	FAWT27	FINAL AE INTV WEIGHT, REPL27	N	10.3	1558	1567
577	FAWT28	FINAL AE INTV WEIGHT, REPL28	N	10.3	1568	1577
578	FAWT29	FINAL AE INTV WEIGHT, REPL29	N	10.3	1578	1587
579	FAWT30	FINAL AE INTV WEIGHT, REPL30	N	10.3	1588	1597
580	FAWT31	FINAL AE INTV WEIGHT, REPL31	N	10.3	1598	1607
581	FAWT32	FINAL AE INTV WEIGHT, REPL32	N	10.3	1608	1617
582	FAWT33	FINAL AE INTV WEIGHT, REPL33	N	10.3	1618	1627
583	FAWT34	FINAL AE INTV WEIGHT, REPL34	N	10.3	1628	1637
584	FAWT35	FINAL AE INTV WEIGHT, REPL35	N	10.3	1638	1647
585	FAWT36	FINAL AE INTV WEIGHT, REPL36	N	10.3	1648	1657
586	FAWT37	FINAL AE INTV WEIGHT, REPL37	N	10.3	1658	1667
587	FAWT38	FINAL AE INTV WEIGHT, REPL38	N	10.3	1668	1677
588	FAWT39	FINAL AE INTV WEIGHT, REPL39	N	10.3	1678	1687
589	FAWT40	FINAL AE INTV WEIGHT, REPL40	N	10.3	1688	1697
590	FAWT41	FINAL AE INTV WEIGHT, REPL41	N	10.3	1698	1707
591	FAWT42	FINAL AE INTV WEIGHT, REPL42	N	10.3	1708	1717
592	FAWT43	FINAL AE INTV WEIGHT, REPL43	N	10.3	1718	1727
593	FAWT44	FINAL AE INTV WEIGHT, REPL44	N	10.3	1728	1737
594	FAWT45	FINAL AE INTV WEIGHT, REPL45	N	10.3	1738	1747
595	FAWT46	FINAL AE INTV WEIGHT, REPL46	N	10.3	1748	1757
596	FAWT47	FINAL AE INTV WEIGHT, REPL47	N	10.3	1758	1767
597	FAWT48	FINAL AE INTV WEIGHT, REPL48	N	10.3	1768	1777
598	FAWT49	FINAL AE INTV WEIGHT, REPL49	N	10.3	1778	1787
599	FAWT50	FINAL AE INTV WEIGHT, REPL50	N	10.3	1788	1797
600	FAWT51	FINAL AE INTV WEIGHT, REPL51	N	10.3	1798	1807
601	FAWT52	FINAL AE INTV WEIGHT, REPL52	N	10.3	1808	1817
602	FAWT53	FINAL AE INTV WEIGHT, REPL53	N	10.3	1818	1827
603	FAWT54	FINAL AE INTV WEIGHT, REPL54	N	10.3	1828	1837
604	FAWT55	FINAL AE INTV WEIGHT, REPL55	N	10.3	1838	1847
605	FAWT56	FINAL AE INTV WEIGHT, REPL56	N	10.3	1848	1857
606	FAWT57	FINAL AE INTV WEIGHT, REPL57	N	10.3	1858	1867
607	FAWT58	FINAL AE INTV WEIGHT, REPL58	N	10.3	1868	1877
608	FAWT59	FINAL AE INTV WEIGHT, REPL59	N	10.3	1878	1887
609	FAWT60	FINAL AE INTV WEIGHT, REPL60	N	10.3	1888	1897
610	FAWT61	FINAL AE INTV WEIGHT, REPL61	N	10.3	1898	1907
611	FAWT62	FINAL AE INTV WEIGHT, REPL62	N	10.3	1908	1917
612	FAWT63	FINAL AE INTV WEIGHT, REPL63	N	10.3	1918	1927
613	FAWT64	FINAL AE INTV WEIGHT, REPL64	N	10.3	1928	1937
614	FAWT65	FINAL AE INTV WEIGHT, REPL65	N	10.3	1938	1947
615	FAWT66	FINAL AE INTV WEIGHT, REPL66	N	10.3	1948	1957
616	FAWT67	FINAL AE INTV WEIGHT, REPL67	N	10.3	1958	1967
617	FAWT68	FINAL AE INTV WEIGHT, REPL68	N	10.3	1968	1977
618	FAWT69	FINAL AE INTV WEIGHT, REPL69	N	10.3	1978	1987
619	FAWT70	FINAL AE INTV WEIGHT, REPL70	N	10.3	1988	1997
620	FAWT71	FINAL AE INTV WEIGHT, REPL71	N	10.3	1998	2007
621	FAWT72	FINAL AE INTV WEIGHT, REPL72	N	10.3	2008	2017
622	FAWT73	FINAL AE INTV WEIGHT, REPL73	N	10.3	2018	2027

Order	Variable name	Variable label	Format	Length	Start column	End column
623	FAWT74	FINAL AE INTV WEIGHT, REPL74	N	10.3	2028	2037
624	FAWT75	FINAL AE INTV WEIGHT, REPL75	N	10.3	2038	2047
625	FAWT76	FINAL AE INTV WEIGHT, REPL76	N	10.3	2048	2057
626	FAWT77	FINAL AE INTV WEIGHT, REPL77	N	10.3	2058	2067
627	FAWT78	FINAL AE INTV WEIGHT, REPL78	N	10.3	2068	2077
628	FAWT79	FINAL AE INTV WEIGHT, REPL79	N	10.3	2078	2087
629	FAWT80	FINAL AE INTV WEIGHT, REPL80	N	10.3	2088	2097
630	APSU	PSU FOR TAYLOR SERIES VAR ESTIMATION	N	4	2098	2101
631	ASTRATUM	STRATUM FOR TAYLOR SERIES VAR ESTIMATION	N	2	2102	2103
632	AGF1	IMPUTATION FLAG	N	2	2104	2105
633	SEF1	IMPUTATION FLAG	N	2	2106	2107
634	AGF2	IMPUTATION FLAG	N	2	2108	2109
635	SEF2	IMPUTATION FLAG	N	2	2110	2111
636	AGF3	IMPUTATION FLAG	N	2	2112	2113
637	SEF3	IMPUTATION FLAG	N	2	2114	2115
638	AGF4	IMPUTATION FLAG	N	2	2116	2117
639	AGF5	IMPUTATION FLAG	N	2	2118	2119
640	AGF6	IMPUTATION FLAG	N	2	2120	2121
641	AGF7	IMPUTATION FLAG	N	2	2122	2123
642	IBGRADF	IMPUTATION FLAG	N	2	2124	2125
643	IBGRAF1	IMPUTATION FLAG	N	2	2126	2127
644	IBGRAF2	IMPUTATION FLAG	N	2	2128	2129
645	IBVOCDF	IMPUTATION FLAG	N	2	2130	2131
646	IBDIPF	IMPUTATION FLAG	N	2	2132	2133
647	IBUSDIPF	IMPUTATION FLAG	N	2	2134	2135
648	IBDIPLYF	IMPUTATION FLAG	N	2	2136	2137
649	IBHSREF	IMPUTATION FLAG	N	2	2138	2139
650	IBGEDCLF	IMPUTATION FLAG	N	2	2140	2141
651	IBWORF12	IMPUTATION FLAG	N	2	2142	2143
652	IBSELFEF	IMPUTATION FLAG	N	2	2144	2145
653	IBOTHEMF	IMPUTATION FLAG	N	2	2146	2147
654	IBEMPNUF	IMPUTATION FLAG	N	2	2148	2149
655	IBLANF	IMPUTATION FLAG	N	2	2150	2151
656	IBSPEAF	IMPUTATION FLAG	N	2	2152	2153
657	ESLANF	IMPUTATION FLAG	N	2	2154	2155
658	ESREAF	IMPUTATION FLAG	N	2	2156	2157
659	ESJOF	IMPUTATION FLAG	N	2	2158	2159
660	ESRAISF	IMPUTATION FLAG	N	2	2160	2161
661	ESPUBASF	IMPUTATION FLAG	N	2	2162	2163
662	ESPRTYF	IMPUTATION FLAG	N	2	2164	2165
663	ESPROVEF	IMPUTATION FLAG	N	2	2166	2167
664	ESCOLF	IMPUTATION FLAG	N	2	2168	2169
665	ESFMLIF	IMPUTATION FLAG	N	2	2170	2171
666	ESHRYF	IMPUTATION FLAG	N	2	2172	2173
667	ESTUITOF	IMPUTATION FLAG	N	2	2174	2175
668	ESMATLF	IMPUTATION FLAG	N	2	2176	2177
669	ESINCBF	IMPUTATION FLAG	N	2	2178	2179
670	ESWORF	IMPUTATION FLAG	N	2	2180	2181
671	ESEMPREF	IMPUTATION FLAG	N	2	2182	2183
672	ESEMPSUF	IMPUTATION FLAG	N	2	2184	2185
673	ESWRKPF	IMPUTATION FLAG	N	2	2186	2187

Order	Variable name	Variable label	Format	Length	Start column	End column
674	ESWRKHF	IMPUTATION FLAG	N	2	2188	2189
675	ESEMPAIF	IMPUTATION FLAG	N	2	2190	2191
676	ESEMPTUF	IMPUTATION FLAG	N	2	2192	2193
677	ESEMPMAF	IMPUTATION FLAG	N	2	2194	2195
678	ESEVEF	IMPUTATION FLAG	N	2	2196	2197
679	READENGF	IMPUTATION FLAG	N	2	2198	2199
680	WRITENGF	IMPUTATION FLAG	N	2	2200	2201
681	BSIMPROF	IMPUTATION FLAG	N	2	2202	2203
682	BSGEF	IMPUTATION FLAG	N	2	2204	2205
683	BSHSEQUF	IMPUTATION FLAG	N	2	2206	2207
684	BSNOF	IMPUTATION FLAG	N	2	2208	2209
685	BSREAF	IMPUTATION FLAG	N	2	2210	2211
686	BSCHIF	IMPUTATION FLAG	N	2	2212	2213
687	BSJOF	IMPUTATION FLAG	N	2	2214	2215
688	BSRAISF	IMPUTATION FLAG	N	2	2216	2217
689	BSCOLVOF	IMPUTATION FLAG	N	2	2218	2219
690	BSPUBASF	IMPUTATION FLAG	N	2	2220	2221
691	BSFEEF	IMPUTATION FLAG	N	2	2222	2223
692	BSLIFF	IMPUTATION FLAG	N	2	2224	2225
693	BSPRTYF	IMPUTATION FLAG	N	2	2226	2227
694	BSFMLIF	IMPUTATION FLAG	N	2	2228	2229
695	BSHRYF	IMPUTATION FLAG	N	2	2230	2231
696	BSTUITOF	IMPUTATION FLAG	N	2	2232	2233
697	BSMATLF	IMPUTATION FLAG	N	2	2234	2235
698	BSINCBF	IMPUTATION FLAG	N	2	2236	2237
699	BSEVEF	IMPUTATION FLAG	N	2	2238	2239
700	CRDEGREF	IMPUTATION FLAG	N	2	2240	2241
701	CRTYASF	IMPUTATION FLAG	N	2	2242	2243
702	CRTYBCF	IMPUTATION FLAG	N	2	2244	2245
703	CRTYMAF	IMPUTATION FLAG	N	2	2246	2247
704	CRTYDOF	IMPUTATION FLAG	N	2	2248	2249
705	CRTYPPF	IMPUTATION FLAG	N	2	2250	2251
706	CRTYOTF	IMPUTATION FLAG	N	2	2252	2253
707	CRPOSTDF	IMPUTATION FLAG	N	2	2254	2255
708	CRPOSBF	IMPUTATION FLAG	N	2	2256	2257
709	CRPOSMAF	IMPUTATION FLAG	N	2	2258	2259
710	CRPOSDOF	IMPUTATION FLAG	N	2	2260	2261
711	CRCIFF1	IMPUTATION FLAG	N	2	2262	2263
712	CRREAF1	IMPUTATION FLAG	N	2	2264	2265
713	CRCERF1	IMPUTATION FLAG	N	2	2266	2267
714	CRSTRMF1	IMPUTATION FLAG	N	2	2268	2269
715	CRSTRYF1	IMPUTATION FLAG	N	2	2270	2271
716	CRCOMMF1	IMPUTATION FLAG	N	2	2272	2273
717	CRCOMYF1	IMPUTATION FLAG	N	2	2274	2275
718	CRINSF1	IMPUTATION FLAG	N	2	2276	2277
719	CRPTFF1	IMPUTATION FLAG	N	2	2278	2279
720	CRENRNF1	IMPUTATION FLAG	N	2	2280	2281
721	CRENRUF1	IMPUTATION FLAG	N	2	2282	2283
722	CRCRDHF1	IMPUTATION FLAG	N	2	2284	2285
723	CRCLSHF1	IMPUTATION FLAG	N	2	2286	2287

Order	Variable name	Variable label	Format	Length	Start column	End column
724	CRTUITF1	IMPUTATION FLAG	N	2	2288	2289
725	CRMATLF1	IMPUTATION FLAG	N	2	2290	2291
726	CRINCBF1	IMPUTATION FLAG	N	2	2292	2293
727	CRWORF1	IMPUTATION FLAG	N	2	2294	2295
728	CREMPRF1	IMPUTATION FLAG	N	2	2296	2297
729	CREMPSF1	IMPUTATION FLAG	N	2	2298	2299
730	CRWRKPF1	IMPUTATION FLAG	N	2	2300	2301
731	CRWRKHF1	IMPUTATION FLAG	N	2	2302	2303
732	CREMPAF1	IMPUTATION FLAG	N	2	2304	2305
733	CREMPTF1	IMPUTATION FLAG	N	2	2306	2307
734	CREMPMF1	IMPUTATION FLAG	N	2	2308	2309
735	CRCIFF2	IMPUTATION FLAG	N	2	2310	2311
736	CRREAF2	IMPUTATION FLAG	N	2	2312	2313
737	CRCERF2	IMPUTATION FLAG	N	2	2314	2315
738	CRSTRMF2	IMPUTATION FLAG	N	2	2316	2317
739	CRSTRYF2	IMPUTATION FLAG	N	2	2318	2319
740	CRCOMMF2	IMPUTATION FLAG	N	2	2320	2321
741	CRCOMYF2	IMPUTATION FLAG	N	2	2322	2323
742	CRINSF2	IMPUTATION FLAG	N	2	2324	2325
743	CRPTFF2	IMPUTATION FLAG	N	2	2326	2327
744	CRENRNF2	IMPUTATION FLAG	N	2	2328	2329
745	CRENRUF2	IMPUTATION FLAG	N	2	2330	2331
746	CRCRDHF2	IMPUTATION FLAG	N	2	2332	2333
747	CRCLSHF2	IMPUTATION FLAG	N	2	2334	2335
748	CRTUITF2	IMPUTATION FLAG	N	2	2336	2337
749	CRMATLF2	IMPUTATION FLAG	N	2	2338	2339
750	CRINCBF2	IMPUTATION FLAG	N	2	2340	2341
751	CRWORF2	IMPUTATION FLAG	N	2	2342	2343
752	CREMPRF2	IMPUTATION FLAG	N	2	2344	2345
753	CREMPSF2	IMPUTATION FLAG	N	2	2346	2347
754	CRWRKPF2	IMPUTATION FLAG	N	2	2348	2349
755	CRWRKHF2	IMPUTATION FLAG	N	2	2350	2351
756	CREMPAF2	IMPUTATION FLAG	N	2	2352	2353
757	CREMPTF2	IMPUTATION FLAG	N	2	2354	2355
758	CREMPMF2	IMPUTATION FLAG	N	2	2356	2357
759	CRSTRMF3	IMPUTATION FLAG	N	2	2358	2359
760	CRSTRYF3	IMPUTATION FLAG	N	2	2360	2361
761	CRCOMMF3	IMPUTATION FLAG	N	2	2362	2363
762	CRCOMYF3	IMPUTATION FLAG	N	2	2364	2365
763	CRPTFF3	IMPUTATION FLAG	N	2	2366	2367
764	CRENRNF3	IMPUTATION FLAG	N	2	2368	2369
765	CRENRUF3	IMPUTATION FLAG	N	2	2370	2371
766	CRCRDHF3	IMPUTATION FLAG	N	2	2372	2373
767	CRTUITF3	IMPUTATION FLAG	N	2	2374	2375
768	CRMATLF3	IMPUTATION FLAG	N	2	2376	2377
769	CRINCBF3	IMPUTATION FLAG	N	2	2378	2379
770	CRCRDHF4	IMPUTATION FLAG	N	2	2380	2381
771	CRVOCDF	IMPUTATION FLAG	N	2	2382	2383
772	VOVOF	IMPUTATION FLAG	N	2	2384	2385
773	VOTECF	IMPUTATION FLAG	N	2	2386	2387
774	VOASSOF	IMPUTATION FLAG	N	2	2388	2389

Order	Variable name	Variable label	Format	Length	Start column	End column
775	VOOTHDF	IMPUTATION FLAG	N	2	2390	2391
776	VOCIFF1	IMPUTATION FLAG	N	2	2392	2393
777	VOREAF1	IMPUTATION FLAG	N	2	2394	2395
778	VOCERF1	IMPUTATION FLAG	N	2	2396	2397
779	VOSTRMF1	IMPUTATION FLAG	N	2	2398	2399
780	VOSTRYF1	IMPUTATION FLAG	N	2	2400	2401
781	VOCOMMF1	IMPUTATION FLAG	N	2	2402	2403
782	VOCOMYF1	IMPUTATION FLAG	N	2	2404	2405
783	VOPTFF1	IMPUTATION FLAG	N	2	2406	2407
784	VOENRNF1	IMPUTATION FLAG	N	2	2408	2409
785	VOENRUF1	IMPUTATION FLAG	N	2	2410	2411
786	VOCRSNF1	IMPUTATION FLAG	N	2	2412	2413
787	VOCRDHF1	IMPUTATION FLAG	N	2	2414	2415
788	VOCLSHF1	IMPUTATION FLAG	N	2	2416	2417
789	VOTUITF1	IMPUTATION FLAG	N	2	2418	2419
790	VOMATLF1	IMPUTATION FLAG	N	2	2420	2421
791	VOWORF1	IMPUTATION FLAG	N	2	2422	2423
792	VOEMPRF1	IMPUTATION FLAG	N	2	2424	2425
793	VOEMPSF1	IMPUTATION FLAG	N	2	2426	2427
794	VOWRKPF1	IMPUTATION FLAG	N	2	2428	2429
795	VOWRKHF1	IMPUTATION FLAG	N	2	2430	2431
796	VOEMPAF1	IMPUTATION FLAG	N	2	2432	2433
797	VOEMPTF1	IMPUTATION FLAG	N	2	2434	2435
798	VOEMPMF1	IMPUTATION FLAG	N	2	2436	2437
799	VOREAF2	IMPUTATION FLAG	N	2	2438	2439
800	VOCERF2	IMPUTATION FLAG	N	2	2440	2441
801	VOSTRMF2	IMPUTATION FLAG	N	2	2442	2443
802	VOSTRYF2	IMPUTATION FLAG	N	2	2444	2445
803	VOCOMMF2	IMPUTATION FLAG	N	2	2446	2447
804	VOCOMYF2	IMPUTATION FLAG	N	2	2448	2449
805	VOPTFF2	IMPUTATION FLAG	N	2	2450	2451
806	VOENRNF2	IMPUTATION FLAG	N	2	2452	2453
807	VOENRUF2	IMPUTATION FLAG	N	2	2454	2455
808	VOCRSNF2	IMPUTATION FLAG	N	2	2456	2457
809	VOCRDHF2	IMPUTATION FLAG	N	2	2458	2459
810	VOCLSHF2	IMPUTATION FLAG	N	2	2460	2461
811	VOTUITF2	IMPUTATION FLAG	N	2	2462	2463
812	VOMATLF2	IMPUTATION FLAG	N	2	2464	2465
813	VOWORF2	IMPUTATION FLAG	N	2	2466	2467
814	VOEMPRF2	IMPUTATION FLAG	N	2	2468	2469
815	VOEMPSF2	IMPUTATION FLAG	N	2	2470	2471
816	VOWRKPF2	IMPUTATION FLAG	N	2	2472	2473
817	VOWRKHF2	IMPUTATION FLAG	N	2	2474	2475
818	VOEMPAF2	IMPUTATION FLAG	N	2	2476	2477
819	VOEMPTF2	IMPUTATION FLAG	N	2	2478	2479
820	VOEMPMF2	IMPUTATION FLAG	N	2	2480	2481
821	APPRENTF	IMPUTATION FLAG	N	2	2482	2483
822	APEMPLOF	IMPUTATION FLAG	N	2	2484	2485
823	APUNIOF	IMPUTATION FLAG	N	2	2486	2487
824	APFEDGOF	IMPUTATION FLAG	N	2	2488	2489
825	APOTHEF	IMPUTATION FLAG	N	2	2490	2491
826	APSTRTMF	IMPUTATION FLAG	N	2	2492	2493

Order	Variable name	Variable label	Format	Length	Start column	End column
827	APSTRTYF	IMPUTATION FLAG	N	2	2494	2495
828	APCOMPMPF	IMPUTATION FLAG	N	2	2496	2497
829	APCOMPYF	IMPUTATION FLAG	N	2	2498	2499
830	APCLSHF	IMPUTATION FLAG	N	2	2500	2501
831	APTUITOF	IMPUTATION FLAG	N	2	2502	2503
832	APMATLF	IMPUTATION FLAG	N	2	2504	2505
833	APINCBF	IMPUTATION FLAG	N	2	2506	2507
834	FCACTF	IMPUTATION FLAG	N	2	2508	2509
835	FCACTOTF	IMPUTATION FLAG	N	2	2510	2511
836	WRCRF1	IMPUTATION FLAG	N	2	2512	2513
837	WRCLSHF1	IMPUTATION FLAG	N	2	2514	2515
838	WRCURF1	IMPUTATION FLAG	N	2	2516	2517
839	WRRSSKF1	IMPUTATION FLAG	N	2	2518	2519
840	WRNWSKF1	IMPUTATION FLAG	N	2	2520	2521
841	WRRSRAF1	IMPUTATION FLAG	N	2	2522	2523
842	WRRSNEF1	IMPUTATION FLAG	N	2	2524	2525
843	WRRSCEF1	IMPUTATION FLAG	N	2	2526	2527
844	WRRSREF1	IMPUTATION FLAG	N	2	2528	2529
845	WRPRTYF1	IMPUTATION FLAG	N	2	2530	2531
846	WRPROVF1	IMPUTATION FLAG	N	2	2532	2533
847	WRCREF1	IMPUTATION FLAG	N	2	2534	2535
848	WRCEF1	IMPUTATION FLAG	N	2	2536	2537
849	WRJOBSF1	IMPUTATION FLAG	N	2	2538	2539
850	WRTUITF1	IMPUTATION FLAG	N	2	2540	2541
851	WRMATLF1	IMPUTATION FLAG	N	2	2542	2543
852	WRINCBF1	IMPUTATION FLAG	N	2	2544	2545
853	WRWORF1	IMPUTATION FLAG	N	2	2546	2547
854	WREMPRF1	IMPUTATION FLAG	N	2	2548	2549
855	WREMPSF1	IMPUTATION FLAG	N	2	2550	2551
856	WRWRKPF1	IMPUTATION FLAG	N	2	2552	2553
857	WRWRKHF1	IMPUTATION FLAG	N	2	2554	2555
858	WREMPAF1	IMPUTATION FLAG	N	2	2556	2557
859	WREMPF1	IMPUTATION FLAG	N	2	2558	2559
860	WREMPMF1	IMPUTATION FLAG	N	2	2560	2561
861	WRCLSHF2	IMPUTATION FLAG	N	2	2562	2563
862	WRCURF2	IMPUTATION FLAG	N	2	2564	2565
863	WRRSSKF2	IMPUTATION FLAG	N	2	2566	2567
864	WRNWSKF2	IMPUTATION FLAG	N	2	2568	2569
865	WRRSRAF2	IMPUTATION FLAG	N	2	2570	2571
866	WRRSNEF2	IMPUTATION FLAG	N	2	2572	2573
867	WRRSCEF2	IMPUTATION FLAG	N	2	2574	2575
868	WRRSREF2	IMPUTATION FLAG	N	2	2576	2577
869	WRPRTYF2	IMPUTATION FLAG	N	2	2578	2579
870	WRPROVF2	IMPUTATION FLAG	N	2	2580	2581
871	WRCREF2	IMPUTATION FLAG	N	2	2582	2583
872	WRCEF2	IMPUTATION FLAG	N	2	2584	2585
873	WRJOBSF2	IMPUTATION FLAG	N	2	2586	2587
874	WRTUITF2	IMPUTATION FLAG	N	2	2588	2589
875	WRMATLF2	IMPUTATION FLAG	N	2	2590	2591
876	WRINCBF2	IMPUTATION FLAG	N	2	2592	2593
877	WRWORF2	IMPUTATION FLAG	N	2	2594	2595
878	WREMPRF2	IMPUTATION FLAG	N	2	2596	2597

Order	Variable name	Variable label	Format	Length	Start column	End column
879	WREMPSF2	IMPUTATION FLAG	N	2	2598	2599
880	WRWRKPF2	IMPUTATION FLAG	N	2	2600	2601
881	WRWRKHF2	IMPUTATION FLAG	N	2	2602	2603
882	WREMPAF2	IMPUTATION FLAG	N	2	2604	2605
883	WREMPF2	IMPUTATION FLAG	N	2	2606	2607
884	WREMPMF2	IMPUTATION FLAG	N	2	2608	2609
885	WRCLSHF3	IMPUTATION FLAG	N	2	2610	2611
886	WRCURF3	IMPUTATION FLAG	N	2	2612	2613
887	WRRSCEF3	IMPUTATION FLAG	N	2	2614	2615
888	WRPRTYF3	IMPUTATION FLAG	N	2	2616	2617
889	WRPROVF3	IMPUTATION FLAG	N	2	2618	2619
890	WRCREF3	IMPUTATION FLAG	N	2	2620	2621
891	WRCEF3	IMPUTATION FLAG	N	2	2622	2623
892	WRJOBSF3	IMPUTATION FLAG	N	2	2624	2625
893	WRTUITF3	IMPUTATION FLAG	N	2	2626	2627
894	WRMATLF3	IMPUTATION FLAG	N	2	2628	2629
895	WRINCBF3	IMPUTATION FLAG	N	2	2630	2631
896	WRWORF3	IMPUTATION FLAG	N	2	2632	2633
897	WREMPRF3	IMPUTATION FLAG	N	2	2634	2635
898	WREMPSF3	IMPUTATION FLAG	N	2	2636	2637
899	WRWRKPF3	IMPUTATION FLAG	N	2	2638	2639
900	WRWRKHF3	IMPUTATION FLAG	N	2	2640	2641
901	WREMPAF3	IMPUTATION FLAG	N	2	2642	2643
902	WREMPF3	IMPUTATION FLAG	N	2	2644	2645
903	WREMPMF3	IMPUTATION FLAG	N	2	2646	2647
904	WRCLSHF4	IMPUTATION FLAG	N	2	2648	2649
905	WRCURF4	IMPUTATION FLAG	N	2	2650	2651
906	WRRSSKF4	IMPUTATION FLAG	N	2	2652	2653
907	WRNWSKF4	IMPUTATION FLAG	N	2	2654	2655
908	WRRSRAF4	IMPUTATION FLAG	N	2	2656	2657
909	WRRSNEF4	IMPUTATION FLAG	N	2	2658	2659
910	WRRSCEF4	IMPUTATION FLAG	N	2	2660	2661
911	WRRSREF4	IMPUTATION FLAG	N	2	2662	2663
912	WRPRTYF4	IMPUTATION FLAG	N	2	2664	2665
913	WRPROVF4	IMPUTATION FLAG	N	2	2666	2667
914	WRCREF4	IMPUTATION FLAG	N	2	2668	2669
915	WRCEF4	IMPUTATION FLAG	N	2	2670	2671
916	WRJOBSF4	IMPUTATION FLAG	N	2	2672	2673
917	WRTUITF4	IMPUTATION FLAG	N	2	2674	2675
918	WRMATLF4	IMPUTATION FLAG	N	2	2676	2677
919	WRINCBF4	IMPUTATION FLAG	N	2	2678	2679
920	WRWORF4	IMPUTATION FLAG	N	2	2680	2681
921	WREMPRF4	IMPUTATION FLAG	N	2	2682	2683
922	WREMPSF4	IMPUTATION FLAG	N	2	2684	2685
923	WRWRKPF4	IMPUTATION FLAG	N	2	2686	2687
924	WRWRKHF4	IMPUTATION FLAG	N	2	2688	2689
925	WREMPAF4	IMPUTATION FLAG	N	2	2690	2691
926	WREMPF4	IMPUTATION FLAG	N	2	2692	2693
927	WREMPMF4	IMPUTATION FLAG	N	2	2694	2695
928	WROREF	IMPUTATION FLAG	N	2	2696	2697
929	WROCOLF	IMPUTATION FLAG	N	2	2698	2699
930	WROPAF	IMPUTATION FLAG	N	2	2700	2701

Order	Variable name	Variable label	Format	Length	Start column	End column
931	WROTIMF	IMPUTATION FLAG	N	2	2702	2703
932	WROCERF	IMPUTATION FLAG	N	2	2704	2705
933	SACRF1	IMPUTATION FLAG	N	2	2706	2707
934	SACLSHF1	IMPUTATION FLAG	N	2	2708	2709
935	SACURF1	IMPUTATION FLAG	N	2	2710	2711
936	SAPRTYF1	IMPUTATION FLAG	N	2	2712	2713
937	SAPROVF1	IMPUTATION FLAG	N	2	2714	2715
938	SACREF1	IMPUTATION FLAG	N	2	2716	2717
939	SACEF1	IMPUTATION FLAG	N	2	2718	2719
940	SATUITF1	IMPUTATION FLAG	N	2	2720	2721
941	SAMATLF1	IMPUTATION FLAG	N	2	2722	2723
942	SAINCBF1	IMPUTATION FLAG	N	2	2724	2725
943	SAWORF1	IMPUTATION FLAG	N	2	2726	2727
944	SAWRKPF1	IMPUTATION FLAG	N	2	2728	2729
945	SAWRKHF1	IMPUTATION FLAG	N	2	2730	2731
946	SAEMPAF1	IMPUTATION FLAG	N	2	2732	2733
947	SAEMPTF1	IMPUTATION FLAG	N	2	2734	2735
948	SAEMPMF1	IMPUTATION FLAG	N	2	2736	2737
949	SACLSHF2	IMPUTATION FLAG	N	2	2738	2739
950	SACURF2	IMPUTATION FLAG	N	2	2740	2741
951	SAPRTYF2	IMPUTATION FLAG	N	2	2742	2743
952	SAPROVF2	IMPUTATION FLAG	N	2	2744	2745
953	SACREF2	IMPUTATION FLAG	N	2	2746	2747
954	SACEF2	IMPUTATION FLAG	N	2	2748	2749
955	SATUITF2	IMPUTATION FLAG	N	2	2750	2751
956	SAMATLF2	IMPUTATION FLAG	N	2	2752	2753
957	SAINCBF2	IMPUTATION FLAG	N	2	2754	2755
958	SAWORF2	IMPUTATION FLAG	N	2	2756	2757
959	SAWRKPF2	IMPUTATION FLAG	N	2	2758	2759
960	SAWRKHF2	IMPUTATION FLAG	N	2	2760	2761
961	SAEMPAF2	IMPUTATION FLAG	N	2	2762	2763
962	SAEMPTF2	IMPUTATION FLAG	N	2	2764	2765
963	SAEMPMF2	IMPUTATION FLAG	N	2	2766	2767
964	SAOREF	IMPUTATION FLAG	N	2	2768	2769
965	SAOCOLF	IMPUTATION FLAG	N	2	2770	2771
966	SAOPAF	IMPUTATION FLAG	N	2	2772	2773
967	SAOTIMF	IMPUTATION FLAG	N	2	2774	2775
968	DEVIDTCF	IMPUTATION FLAG	N	2	2776	2777
969	DETVRAF	IMPUTATION FLAG	N	2	2778	2779
970	DEWWF	IMPUTATION FLAG	N	2	2780	2781
971	DECOMF	IMPUTATION FLAG	N	2	2782	2783
972	DEMAIF	IMPUTATION FLAG	N	2	2784	2785
973	DEPHONF	IMPUTATION FLAG	N	2	2786	2787
974	DEOTF	IMPUTATION FLAG	N	2	2788	2789
975	DECOLF	IMPUTATION FLAG	N	2	2790	2791
976	DEVOCF	IMPUTATION FLAG	N	2	2792	2793
977	DEAPPF	IMPUTATION FLAG	N	2	2794	2795
978	DEWORF	IMPUTATION FLAG	N	2	2796	2797
979	DEPERF	IMPUTATION FLAG	N	2	2798	2799
980	PICOMF	IMPUTATION FLAG	N	2	2800	2801
981	PISEFF	IMPUTATION FLAG	N	2	2802	2803
982	PIMAF	IMPUTATION FLAG	N	2	2804	2805

Order	Variable name	Variable label	Format	Length	Start column	End column
983	PICLUF	IMPUTATION FLAG	N	2	2806	2807
984	PISHOF	IMPUTATION FLAG	N	2	2808	2809
985	PIOTF	IMPUTATION FLAG	N	2	2810	2811
986	ADOBMF	IMPUTATION FLAG	N	2	2812	2813
987	ADOBYF	IMPUTATION FLAG	N	2	2814	2815
988	AHISPANF	IMPUTATION FLAG	N	2	2816	2817
989	AWHITF	IMPUTATION FLAG	N	2	2818	2819
990	ABLACF	IMPUTATION FLAG	N	2	2820	2821
991	AAMINF	IMPUTATION FLAG	N	2	2822	2823
992	AASIAF	IMPUTATION FLAG	N	2	2824	2825
993	APACF	IMPUTATION FLAG	N	2	2826	2827
994	ARACEOTF	IMPUTATION FLAG	N	2	2828	2829
995	AMARSTAF	IMPUTATION FLAG	N	2	2830	2831
996	ALIVWITF	IMPUTATION FLAG	N	2	2832	2833
997	LRNDISF	IMPUTATION FLAG	N	2	2834	2835
998	VISHEAF	IMPUTATION FLAG	N	2	2836	2837
999	ADISAF05	IMPUTATION FLAG	N	2	2838	2839
1000	ABORNUF	IMPUTATION FLAG	N	2	2840	2841
1001	AMOVEAGF	IMPUTATION FLAG	N	2	2842	2843
1002	USGRADF	IMPUTATION FLAG	N	2	2844	2845
1003	ASTUENF	IMPUTATION FLAG	N	2	2846	2847
1004	IBWORF	IMPUTATION FLAG	N	2	2848	2849
1005	IBLEAVF	IMPUTATION FLAG	N	2	2850	2851
1006	PAYHRF	IMPUTATION FLAG	N	2	2852	2853
1007	IBWORKMF	IMPUTATION FLAG	N	2	2854	2855
1008	JOBLOOF	IMPUTATION FLAG	N	2	2856	2857
1009	JOBAGF	IMPUTATION FLAG	N	2	2858	2859
1010	JOBEMPF	IMPUTATION FLAG	N	2	2860	2861
1011	JOBREF	IMPUTATION FLAG	N	2	2862	2863
1012	JOBANSAF	IMPUTATION FLAG	N	2	2864	2865
1013	JOBACTF	IMPUTATION FLAG	N	2	2866	2867
1014	JOBEVEF	IMPUTATION FLAG	N	2	2868	2869
1015	JOBLSTYF	IMPUTATION FLAG	N	2	2870	2871
1016	JOBNXTYF	IMPUTATION FLAG	N	2	2872	2873
1017	FNAICF	IMPUTATION FLAG	N	2	2874	2875
1018	AOWNBUF	IMPUTATION FLAG	N	2	2876	2877
1019	FSOF	IMPUTATION FLAG	N	2	2878	2879
1020	CUREMF	IMPUTATION FLAG	N	2	2880	2881
1021	EARNAMF	IMPUTATION FLAG	N	2	2882	2883
1022	EARNUNF	IMPUTATION FLAG	N	2	2884	2885
1023	CONREF05	IMPUTATION FLAG	N	2	2886	2887
1024	CNTRWORF	IMPUTATION FLAG	N	2	2888	2889
1025	CHCRWORF	IMPUTATION FLAG	N	2	2890	2891
1026	HOWNHOMF	IMPUTATION FLAG	N	2	2892	2893
1027	HOTHNUF	IMPUTATION FLAG	N	2	2894	2895
1028	HNUMUSF	IMPUTATION FLAG	N	2	2896	2897
1029	HINCMRNF	IMPUTATION FLAG	N	2	2898	2899
1030	HINCM50F	IMPUTATION FLAG	N	2	2900	2901
1031	HINCOMF	IMPUTATION FLAG	N	2	2902	2903

APPENDIX E

SAS CODE FOR DERIVED VARIABLES

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SAS code for the AE derived variables is below, with the exception of household counter variables (HHTOTAL, etc.), which were derived prior to the creation of the public-use data file; CENREG, which was drawn from the sampling frame; and linked variables (ZIP18PO2, ZIPBLHI2, and ZIPURB), which used the respondent's ZIP Code to extract data from the 2000 Census of Population Summary File 3.

/* AELABOR */

```
IF ((IBWORK = 1 | IBLEAVE = 1) & PAYHRS GE 35) THEN AELABOR = 1;
  ELSE IF ((IBWORK = 1 | IBLEAVE = 1) & PAYHRS LT 35) THEN AELABOR = 2;
  ELSE IF ((JOBLOOK = 1) & (JOBAGN = 1 | JOBEMPL = 1 | JOBREL = 1 | JOBANSAD = 1))
  THEN AELABOR = 3;
  ELSE AELABOR = 4;
```

/* AEPARANY */

```
IF ESLANG = 1 | BSIMPROV = 1 | BSGED = 1 | BSHSEQUV = 1 | CRDEGREE = 1 | CRPOSTDG = 1 |
  CRVOC DIP = 1 | APPRENTI = 1 | WRACTY = 1 | SAACTY = 1 THEN AEPARANY = 1;
  ELSE AEPARANY = 0;
```

/* AEPARTIC */

```
IF ESLANG = 1 | BSIMPROV = 1 | BSGED = 1 | BSHSEQUV = 1 |
  ((CRDEGREE = 1 | CRPOSTDG = 1) & ((2 <= CRPTFT1 <= 3) or (2 <= CRPTFT2 <= 3) or (2 <= CRPTFT3
  <= 3))) | CRVOC DIP = 1 & ((2 <= VOPTFT1 <= 3) or (2 <= VOPTFT2 <= 3) or (2 <= VOPTFT3 <= 3)) |
  APPRENTI = 1 | WRACTY = 1 | SAACTY = 1 THEN AEPARTIC = 1;
  ELSE AEPARTIC = 0;
```

/* ANYDE */

```
IF AEPARANY = 0 THEN ANYDE = -1;
  ELSE IF (DEVIDTCD = 1 | DETVRAD = 1 | DEWWW = 1 | DECOMP = 1 | DEMAIL = 1 |
  DEPHONE = 1 | DEOTH = 1) THEN ANYDE = 1;
  ELSE ANYDE = 0;
```

/* ANYSUPP1 */

```
IF AEPARANY = 0 THEN ANYSUPP1 = -1;
  ELSE IF (ESSUPP = 1 | BSSUPP = 1 | COLSUPP1 = 1 | VOCSUPP1 = 1 | WRSUPP = 1 | SASUPP = 1) THEN
  ANYSUPP1 = 1;
  ELSE ANYSUPP1 = 0;
```

/* BSPARTIC */

```
IF BSIMPROV = 1 | BSGED = 1 | BSHSEQUV = 1 | ESLANG = 1 THEN BSPARTIC = 1;
  ELSE BSPARTIC = 0;
```

/* BSSUPP */

IF NOT (BSIMPROV = 1 | BSGED = 1 | BSHSEQUV = 1) THEN BSSUPP = -1;
ELSE IF (BSPROVEM = 1 | BSWRKPL = 1 | BSWRKHR = 1 | BSEMPAID = 1 | BSEMPTUI = 1 |
BSEMPMAT = 1) THEN BSSUPP = 1;
ELSE BSSUPP = 0;

/* COLSUPP1 */

IF (CRDEGREE = 2 and CRPOSTDG IN (-1, 2)) THEN COLSUPP1 = -1;
ELSE IF (CRWRKPL1 = 1 | CRWRKHR1 = 1 | CREMPAI1 = 1 | CREMPTU1 = 1 | CREMPMA1 = 1) OR
(CRWRKPL2 = 1 | CRWRKHR2 = 1 | CREMPAI2 = 1 | CREMPTU2 = 1 | CREMPMA2 = 1) OR
(CRWRKPL3 = 1 | CRWRKHR3 = 1 | CREMPAI3 = 1 | CREMPTU3 = 1 | CREMPMA3 = 1) THEN COLSUPP1 =
1;
ELSE COLSUPP1 = 0;

/* CRDIPART */

IF (CRDEGREE = 1 | CRPOSTDG = 1 | CRVOC DIP = 1) THEN CRDIPART = 1;
ELSE CRDIPART = 0;

/* CRNEW */

IF CRREAS4 > -1 THEN CRNEW = 4;
ELSE IF CRREAS3 > -1 THEN CRNEW = 3;
ELSE IF CRREAS2 > -1 THEN CRNEW = 2;
ELSE IF CRREAS1 > -1 THEN CRNEW = 1;
ELSE CRNEW = -1;

/* CRSUPP1 */

IF (CRDEGREE = 2 & CRPOSTDG IN (-1, 2) & CRVOC DIP = 2) THEN CRSUPP1 = -1;
ELSE IF (CRWRKPL1 = 1 | CRWRKHR1 = 1 | CREMPAI1 = 1 | CREMPTU1 = 1 | CREMPMA1 = 1) OR
(CRWRKPL2 = 1 | CRWRKHR2 = 1 | CREMPAI2 = 1 | CREMPTU2 = 1 | CREMPMA2 = 1) OR
(CRWRKPL3 = 1 | CRWRKHR3 = 1 | CREMPAI3 = 1 | CREMPTU3 = 1 | CREMPMA3 = 1) OR
(VOWRKPL1 = 1 | VOWRKHR1 = 1 | VOEMPAI1 = 1 | VOEMPTU1 = 1 | VOEMPMA1 = 1) OR
(VOWRKPL2 = 1 | VOWRKHR2 = 1 | VOEMPAI2 = 1 | VOEMPTU2 = 1 | VOEMPMA2 = 1) OR
(VOWRKPL3 = 1 | VOWRKHR3 = 1 | VOEMPAI3 = 1 | VOEMPTU3 = 1 | VOEMPMA3 = 1)
THEN CRSUPP1 = 1;
ELSE CRSUPP1 = 0;

/* EDUCLEVL */

IF (IBGRADE < 4 & IBDIPL = 2) THEN EDUCLEVL = 1;
ELSE IF (IBGRADE = 4 | (IBGRADE < 4 & IBDIPL = 1)) THEN EDUCLEVL = 2;
ELSE IF 5 <= IBGRADE <= 8 THEN EDUCLEVL = 3;
ELSE IF IBGRADE >= 9 THEN EDUCLEVL = 4;

/* ESSUPP */

IF ESLANG NE 1 THEN ESSUPP = -1;
ELSE IF (ESPROVEM = 1 | ESWRKPL = 1 | ESWRKHR = 1 | ESEMPAID = 1 | ESEMPTUI = 1 |
ESEMPMAT = 1) THEN ESSUPP = 1;
ELSE ESSUPP = 0;

/* HIGHEDUC */

IF (IBGRADE < 8 & IBDIPL = 2) THEN HIGHEDUC = 1;
ELSE IF (IBGRADE = 4 | (IBGRADE < 8 & IBDIPL = 1)) THEN HIGHEDUC = 2;
ELSE IF IBGRADE = 8 THEN HIGHEDUC = 3;
ELSE HIGHEDUC = 4;

/* INFMPERS */

IF (PICOMP = 1 | PISELF = 1 | PIMAG = 1 | PICLUB = 1 | PISHOW = 1 | PIOTH = 1) THEN INFMPERS = 1;
ELSE INFMPERS = 0;

/* OCCGRP */

IF FSOC IN (1, 2, 3, 4, 5, 6, 7, 8, 9, 10) THEN OCCGRP = 1;
ELSE IF FSOC IN (11, 12, 13, 14, 20) THEN OCCGRP = 2;
ELSE IF FSOC IN (15, 16, 17, 18, 19) THEN OCCGRP = 3;
ELSE OCCGRP = 4;

/* RACEETHN */

IF AHISPANI = 1 THEN RACEETHN = 3;
ELSE IF AWHITE = 1 & ABLACK = 2 & AAMIND = 2 & AASIAN = 2 & APACI = 2 &
ARACEOTH = 2 THEN RACEETHN = 1;
ELSE IF ABLACK = 1 & AWHITE = 2 & AAMIND = 2 & AASIAN = 2 & APACI = 2 &
ARACEOTH = 2 THEN RACEETHN = 2;
ELSE RACEETHN = 4;

/* RACEETH2 */

IF AHISPANI = 1 THEN RACEETH2 = 3;
ELSE IF AWHITE = 1 & ABLACK = 2 & AAMIND = 2 & AASIAN = 2 & APACI = 2 &
ARACEOTH = 2 THEN RACEETH2 = 1;
ELSE IF ABLACK = 1 & AWHITE = 2 & AAMIND = 2 & AASIAN = 2 & APACI = 2 &
ARACEOTH = 2 THEN RACEETH2 = 2;
ELSE IF (AASIAN = 1 OR APACI = 1) & AWHITE = 2 & ABLACK = 2 & AAMIND = 2 &
ARACEOTH = 2 THEN RACEETH2 = 4;
ELSE RACEETH2 = 5;

/* SAACTY */

IF SANEW > 0 THEN SAACTY = 1;
ELSE SAACTY = 2;

/* SANEW */

SANEW = 0;
ARRAY _CR FCREAS1-FCREAS20;
DO OVER _CR;
IF _CR = 2 THEN SANEW = SANEW + 1;
END;
IF SANEW = 0 THEN SANEW = -1;

/* SASUPP */

IF SAACTY = 2 THEN SASUPP = -1;
ELSE IF SAPROVE1 = 1 | SAWRKPL1 = 1 | SAWRKHR1 = 1 | SAEMPAI1 = 1 | SAEMPTU1 = 1 |
SAEMPMA1 = 1 | SAPROVE2 = 1 | SAWRKPL2 = 1 | SAWRKHR2 = 1 | SAEMPAI2 = 1 |
SAEMPTU2 = 1 | SAEMPMA2 = 1 | SAOPAY = 1 | SAOTIME = 1 THEN SASUPP = 1;
ELSE SASUPP = 0;

/* SATIME */

IF SAACTY = 2 THEN SATIME = -1;
ELSE IF SAACTY = 1 THEN DO ;
IF SACLSHR2 NE -1 THEN SATIME = (SACLSHR1 + SACLSHR2) * SAWGT;
ELSE IF SACLSHR1 NE -1 THEN SATIME = SACLSHR1 * SAWGT;
ELSE SATIME = 0;
END;

/* VOCSUPP1 */

IF CRVODIP = 2 THEN VOCSUPP1 = -1;
ELSE IF (VOWRKPL1 = 1 | VOWRKHR1 = 1 | VOEMPAI1 = 1 | VOEMPTU1 = 1 | VOEMPMA1 = 1) OR
(VOWRKPL2 = 1 | VOWRKHR2 = 1 | VOEMPAI2 = 1 | VOEMPTU2 = 1 | VOEMPMA2 = 1) OR
(VOWRKPL3 = 1 | VOWRKHR3 = 1 | VOEMPAI3 = 1 | VOEMPTU3 = 1 | VOEMPMA3 = 1)
THEN VOCSUPP1 = 1;
ELSE VOCSUPP1 = 0;

/* VONEW */

IF VOREAS3 > -1 THEN VONEW = 3;
ELSE IF VOREAS2 > -1 THEN VONEW = 2;
ELSE IF VOREAS1 > -1 THEN VONEW = 1;
ELSE VONEW = -1;

/* WRACTY */

IF WRNEW > 0 THEN WRACTY = 1;
ELSE WRACTY = 2;

/* WRNEW */

WRNEW = 0;
ARRAY _CR FCREAS1-FCREAS20;
DO OVER _CR;
IF _CR IN (1, 3) THEN WRNEW = WRNEW + 1;
END;
IF WRNEW = 0 THEN WRNEW = -1;

/* WRSUPP */

IF WRACTY = 2 then WRSUPP = -1;
ELSE IF (WRPROVE1 = 1 | WRWRKPL1 = 1 | WRWRKHR1 = 1 | WREMPAI1 = 1 | WREMPMU1 = 1 |
WREMPMA1 = 1) OR (WRPROVE2 = 1 | WRWRKPL2 = 1 | WRWRKHR2 = 1 | WREMPAI2 = 1 |
WREMPMU2 = 1 | WREMPMA2 = 1) OR (WRPROVE3 = 1 | WRWRKPL3 = 1 | WRWRKHR3 = 1 |
WREMPAI3 = 1 | WREMPMU3 = 1 | WREMPMA3 = 1) OR (WRPROVE4 = 1 | WRWRKPL4 = 1 |
WRWRKHR4 = 1 | WREMPAI4 = 1 | WREMPMU4 = 1 | WREMPMA4 = 1) OR WROPAY = 1 OR
WROTIME = 1 THEN WRSUPP = 1;
ELSE WRSUPP = 0;

/* WRTIME */

IF WRACTY = 2 THEN WRTIME = -1;
ELSE IF WRACTY = 1 THEN DO;
IF WRCLSHR4 NE -1 THEN WRTIME = (WRCLSHR1 + WRCLSHR2 + WRCLSHR3 + WRCLSHR4) *
WRWGT;
ELSE IF WRCLSHR3 NE -1 THEN WRTIME = (WRCLSHR1 + WRCLSHR2 + WRCLSHR3) * WRWGT;
ELSE IF WRCLSHR2 NE -1 THEN WRTIME = (WRCLSHR1 + WRCLSHR2) * WRWGT;
ELSE IF WRCLSHR1 NE -1 THEN WRTIME = WRCLSHR1 * WRWGT;
ELSE WRTIME = 0;
END;

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APPENDIX F

ADULT EDUCATION DATA FILE CODEBOOK

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APPENDIX G

INDUSTRY AND OCCUPATION CODING MANUAL

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INDUSTRY AND OCCUPATION CODING

1. General Approach

Industries and occupations reported in the Adult Education Survey of the 2005 National Household Education Surveys Program (AE-NHES:2005) will be coded according to the rules of the *North American Industry Classification System Manual* (2002) and the *Standard Occupational Classification Manual* (2000). Rather than using highly detailed categories for industry (NAICS) and occupation (SOC), the AE-NHES:2005 will use aggregated categories, similar to the approach used in prior NHES data collections. This coding manual provides general approaches to coding both industry and occupation. The 2-digit and 3-digit NAICS and SOC codes associated with each of the NHES categories are provided in Sections 2 and 3, respectively. Sometimes SOC codes with more than 3-digits are used to group occupations within NHES categories.

The AE-NHES:2005 **industry** categories are comprised of industry codes listed at the 2-digit and 3-digit levels as delineated in the *North American Industry Classification System Manual* (2002). In some cases, 2-digit codes will appear in multiple NHES categories, e.g. code 72 in NHES categories 07 and 09. For these cases, the 3-digit codes will serve as the differentiators for placement in the appropriate NHES categories.

The AE-NHES:2005 categories for **industry** are:

- | | |
|--|--|
| 01. Agriculture, Forestry and Fishing | NAICS code 11 |
| 02. Mining..... | NAICS code 21 |
| 03. Construction..... | NAICS code 23 |
| 04. Manufacturing | NAICS codes 31-33 |
| 05. Transportation & Public Utilities..... | NAICS codes 22, 48, 49, 56 |
| 06. Wholesale Trade..... | NAICS code 42 |
| 07. Retail Trade | NAICS codes 44, 45 & 72 (selected codes) |
| 08. Finance, Insurance, and Real Estate..... | NAICS codes 52, 53 & 55 |
| 09. Services, except Health and Education..... | NAICS codes 54, 56, 71, 72 (selected codes) & 81 |
| 10. Health Services | NAICS code 62 |
| 11. Educational Services | NAICS code 61 |
| 12. Public Administration | NAICS code 92 |
| 13. Information | NAICS code 51 |
| 14. Non-Classifiable Establishments | NAICS code 99 |

The AE-NHES:2005 **occupation** categories are comprised of occupation codes listed at the 2-digit (e.g. 11-0000) and 3-digit level (e.g. 11-1000) as delineated in the *Standard Occupational Classification Manual* (2000). In some cases, 2-digit codes will appear in multiple NHES categories, e.g. code 19 in NHES categories 03 and 04. For these cases, 3-digit or more codes will serve as the differentiators for placement in the appropriate NHES categories.

The AE-NHES:2005 categories for **occupation** are:

- | | |
|--|---|
| 01. Executive, Administrative, and Managerial Occupations | SOC codes 11, 13 |
| 02. Engineers, Surveyors, and Architects | SOC code 17 (selected codes) |
| 03. Natural Scientists and Mathematicians | SOC codes 15 and 19 (selected codes) |
| 04. Social Scientists, Social Workers, Religious Workers, and Lawyers..... | SOC codes 19 (selected codes) , 21, 23 |
| 05. Teachers: College, University, and other Postsecondary Institution; Counselors, Librarians, Archivists | SOC code 25 (selected codes) |
| 06. Teachers, Except Postsecondary Institution | SOC code 25 (selected codes) |
| 07. Health Diagnosing and Treating Practitioners..... | SOC code 29 (selected codes) |
| 08. Registered Nurses, Pharmacists, Dieticians, Therapists, and Physician’s Assistants..... | SOC code 29 (selected codes) |
| 09. Writers, Artists, Entertainers, and Athletes | SOC code 27 |
| 10. Health Technologists and Technicians | SOC code 29 (selected codes) |
| 11. Technologists and Technicians, except Health..... | SOC codes 17, 19 (selected codes for both) |
| 12. Marketing and Sales Occupations..... | SOC code 41 |
| 13. Administrative Support Occupations, including Clerical | SOC code 43 |
| 14. Service Occupations | SOC codes 31, 33, 35, 37 (selected codes), 39 |
| 15. Agricultural, Forestry, and Fishing Occupations | SOC code 45 |
| 16. Mechanics and Repairers | SOC code 49 |
| 17. Construction and Extractive Occupations..... | SOC code 47 |
| 18. Precision and Production Working Occupations..... | SOC code 51 |
| 19. Transportation and Material Moving Occupations | SOC code 53 |
| 20. Miscellaneous Occupations..... | SOC code 55, 99 |

When coding **industry** and **occupation** codes in the NHES:2005, five variables will be used. These variables include:

- Industry;
- Names of employer;
- Occupation;
- Main duties; and
- Educational attainment.

For the most part, two variables will be used in coding the respondent’s industry: the name of the employer and the respondent’s description of the industry. In many cases, the industry string alone will be sufficient to code the type of industry (e.g., retail store). The AE-NHES:2005 restricted-use data file¹ contains verbatim strings of the variables that are used for coding industry. The variables containing the verbatim strings are INDUSTRY for the respondent’s industry and EMPLNAME for name of the respondent’s employer. The AE public use data file contains the industry codes under the variable name FNAICS.

¹The restricted-use data file can be obtained under a special licensing agreement with NCES.

For coding occupation, coders will rely primarily on the respondent's occupation and duties. The specific duties given by the respondent often help to classify the occupation. The respondent's highest education is available to use when the occupation cannot be coded with the job title and duties alone. The AE-NHES:2005 restricted-use data file contains verbatim strings of the variables that are used for coding occupation. The variables containing the verbatim strings are PROFESSN for the respondent's occupation and DUTIES and DUTIES2 for the respondent's main duties. The AE public use data file contains the occupation codes under the variable name FSOC.

2. Industry (NAICS) Coding

This section discusses the aggregated categories that will be used for coding *industry* in the NHES:2005. Under each NHES category, there is a listing of the 2-digit and 3-digit NAICS codes that are included. For example, NHES industry category 01, Agriculture, Forestry, & Fishing, includes all NAICS industry codes beginning with 11. The AE-NHES:2005 public data file contains the NHES industry category codes; the variable name is FNAICS.

01 Agriculture, Forestry, and Fishing

This category includes all NAICS codes associated with agriculture, forestry, and those associated with fishing, hunting, and trapping. This includes NAICS category 11 and its subgroups. Examples are:

- 11 Agriculture, Forestry, Fishing, and Hunting
 - 111 Crop production
 - 112 Animal production
 - 113 Forestry and logging
 - 114 Fishing, hunting and trapping
 - 115 Support activities for agriculture and forestry
-

02 Mining

This category includes all NAICS codes associated with metal mining, coal mining, oil and gas extraction, and mining of nonmetallic minerals. This includes NAICS category 21 and its subgroups. Examples are:

- 21 Mining
 - 211 Oil and gas extraction
 - 212 Mining (except oil and gas)
 - 213 Support activities for mining
-

03 Construction

This category includes all NAICS codes associated with residential and nonresidential building construction; heavy construction such as highways, bridges, and tunnels; and special construction trade contractors in areas such as plumbing and heating, or electrical wiring. This includes NAICS category 23 and its subgroups. Examples are:

- 23 Construction
 - 236 Construction of buildings
 - 237 Heavy and civil engineering construction
 - 238 Specialty trade contractors
-

04 Manufacturing

This is a very broad category that includes the manufacture (making) of most kinds of products. It is a comprehensive list including food, clothing, furniture, wood products, paper products, printing and publishing, chemical and petroleum products (not including oil and gas extraction), rubber, glass, concrete, stone, and metal products, electronics and other equipment, transportation equipment, and machinery. This encompasses NAICS category codes 31–33 and their subgroups. Examples are:

31-33 Manufacturing

- 311 Food manufacturing
 - 312 Beverage and tobacco product manufacturing
 - 313 Textile mills
 - 314 Textile product mills
 - 315 Apparel manufacturing
 - 316 Leather and allied product manufacturing

 - 321 Wood product manufacturing
 - 322 Paper manufacturing
 - 323 Printing and related support activities
 - 324 Petroleum and coal products manufacturing
 - 325 Chemical manufacturing
 - 326 Plastics and rubber products manufacturing
 - 327 Nonmetallic mineral product manufacturing

 - 331 Primary metal manufacturing
 - 332 Fabricated metal product manufacturing
 - 333 Machinery manufacturing
 - 334 Computer and electronic product manufacturing
 - 335 Electrical equipment, appliance, and component manufacturing
 - 336 Transportation equipment manufacturing
 - 337 Furniture and related product manufacturing
 - 339 Miscellaneous manufacturing
-

05 Transportation and Public Utilities

This category includes a variety of public utilities such as electric power generation, natural gas distribution, water supply, sewage treatment facilities, and steam and air conditioning supply. It also includes air, rail water and truck transportation, local transportation such as buses, commuter coaches, streetcars, and taxis; and the postal service. This category includes NAICS categories 22, 48, 49 and 56 and their subgroups, with examples listed below:

22 Utilities

221 Utilities

48-49 Transportation & Warehousing

481 Air transportation
482 Rail transportation
483 Water transportation
484 Truck transportation
485 Transit and ground passenger transportation
486 Pipeline transportation
487 Scenic and sightseeing transportation
488 Support activities for transportation

491 Postal service

492 Couriers and messengers
493 Warehousing and storage

56 Waste Management & Remediation Services

562 Waste management and remediation services

06 Wholesale Trade

Wholesale trade refers to the sale of goods to retailers, contractors, business users, those acting as their agents, or to other wholesalers. It includes durable goods such as machinery and appliances, furniture and home furnishings, construction materials, and so on. It also includes wholesale trade of nondurable goods like clothing, paper products, groceries, chemicals, books and newspapers, and so on. This includes NAICS category code 42 and its subgroups. Examples are as follows:

42 Wholesale Trade

423 Merchant wholesalers, durable goods
424 Merchant wholesalers, nondurable goods
425 Wholesale electronic markets and agents and brokers

07 Retail Trade

Retail trade refers to establishments engaged in selling merchandise for personal or household consumption, and providing services incidental to the sale of goods. The NAICS categories included are 44, 45, and 72 and their subgroups. The examples below show the wide range of retail trade establishments included in this category.

44 Retail Trade

- 441 Motor vehicles and parts dealers
- 442 Furniture stores
- 443 Electronics and appliance stores
- 444 Building material and garden equipment and supplies dealers
- 445 Food and beverage stores
- 446 Health and personal care stores
- 447 Gasoline stations
- 448 Clothing and clothing accessories stores

45 Retail Trade

- 451 Sporting goods, hobby, book and music stores
- 452 General merchandise stores
- 453 Miscellaneous store retailers
- 454 Nonstore retailers

72 Accommodation and Food Services (Accommodation portion included under 09)

- 722 Food services and drinking places
-

08 Finance, Insurance, and Real Estate

This category includes financial institutions such as banks, savings institutions, credit unions, and mortgage bankers and brokers. It also includes securities and commodities brokers and dealers, the insurance industry, real estate, and other investment businesses. NAICS codes for this group include 52, 53 and 55 and their subgroups. Examples include:

52 Finance and insurance

- 521 Monetary authorities – central bank
- 522 Credit intermediation and related activities
- 523 Securities, commodity contracts, and other financial investments and related activities
- 524 Insurance carriers and related activities
- 525 Funds, trusts, and other financial vehicles

53 Real estate and rental and leasing

- 531 Real estate
- 532 Rental and leasing services
- 533 Lessors of nonfinancial intangible assets (except copyrighted works)

55 Management of companies and enterprises

- 551 Management of companies and enterprises
-

09 Services except Health and Education

Services are businesses engaged in providing a wide variety of services for individuals, business and government, and other organizations. These businesses include hotels and lodging places; establishments providing personal, business, repair, and amusement services; legal, engineering and other professional services; and membership organizations. The NAICS category codes include 54, 56, 71, 72, and 81 and their corresponding subgroups. Examples are:

- 54 Professional, scientific and technical services
 - 541 Professional, scientific and technical services

- 56 Administrative and support services
 - 561 Administrative and support services

- 71 Arts, entertainment and recreation
 - 711 Performing arts, spectator sports and related industries
 - 712 Museums, historical sites and similar institutions
 - 713 Amusement, gambling, and recreational industries

- 72 Accommodation and Food Services (Food Services portion included under 07)
 - 721 Accommodation

- 81 Other services (except public administration)
 - 811 Repair and maintenance
 - 812 Personal and laundry services
 - 813 Religious, grantmaking, civic, professional and similar organizations
 - 814 Private households

***NOTE:** Two kinds of services industries (**Health Services and Educational Services**) are **NOT** included in here. There are two separate NHES categories for them, shown below.*

10 Health Services

Health services include doctors' and dentists' offices and clinics, other health practitioners' offices, nursing and personal care facilities, hospitals, medical and dental laboratories, home health care services, and miscellaneous health and allied health services. Social assistance including individual and family services, community emergency and relief services, vocational rehabilitation and child day care services are included in this category. This includes NAICS category 62 and its subgroups. Please see the examples that follow:

- 62 Health Care and Social Assistance
 - 621 Ambulatory health care services
 - 622 Hospitals
 - 623 Nursing and residential care facilities
 - 624 Social assistance
-

11 Educational Services

Educational services include elementary and secondary schools, colleges and junior colleges, universities, professional schools (e.g., medical or law school), vocational schools, business schools, sports and recreation instruction and other schools and educational services. This includes NAICS code 61 and its subgroup.

- 61 Education Services
 - 611 Educational services
-

12 Public Administration

This category includes executive, legislative, judicial, administrative and regulatory activities of Federal, State, local, and international governments. It does not include private business establishments, which are included in other categories based on the activity in which they are engaged. For example, a private accounting firm that conducts independent audits for a local government agency would be included in 09 - Services, and not in 12 - Public Administration. This includes NAICS category 92 and its subgroups. Examples are:

- 92 Public administration
 - 921 Executive, legislative, and other general government support
 - 922 Justice, public order, and safety activities
 - 923 Administration of human resource programs
 - 924 Administration of environmental quality programs
 - 925 Administration of housing programs, urban planning, and community development
 - 926 Administration of economic programs
 - 927 Space research and technology
 - 928 National security and international affairs
-

13 Information

This group includes publishing, motion picture and sound recording industries, broadcasting (except Internet), Internet publishing, broadcasting and telecommunications. It also includes telecommunications, internet service providers and other information services. This includes NAICS category 51 and its subgroups. Examples include:

51 Information

- 511 Publishing industries (except Internet)
- 512 Motion picture and sound recording industries
- 515 Broadcasting (except Internet)
- 516 Internet publishing and broadcasting
- 517 Telecommunications
- 518 Internet service providers, web search portals, and data processing services
- 519 Other information services

14 Nonclassifiable Establishments

This group includes establishments that cannot be placed in any other industry.

- 99 Nonclassifiable establishments
-

3. Occupation (SOC) Coding

This section describes the aggregated categories that will be used for coding *occupation* in the NHES:2005. Under each NHES occupation category, there is a listing of the 2-digit and 3-digit or more SOC codes that are included. For example, NHES occupation category 01, Executive, Administrative, and Managerial Occupations includes SOC codes beginning with 11 and 13. The AE-NHES:2005 public data file contains the NHES occupation category codes and the variable name is FSOC.

01 Executive, Administrative, and Managerial Occupations

This category includes top and middle management occupations and occupations that directly support management. Top level managers are persons concerned with policy making, planning, staffing, directing and/or controlling activities. Middle managers include persons who plan, or organize, direct and/or control activities at the operational level. Legislators are also included in this category. Workers in this category are not directly concerned with the fabrication of products or with the provision of services. Other officials and administrators include consultants, library directors, custom-house brokers, and location managers.

- 11-0000 Management Occupations
 - 11-1000 Top executives
 - 11-2000 Advertising, marketing, promotions, public relations, and sales managers
 - 11-3000 Operations specialties managers
 - 11-9000 Other management occupations

- 13-0000 Business and Financial Operations Occupations
 - 13-1000 Business operations specialists
 - 13-2000 Financial specialists

NOTE: Supervisors generally supervise and coordinate activities of workers engaged in one or more occupations and they are categorized with the occupation they supervise. For example, supervisors of agricultural workers are included in category 15 (Agricultural, Forestry, and Fishing Occupations). On the other hand, managers plan, organize, direct, and control the major functions of an industrial, commercial, governmental, or other establishment.

02 Engineers, Surveyors, and Architects

The category includes occupations concerned with applying principles of architecture and engineering in the design and construction of buildings, equipment and processing systems, highways and roads, and land utilization. Code computer software engineers under category 03 - Natural Scientists and Mathematicians.

- 17-0000 Architecture and Engineering Occupations
 - 17-1000 Architects, surveyors, and cartographers
 - 17-2000 Engineers
-

03 Natural Scientists and Mathematicians

This category includes those engaged primarily in the application of scientific principles to research and development. Natural scientists are those in the physical sciences (e.g., chemistry, physics) and the life sciences (e.g., biology, agriculture, and medicine). In addition, this category includes those in computer science, mathematics (including statistics), and operations research. Physical, life, and mathematical technicians are to be grouped under 11, instead of 3. Computer software engineers, computer programmers, computer systems analysts and database administrators are included in this category.

15-0000 Computer and Mathematical Occupations
15-1000 Computer specialists
15-2000 Mathematical science occupations

19-0000 Life and Physical Science Occupations
19-1000 Life scientists
19-2000 Physical scientists

NOTE: Those who teach in these fields are classified under teaching (see 05 and 06).

04 Social Scientists, Social Workers, Religious Workers, and Lawyers

This division includes occupations concerned with the social needs of people and in basic and applied research in the social sciences. Social scientists, counselors, social workers, religious workers, lawyers, judges and paralegals are included in this category.

19-0000 Social Science Occupations
19-3000 Social scientists and related workers

21-0000 Community and Social Services Occupations
21-1000 Counselors, social workers, and other community and social service specialists
21-2000 Religious workers

23-0000 Legal Occupations
23-1000 Lawyers, judges, and related workers
23-2000 Legal support workers

05 Teachers: College, University, and other Postsecondary Institution; Counselors, Librarians, Archivists

This NHES category includes those who teach at higher education institutions and at other postsecondary (after high school) institutions, such as vocational institutes. In addition, librarians, archivists and curators are included here.

25-0000	Education, Training, and Library Occupations
25-1000	Postsecondary teachers
25-4000	Librarians, curators, and archivists

06 Teachers, except Postsecondary Institution

This category includes prekindergarten and kindergarten teachers, elementary and secondary teachers, special education teachers, instructional coordinators, teacher assistants and adult education teachers (outside postsecondary).

25-0000	Education, training and library occupations
25-2000	Primary, secondary, and special education school teachers
25-3000	Other teachers and instructors
25-9000	Other education, training and library occupations

NOTE: While early childhood teachers are included in this category, child care workers at day care centers are classified under category 14 (Service Occupations).

07 Health Diagnosing and Treating Practitioners

This category includes health care professionals who diagnose and treat patients. In addition to physicians, dentists, and veterinarians, this category includes optometrists, podiatrists, and other diagnosing and treating professionals, such as chiropractors, hypnotherapists, and acupuncturists.

29-0000	Healthcare Practitioners and Technical Occupations
29-1000	Health Diagnosing and Treating Practitioners
29-1010	Chiropractors
29-1020	Dentists
29-1040	Optometrists
29-1060	Physicians and surgeons
29-1080	Podiatrists
29-1130	Veterinarians
29-1190	Miscellaneous health diagnosing and treating practitioners

NOTE: This category does not include registered nurses, LPN's, or assisting health occupations. Registered nurses are included in category 08 (Registered Nurses, Pharmacists, Dieticians, Therapists, and Physician's Assistants). LPN's are included in category 10 (Health Technologists and Technicians). Assisting health occupations (e.g., nurses aide or dental assistants) are included under category 14 (Service Occupations).

08 Registered Nurses, Pharmacists, Dietitians, Therapists, and Physician’s Assistants

This category includes occupations concerned with the maintenance of health, the prevention of illness, and the care of the ill through the provision and supervision of nursing care; compounding drugs, planning food service or nutritional programs; providing assistance to physicians; and the provision of therapy and treatment as directed by physicians.

- 29-0000 Healthcare Practitioners and Technical Occupations
 - 29-1000 Health Diagnosing and Treating Practitioners
 - 29-1030 Dietitians and nutritionists
 - 29-1050 Pharmacists
 - 29-1070 Physician assistants
 - 29-1110 Registered nurses
 - 29-1120 Therapists

NOTE: This category does not include assisting occupations, such as nurses aide or dental assistants, etc., which are included under category 14 (Service Occupations). LPN’s are included under category 10 (Health Technologists and Technicians).

09 Writers, Artists, Entertainers, and Athletes

This occupational category includes occupations concerned with creating and executing artistic works in a personally interpreted manner, by painting, sculpturing, drawing, engraving, etching, and other methods; creating designs for products and interior decorations; designing and illustrating books, magazines, and other publications; writing; still, motion picture and television photography/filming; producing, directing, staging, acting, dancing, singing in entertainment; and participating in sports and athletics as competitor or player and administering and directing athletic programs.

- 27-0000 Arts, Design, Entertainment, Sports, and Media Occupations
 - 27-1000 Art and design workers
 - 27-2000 Entertainers and performers, sports and related workers
 - 27-3000 Media and communication workers
 - 27-4000 Media and communication equipment workers

10 Health Technologists and Technicians

This category includes occupations concerned with providing technical assistance in the provision of health care. For example, clinical laboratory technologists and technicians, dental hygienists, radiologic technicians, licensed practical nurses (LPN's), emergency medical technicians (EMT's), opticians and other health technologists are included here.

29-0000 Health Care Technical Occupations
29-2000 Health technologists and technicians
29-9000 Other health care practitioners and technical occupations

NOTE: Nurses aides or dental assistants are included under category 14 (Service Occupations).

11 Technologists and Technicians, except Health

This group includes those providing technical assistance in engineering and scientific research, development, testing, and related activities, as well as operating and programming technical equipment and systems.

17-0000 Architecture and engineering occupations
17-3000 Drafters, engineers and mapping technicians

19-0000 Life, physical, and social science occupations
19-4000 Life, physical, and social science technicians

12 Marketing and Sales Occupations

This category includes occupations involved in selling goods or services, purchasing commodities and property for resale, and conducting wholesale or retail business.

41-0000	Sales and Related Occupations
41-1000	Supervisors, sales workers
41-2000	Retail sales workers
41-3000	Sales representatives, services
41-4000	Sales representatives, wholesale and manufacturing
41-9000	Other sales and related workers

13 Administrative Support Occupations, including Clerical

Occupations involved in preparing, transcribing, transferring, systematizing, and preserving written communications and records; collecting accounts; gathering and distributing information; operating office machines and data processing equipment; operating switchboards; distributing mail and messages; and other support and clerical duties such as bank teller, data entry keyer, etc.

43-0000	Office and Administrative Support Occupations
43-1000	Supervisors, office, and administrative support workers
43-2000	Communications equipment operators
43-3000	Financial clerks
43-4000	Information and record clerks
43-5000	Material recording, scheduling, dispatching, and distributing workers
43-6000	Secretaries and administrative assistants
43-9000	Other office and administrative support workers

14 Service Occupations

The category includes occupations providing personal and protective services to individuals, food preparation and healthcare support. Some examples include food service, health service (e.g, aides or assistants), fire fighters, and personal services.

- 31-0000 Healthcare Support Occupations
 - 31-1000 Nursing, psychiatric, and home health aides
 - 31-2000 Occupational and physical therapist assistants and aides
 - 31-9000 Other healthcare support occupations

- 33-0000 Protective Service Occupations
 - 33-1000 First line supervisors/managers, protective service workers
 - 33-2000 Fire fighting and prevention workers
 - 33-3000 Law enforcement workers
 - 33-9000 Other protective service workers

- 35-0000 Food Preparation and Serving Related Occupations
 - 35-1000 Supervisors, food preparation and serving workers
 - 35-2000 Cooks and food preparation workers
 - 35-3000 Food and beverage serving workers
 - 35-9000 Other food preparation and serving related workers

- 37-0000 Building and grounds cleaning and maintenance occupations
 - 37-1000 Supervisors, building and grounds cleaning and maintenance workers
 - 37-2000 Building Cleaning and pest control workers
 - 37-3000 Grounds maintenance workers

- 39-0000 Personal Care and Service Occupations
 - 39-1000 Supervisors, personal care and service workers
 - 39-2000 Animal care and service workers
 - 39-3000 Entertainment attendants and related workers
 - 39-4000 Funeral service workers
 - 39-5000 Personal appearance workers
 - 39-6000 Transportation, tourism and lodging attendants
 - 39-9000 Other personal care and service workers

NOTE: Cooks and clerks at fast-food restaurants are included in this category.

15 Agricultural, Forestry, and Fishing Occupations

This category is concerned with the production, propagation (breeding/growing), gathering, and catching of animals, animal products, and plant products (timber, crop, and ornamental); the provision of services associated with agricultural production; and game farms, fisheries, and wildlife conservation.

45-0000	Farming, Fishing and Forestry Occupations
45-1000	Supervisors, farming, fishing, and forestry workers
45-2000	Agricultural workers
45-3000	Fishing and hunting workers
45-4000	Forest, conservation and logging workers

16 Mechanics and Repairers

Mechanics and repairers are persons who do adjustment, maintenance, part replacement, and repair of tools, equipment, and machines. Installation may be included if installation is usually done in conjunction with other duties of the repairers.

49-0000	Installation, Maintenance, and Repair Occupations
49-1000	Supervisors of installation, maintenance and repair workers
49-2000	Electrical and electronic equipment mechanics, installers, and repairers
49-3000	Vehicle and mobile equipment mechanics, installers, and repairers
49-9000	Other installation, maintenance, and repair occupations

17 Construction and Extractive Occupations

This category includes occupations that normally are performed at a specific site, which will change over time, in contrast to production workers, where the work is usually at a fixed location. Construction workers include those in overall construction, brickmasons, stonemasons, carpenters, electricians, drywall installers, paperhangers and painters, etc. Extractive occupations include oil well drillers, mining machine operators, and so on. This category includes occupations that involve helping other workers and performing routine nonmachine tasks. A wide variety of helpers are included in this category.

47-0000	Construction and Extraction Occupations
47-1000	Supervisors, construction and extraction workers
47-2000	Construction trades workers
47-3000	Helpers, construction trades
47-4000	Other construction and related workers
47-5000	Extraction workers

18 Precision and Production Working Occupations

This category includes occupations concerned with setting up, operating, and tending of machines and hand production work usually in a factory or other fixed place of business. It also includes occupations concerned with performing tasks that require a high degree of precision or attainment of rigid specification and operating plants or large systems. Examples are tool and die makers, pattern and model makers, machinists, jewelers, engravers, and so on. Also included are some food-related occupations including butchers and bakers. Plant and system operators include water and sewage, gas, power, chemical, petroleum, and other plant or system operators.

51-0000	Precision and Production Occupations
51-1000	Supervisors, precision and production workers
51-2000	Assemblers and fabricators
51-3000	Food processing workers
51-4000	Metal workers and plastic workers
51-5000	Printing workers
51-6000	Textile, apparel, and furnishings workers
51-7000	Woodworkers
51-8000	Plant and system operators
51-9000	Other Production Occupations

19 Transportation and Material Moving Occupations

This category includes occupations concerned with operating and controlling equipment used to facilitate the movement of people or materials and the supervising of those workers. This category includes occupations that involve helping other workers and performing routine nonmachine tasks. A wide variety of helpers, handlers, etc., are included in this category.

53-0000	Transportation and Material Moving Occupations
53-1000	Supervisors, transportation and material moving workers
53-2000	Air transportation workers
53-3000	Motor vehicle operators
53-4000	Rail transportation workers
53-5000	Water transportation workers
53-6000	Other transportation workers
53-7000	Material moving workers

20 Miscellaneous Occupations

Occupations that are not included in any of the categories above are included here.

55-0000	Military Specific Occupations
55-1000	Military officer special and tactical operations leaders/managers
55-2000	First-line enlisted military supervisor/managers
55-3000	Military enlisted tactical operations and air/weapons specialists and crew members
99	Occupations not included elsewhere

4. Crosswalk of Industry and Occupation Categories between NHES:2005 and NHES:(2001, 1999, 1995)

This section provides information on a crosswalk of industry and occupation categories between NHES:2005 and NHES: (2001, 1999, 1995). Tables 1 and 2 are keyed to NHES:2005 and NHES:(2001, 1999, 1995) industry and occupation categories.

Table 1. Crosswalk of Industry Categories between NHES:2005 and NHES:(2001, 1999, 1995)

NHES:2005 Industry Codes		NHES:(2001, 1999, 1995) Industry Codes	
01	Agriculture, Forestry, and Fishing	01	Agriculture, Forestry, and Fishing
02	Mining	02	Mining
03	Construction	03	Construction
04	Manufacturing	04	Manufacturing
05	Transportation and Public Utilities (includes US Postal Service; excludes Communications)	05	Transportation and Public Utilities (includes US Postal Service and Communications)
06	Wholesale Trade	06	Wholesale Trade
07	Retail Trade	07	Retail Trade
08	Finance, Insurance, and Real Estate	08	Finance, Insurance, and Real Estate
09	Services (excludes Motion Pictures)	09	Services (includes Motion Pictures)
10	Health Services	10	Health Services
11	Educational Services	11	Educational Services
12	Public Administration	12	Public Administration
13	Information (includes Publishing, Motion Pictures and Sound Recording, Broadcasting, Internet Publishing and Broadcasting, Telecommunications, ISPs and other Web-Related Services, Other Information Services)		
14	Nonclassifiable Establishments	13	Nonclassifiable Establishments

Table 2. Crosswalk of Occupation Categories between NHES:2005 and NHES:(2001, 1999, 1995)

NHES:2005 Occupation Codes		NHES:(2001, 1999, 1995) Occupation Codes	
01	Executive, Administrative, and Managerial Occupations	01	Executive, Administrative, and Managerial Occupations
02	Engineers, Surveyors, and Architects	02	Engineers, Surveyors, and Architects
03	Natural Scientists and Mathematicians	03	Natural Scientists and Mathematicians
04	Social Scientists, Social Workers, Religious Workers, and Lawyers	04	Social Scientists, Social Workers, Religious Workers, and Lawyers
05	Teachers: College, University, and other Postsecondary Institution; Counselors, Librarians, Archivists	05	Teachers: College, University, and other Postsecondary Institution; Counselors, Librarians, Archivists
06	Teachers, except Postsecondary Institution	06	Teachers, except Postsecondary Institution
07	Health Diagnosing and Treating Practitioners	07	Health Diagnosing and Treating Practitioners
08	Registered Nurses, Pharmacists, Dietitians, Therapists, and Physician's Assistants	08	Registered Nurses, Pharmacists, Dietitians, Therapists, and Physician's Assistants
09	Writers, Artists, Entertainers, and Athletes	09	Writers, Artists, Entertainers, and Athletes
10	Health Technologists and Technicians	10	Health Technologists and Technicians
11	Technologists and Technicians, except Health	11	Technologists and Technicians, except Health
12	Marketing and Sales Occupations	12	Marketing and Sales Occupations
13	Administrative Support Occupations, including Clerical	13	Administrative Support Occupations, including Clerical
14	Service Occupations	14	Service Occupations
15	Agricultural, Forestry, and Fishing Occupations	15	Agricultural, Forestry, and Fishing Occupations
16	Mechanics and Repairers	16	Mechanics and Repairers
17	Construction and Extractive Occupations	17	Construction and Extractive Occupations

Table 2. Crosswalk of Occupation Categories between NHES:2005 and NHES:(2001, 1999, 1995)—Continued

NHES:2005 Occupation Codes		NHES:(2001, 1999, 1995) Occupation Codes	
18	Precision and Production Working Occupations ¹	18	Precision Production Occupations
		19	Production Working Occupations
19	Transportation and Material Moving Occupations	20	Transportation and Material Moving Occupations
		21	Handlers, Equipment Cleaners, Helpers, and Laborers ²
20	Miscellaneous Occupations (includes Military Specific Occupations)	22	Miscellaneous Occupations (includes Military Specific Occupations)

¹ For NHES:2005, the Precision Production and Production Working Occupations were merged together into one category Precision and Production Working Occupations as consistent with the treatment of these occupations in the 2000 Standard Occupation Classification Manual (SOC).

² Category 21 (Handlers, Equipment Cleaners, Helpers, and Laborers) was not included for NHES:2005. This exclusion was due to the fact that the category was eliminated in the 2000 SOC Manual with the placement of these occupations under other occupational codes, e.g. Construction Helpers under code 17 (Construction and Extractive Occupations)

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APPENDIX H

MAJOR FIELD OF STUDY CODING MANUAL

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TABLE OF CONTENTS

	Page
I. BACKGROUND	H-1
II. CODING PROCEDURES	H-1
III. RESOLUTION OF AMBIGUOUS VERBATIM STRINGS	H-3
IV. LIST OF 2-DIGIT CIP CATEGORIES	H-15
V. ALPHABETIC INDEX OF ALL CIP CODES	H-17
VI. LIST OF MFOS EXAMPLES IN EACH CODING CATEGORY	H-39

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CODING MAJOR FIELDS OF STUDY

I. BACKGROUND

The Adult Education Survey of the 2005 National Household Education Surveys Program (AE-NHES:2005) collects major fields of study (MFOS) of postsecondary credential programs. Credential programs include any programs that award vocational or technical diplomas, associate's degrees, bachelor's degrees, master's degrees, doctorates, and professional degrees beyond a bachelor's degree. Each string of MFOS reported by the respondents was coded using two-digit categories of the *Classification of Instructional Programs (CIP)*.² The MFOS coding categories and coding procedures that were developed for the Adult Education Survey of the NHES:1995 are to be used for the NHES:2005.

This manual provides information to coders who are responsible for coding MFOS verbatim strings and supervisors who are responsible for supervising coding staff about the step-by-step procedures necessary to determine appropriate MFOS codes. In addition, this manual is intended to inform NHES data users of procedures and decisions rules associated with coding MFOS. The AE-NHES:2005 public data file contains the MFOS codes; the variable names are CRCIPF1, CRCIPF2, CRCIPF3, CRCIPF4, VOCIPF1, and VOCIPF2, VOCIPF3.

This manual includes specific decision rules that can be implemented for assigning codes to ambiguous verbatim strings of MFOS. Therefore, when assigning MFOS codes, the coders and supervisors are strongly encouraged not only to use verbatim strings of MFOS, but also to review and implement the decision rules discussed in this manual (see the Resolution of Ambiguous Verbatim Strings section). This manual includes the following five major sections:

- Coding Procedures;
- Resolution of Ambiguous Verbatim Strings;
- List of 2-digit CIP Categories;
- Alphabetic Index of All CIP Codes; and
- List of MFOS Examples in Each Category.

II. CODING PROCEDURES

Verbatim strings of MFOS reported by the respondents are the primary information used to determine appropriate MFOS codes. There are many cases in which verbatim strings exactly match the MFOS listed in the Alphabetic Index of All CIP Codes (e.g., Agriculture, Chemistry, Computer Sciences, Educational Psychology, Structural Engineering, etc.). In other cases, however, verbatim strings do not match the MFOS listed in the Alphabetic Index of All CIP Codes. Before assigning MFOS codes, it is necessary to refer to the *CIP* manual to obtain further information and to ensure that the placement of these cases is appropriate. At the same time, additional information, such as degree types and providers may be used to assist the coders in assigning appropriate codes. In the NHES:1995, course names reported in the credential section of the interview were also used, if available, to help coders assign appropriate codes; however, the credential course names are not being collected in the NHES:2005.

It is important to note here that the use of course information in determining appropriate codes was not particularly fruitful in the NHES:1995. In some studies, full transcript information is used to code courses and major fields of study, and course catalogues from the institutions may also be available. This was not the case in the NHES:1995,

²Morgan, R.L., Hunt, E.S., & Carpenter, J.M. (1990 Edition). *Classification of instructional programs*. U.S. Department of Education, Office of Educational Research and Improvement, NCES 91-396.

which was a telephone survey of persons in their homes. Course names in the NHES:1995 were not collected for all credential programs, only for part-time enrollment. Also, because respondents used their own words to describe both courses and programs, course names were sometimes ambiguous. Finally, some respondents were taking courses for general requirements or electives, so that their courses did not provide information to clarify the major field of study.

Specific Coding Steps

Assigning MFOS codes involves up to seven steps. It is not necessary to take all seven steps for all cases. Steps 1 through Step 3 are used to determine the most appropriate MFOS code for the majority of cases; however, all seven steps are sometimes necessary before assigning appropriate MFOS codes. The seven steps are described below.

- Step 1** Read verbatim string of MFOS.
- Step 2** Search for matching strings from the Alphabetic Index of All CIP Codes found in section V of this manual.
- Step 3** If the verbatim string matches one of the strings in the Alphabetic Index of All CIP Codes, identify the category and enter the 2-digit code for the case. Then, go to the next case. Otherwise, go to Step 4.
- Step 4** Because respondents use their own words when reporting major fields of study, the verbatim strings do not always exactly match strings in the Alphabetic Index of All CIP Codes. If the substantive area of study clearly fits into the strings found in the Alphabetic Index of All CIP Codes, the coder should identify the category and enter the 2-digit code for the case.

To determine the substantive areas of the field of study, the noun of the verbatim string generally provides more of the substance than the adjective. For example, the substantive area for interior design is “design,” which is a part of the visual and performing arts. Since the Alphabetic Index of All CIP Codes contains the exact string (see page F-29 of this manual), the appropriate MFOS code for interior design is Category 50 (Visual and Performing Arts).

However, there are other cases in which the adjective of the verbatim string provides more of the substance than the noun. For example, if the verbatim response of the MFOS is architectural design, the Alphabetic Index of All CIP Codes contains several strings (i.e., architecture, architectural environmental design, and architectural urban design and planning) that relate to the reported verbatim string. In this case, category 04 (Architecture & Related Programs) would be the appropriate code, because the substantive area appears to be “architecture” rather than “design” in this case. **It is important to note that although Category 04 is the right placement for architectural design, the coders should always look at the noun string (i.e., design) to ensure that assigned codes are most appropriate.**

- Step 5** If the verbatim string does not match the strings in the Alphabetic Index of All CIP Codes at all, coders should refer to the *CIP* manual for further information. In order to look for information in the *CIP* manual, they should refer to the list of CIP categories found in this manual (see page H-17) and identify possible placement using substantive areas of MFOS (i.e., business, education, sciences, engineering, etc.) that the verbatim string best represents. Then, they should read the information in the *CIP* manual and enter the code if the information describes the substantive area of the verbatim string.

For example, if the verbatim string of the MFOS is counseling, this case could be coded in either 13, Education or 42, Psychology. In this case, the coders need to refer to both the education and the psychology sections in the *CIP* manual to examine which section contains information that describes the reported verbatim string. Since the reported verbatim string does not contain the word “education,” and the *CIP* manual includes the vast majority of counseling programs in the psychology section (see page 137 of the *CIP* manual), this case should be assigned to 42, Psychology.

Remember that this manual also includes a number of specific decision rules for assigning MFOS codes for ambiguous verbatim strings. You should review any relevant information in section III.

Step 6 If coders have difficulty determining appropriate 2-digit codes from the *CIP* manual, they should write problems along with case ID numbers on a problem log sheet. A problem log of these cases should be maintained and supervisors should review these cases on a flow basis.

When recording the problems, the coders are asked to indicate alternative codes that they consider and the final codes that they assign to the problem cases. Supervisors should review all alternative codes before determining the most appropriate codes for the problem cases.

Example: If the reported verbatim string of MFOS is air conditioning and refrigeration and the coder has difficulty in assigning a code, the coder records this case in the problem log. The coder indicates that he/she considered three possible codes for this case (i.e., 14, Engineering; 15, Engineering-Related Technologies; or 47, Mechanics & Repairs) and assigned 91, Indeterminable. Then, the supervisor first reviews the three codes that the coder indicated and will look for any other alternative codes before assigning the final code.

When the reported verbatim strings do not appear to be representative of a true MFOS string, the coders should also record these verbatim strings on the problem log sheet.

Example: If the verbatim strings of MFOS are a bachelor of art & science or an associate of art, these are simply undifferentiated bachelor’s or associate’s degree titles. These cases should be assigned to 91, Indeterminable, since the content is not distinct enough to assign the case to a specific discipline.

Step 7 If the information reported by the respondents is not sufficient to determine an appropriate code, then code 91, Indeterminable, should be assigned. Before assigning the Indeterminable code, coders should refer to the *CIP* manual as well as the decision rules included in this manual.

The coders should be instructed not to make any decisions that exceed the rules in this manual or the *CIP* manual. All cases assigned to 91, Indeterminable, should be reviewed by supervisors for alternative coding assignment.

III. RESOLUTION OF AMBIGUOUS VERBATIM STRINGS

There are some cases in which assigning appropriate MFOS codes is difficult for coders using the Alphabetic Index of All CIP Codes, mainly because respondents used their own words to describe MFOS. As stated in Step 6, these ambiguous verbatim strings should be recorded on the problem log sheet and reviewed by supervisors for possible placement.

When reviewing these ambiguous cases, supervisors will usually find that the *CIP* manual provides information for them to determine the most appropriate MFOS codes for them. Although the *CIP* manual does not specify programs

based on the type of degree or provider, this additional information can also be used to assign appropriate MFOS codes. For example, “electrical” should be coded 14, Engineering if the degree type is a bachelor’s degree or higher, but “electrical” should be coded 15, Engineering-Related Technologies if the degree type is an associate’s degree or vocational/technical diploma. The first section below includes examples of ambiguous cases for which degree and provider are useful in assigning codes.

The following is a discussion of ambiguous verbatim strings of MFOS recorded by the coders in the NHES:95 AE component. In the problem log sheet, the coders indicated that they were unsure about assigning codes for these ambiguous cases. To determine MFOS codes for them, specific decision rules were formulated for the cases, as needed.

In some cases, particularly in the very early stages of coding, cases were identified as problematic when they did, in fact, appear in the *CIP* manual. In these cases, the coders may have been unsure of the general area in which to look for the appropriate code. In some cases, the respondent may have used a technical term with which coders were unfamiliar, and they did not have sufficient information to begin their search (i.e., see Horology, below). In many of these cases, coders did not identify possible coding categories in the problem log. As a result of this initial difficulty, assignment of MFOS codes for the vast majority of the ambiguous cases is based on the information found in the *CIP* manual; page numbers of the *CIP* manual are indicated. The use of some of these examples in future training, and their inclusion in training exercises, may help to avoid the need to review some of these types of cases in future coding efforts.

In other cases, the response reported in the interview was truly ambiguous, and additional decision rules were needed for the classification of these cases. Both coders and supervisors are strongly advised to be familiar with decision rules included in this manual and to implement them, whenever necessary. The following is divided into three sections: (1) ambiguous engineering and health programs, (2) real estate programs, and (3) other ambiguous programs.

Ambiguous Engineering and Health Programs

This section covers those ambiguous engineering and health programs for which degree and provider are helpful in assigning the MFOS codes. Remember that the *CIP* manual does not specify by level so the degree/provider rule is not always helpful in determining the appropriate MFOS code. It should be noted that when more than one plausible code remains after considering degree/provider, the detailed description of content areas in the *CIP* manual should be used to select the appropriate MFOS code. The general rule is that if the degree is less than a bachelor’s degree, or the provider is a vocational school or technical institute, the program should be coded at the vocational level, e.g., 15, Engineering-Related Technologies. On the other hand, if the provider is a 4-year college or university, or the degree is a bachelor’s degree or above, the program should be coded at the more technical level, e.g., 14, Engineering or 51, Health Professions and Related Sciences.

Below is a discussion of verbatim strings illustrating the process of reviewing possible codes and implementing decision rules related to degrees or providers. These appear in alphabetical order within the engineering-related group and the health-related group.

Aeronautic science: The term “aeronautic” appears in both category 14, Engineering (e.g., aerospace and aeronautical engineering, *CIP* manual, page 85), and in category 49, Transportation & Materials Moving Workers (the *CIP* manual includes aviation and airway science, aircraft pilot and navigator, and air traffic controller programs in *CIP* category 49 (*CIP* manual, page 159)). The reported MFOS does not include the term “engineering,” which would suggest its placement in category 14. As a result, this case should be coded 49, Transportation & Materials Moving Workers since it more closely matches the response as given.

Air conditioning and refrigeration: This case could be assigned to one of three categories: 14, Engineering; 15, Engineering-Related Technologies; or 47, Mechanics & Repairs. The choice between these three codes should be made on the basis of the verbatim strings, the type of provider, and the degree sought. Engineering includes such “scientific” engineering fields as aerospace engineering, chemical engineering, electrical engineering, engineering physics, etc., and so is eliminated as a possible category. Mechanics and repairers, 47 includes installing and repairing electrical equipment and machines, and appears to be a possible placement. However, this case should be coded 15, Engineering-Related Technologies, because the *CIP* manual includes heating, air conditioning and refrigeration technologies, technicians in support of engineers and other professionals. Also, the degree sought in this case seems to support more than a refrigerator repair man.

See also, Heating, ventilation, and refrigeration, below.

Architectural: This case could be coded in one of four MFOS categories: 04, Architecture & Related Programs; 14, Engineering; 15, Engineering-Related Technologies; or 48, Precision Production Trades. This is because the term “architectural” appears in each of these categories in the *CIP* manual. According to the *CIP* manual, architecture and architectural urban design and planning programs are included in CIP category 04. Architectural engineering technology is included in engineering-related technologies (*CIP* manual, page 93), and architectural engineering programs are included in CIP category 14 (*CIP* manual, page 58). Architectural drafting is included under precision production trades, 48 (*CIP* manual, page 155). The reported name of the program is architectural and the reported verbatim string does not include the words “engineering” or “drafting.” The verbatim reporting of “architectural” indicates that the key content is architecture. This case is assigned to 04, Architecture & Related Programs.

Electrical: Electrical technology fields are included in 15, Engineering-Related Technologies while electrical and electronics equipment installers and repairers are included in 47, Mechanics and Repairers. There is no mention of engineering or repairing in the information reported for this program. However, electrical engineering is included in category 14, Engineering. Based on the decision rules associated with the provider and degree type, this case is coded 15, Engineering-Related Technologies since the degree is an associate’s degree. If, however, the degree is a bachelor’s degree or higher, then the case would be coded 14, Engineering.

Also see *Electrical theory*, *Electronics*, and *Electronics engineering*, below.

Electrical theory: The decision rule is the same as for the response “electrical,” that is, the decision rules based on the provider and degree type. This case is coded 14, Engineering.

Electronics: This response could be assigned to either 15, Engineering-Related Technology or 47, Mechanics & Repairs, both of which include subfields related to electronics technology. If this is a vocational/technical program and there is no mention of repairs in the name of the program reported by the respondent, this case is coded 15, Engineering-Related Technology. If the respondent was pursuing a bachelor’s degree or higher, this would have been coded as 14, Engineering, a category that also includes electronics programs.

See also *Electrical*, and *Electrical theory*, above, and *Electronics engineering*, below.

Electronics engineering: This case could be assigned to either 14, Engineering or 15, Engineering-Related Technology. Since the degree type is a bachelor’s degree or higher, this case should be coded 14, Engineering. The *CIP* manual includes electronic engineering programs in CIP category 14 (*CIP* manual, page 87). However, if the degree is an associate degree or higher, then the case would be coded 15, Engineering-Related Technology.

Heating, ventilation, refrigeration: This case could be assigned to one of three categories: 14, Engineering; 15, Engineering-Related Technologies; or 47, Mechanics & Repairs. Engineering, however, includes

such “scientific” engineering fields as aerospace engineering, chemical engineering, electrical engineering, engineering physics, etc., and so is eliminated as a possible category. Engineering-related technologies, 15, includes programs that prepare individuals to apply basic engineering principles and technical skills in support of engineering and related projects. This category appears to be more engineering-related and thus can be eliminated. Mechanics and repairers includes installing and repairing electrical equipment and machines, and appears to be a possible placement. The respondent reported participating in an associate’s degree with a provider of a federal, state, county, or local government agency. This case is coded 47, Heating, Air Conditioning and Refrigeration Mechanic and Repairer, because the *CIP* manual explicitly includes heating, air conditioning and refrigeration mechanics and repairers in CIP category 47 (*CIP* manual, page 95) and because the respondent’s degree program is consistent with the CIP category.

Also see *Air conditioning and refrigeration*, above.

Industrial wire & technology: This case could be assigned to either 15, Engineering-Related Technology or 47, Mechanics & Repairers. Engineering-related technology includes industrial production technologies (*CIP* manual, page 96). Mechanics and repairers includes electrical and electronics equipment installation and repair (*CIP* manual, page 151). The substantive area of this program appears to be engineering-related and the response does not include installation or repair. The respondent was enrolled in a vocational/technical program at a public 2-year vocational/technical school. As a result, this case is coded 15, Engineering-Related Technology.

Alcohol drug studies: The name of the program suggests that this MFOS is a health-related area, that is, this case can be assigned to either 34, Health-Related Knowledge & Skills or 51, Health Professions & Related Sciences. However, category 34 includes personal and family health fields such as birthing and parenting, personal health improvement, and additional prevention and treatment (which focuses on the individual or family). The *CIP* manual indicates that alcohol or drug preventive strategies and treatment programs are in CIP category 51 (*CIP* manual, page 179). The degree type the respondent pursued was an associate’s degree at a 2-year community or junior college. Because the reported name (alcohol/drug studies) does not suggest that the field of study is for personal/family health and because the respondent reports taking this course as part of an associate’s degree program at a 2-year community or junior college, this case is assigned to 51, Health Professions and Related Sciences.

See also, *Drug and alcohol abuse*, below.

Drug and alcohol abuse: See *Alcohol and Drug studies*, above. This case is assigned to 51, Health Professions and Related Sciences because the name of the program reported by the respondent, the degree type (bachelor’s), and provider (4-year college or university) indicate that this MFOS is a health-related field. Additionally, the *CIP* manual includes drug and alcohol prevention strategies and treatment programs in CIP category 51 (page 179). The response does not indicate that this program is for personal/family health. Category 34 of the *CIP* manual, Health-Related Knowledge & Skills, and category 37, Personal Awareness & Self-Improvement, are considered personal improvement fields.

Real Estate Programs

The following four entries all are related to real estate programs under various names. In general, these were listed by coders as problematic because real estate is generally thought of as a sales/marketing activity (under category 08), but all real estate entries in the *CIP* manual appear under category 52, Business Management and Administrative Support. In the NHES:95, a total of 29 real estate-related programs were reported and assigned to 52, Business Management & Administrative Services (3 percent of all programs coded 52).

Real estate: This case could be coded in either 08, Business or 52, Business Management & Administrative Services. This case is assigned to 52, Business Management & Administrative Services. This respondent was pursuing a professional degree at an adult learning center.

Real estate appraisal: This case could be coded in either 08, Business Marketing or 52, Business Management & Administrative Services. This case is assigned to 52, Business Management & Administrative Services. The reported degree is an associate's degree at a public 2-year vocational/technical school.

Real estate appraiser: This case could be coded in either 08, Business or 52, Business Management & Administrative Services. This case is assigned to 52, Business Management & Administrative Services. The vocational/technical program was provided by a professional association.

Real estate law: The coder was unsure as to whether this case should be coded with other real estate fields or with law. Since the *CIP* manual contains real estate law program in the business section instead of in the law section (*CIP* manual, page 198), this case is coded 52, Business Management & Administrative Services. The respondent was pursuing an associate's degree at a 4-year college or university.

Other Ambiguous Programs

The following are programs for which coders had difficulty assigning MFOS codes, discussions of possible codes, and justifications for the final codes assigned to these cases. These are discussed in alphabetical order.

Administration of justice: This case could be coded as 22, Law and Legal Studies, 43, Protective Services, or 44, Public Administration. Law and Legal Studies covers programs at the bachelor's degree or higher level. Protective services includes law-enforcement-related fields, such as criminal justice and corrections, law enforcement-police science, and criminal justice studies (*CIP* manual, page 40). Because of the term "administration" in the title given, 44, Public Administration is also examined to determine whether an appropriate string appears in that category (*CIP* manual, pages 141-142), however, the public administration listing does not include justice-related fields. This case is assigned to 43, Protective Services, because administration of justice is listed under criminal justice studies in the *CIP* manual (page 140).

Administrative office: Although this case was listed by a coder on the problem log, it does not appear to be ambiguous. At first glance, code 08, Marketing Operations/ Marketing and Distribution and 44, Public Administration and Services appear to be possibilities for this case. Careful inspection of Marketing Operations/Marketing and Distributions reveals that this code is for programs that prepare individuals to plan and execute, at the operational or direct sales level, the promotion and distribution of ideas, goods and services in order to create exchanges that satisfy individual and organizational objectives. Nothing in the verbatim string indicates that this description fits this program. Public Administration and Services describes a group of programs that prepare individuals to analyze, manage, and deliver public programs and services. Again, nothing in the verbatim string indicates that this describes this program. The substantive area of the program appears to be business office administration. Since the *CIP* manual classifies this kind of program into *CIP* category 52 (*CIP* manual, page 191), this case is assigned to 52, Business Management and Administrative Services.

American Sign Language: This string was identified by a coder as one that he/she did not know how to code; however, it is not ambiguous. According to the *CIP* manual, sign language interpreter programs are included in *CIP* category 51 (*CIP* manual, page 170). This case is coded 51, Health Professions & Related Sciences.

Art: This case could be assigned to either 36, Leisure & Recreational Activities or 50, Visual & Performing Arts. Leisure and Recreational Activities includes areas such as art, music, dancing, reading, theater, writing, and personal-interest courses such as pet ownership and care, handicrafts and model-making, and so on.

Visual and Performing Arts includes crafts, folk art, dance, design and applied arts, dramatic/theater arts, film/video and photographic arts, fine arts, and music. Category 50 also includes “art, general.” The case is assigned a code of 36, Leisure & Recreation on the basis of the exact string match to the category “art” (*CIP* manual, page 207). The placement is somewhat arbitrary, given that a general art category is also found in category 50.

Associate of Art: This is simply an undifferentiated AA degree title. The content is not distinct enough to assign the case to a specific discipline. This case is assigned to 91, Indeterminable.

Associate of Science: This is simply an undifferentiated AS degree title. The content is not distinct enough to assign the case to a specific discipline. This case is assigned to 91, Indeterminable. The reader will note that the field *Science* alone (below) is assigned to a category. However, an associate or bachelor of science degree may be in many fields other than the sciences, such as engineering, health-related fields, psychology, and so on.

Bachelor of Art & Science: This is simply an undifferentiated bachelor’s degree title. Since the content is not distinct enough to assign the case to a specific discipline, this case is assigned to 91, Indeterminable.

Bilingual certification: The name of the program reported by the respondent indicates that this certificate program might be designed for people who want to be bilingual teachers. However, the *CIP* manual must also be examined for programs for interpreters. No codes are found for bilingual interpreter programs, only for foreign language translation and interpreters in CIP category 16, Foreign Languages and Literature (*CIP* manual, page 99). However, since Bilingual/bicultural education is found to be classified in CIP category 13, Education (*CIP* manual, page 75), this case is assigned to 13, Education.

Caring for people: The coder was uncertain whether this response contained enough information to assign a code. The name of the program reported by the respondent suggests that this MFOS is a health-related area. Category 12, Personal and Miscellaneous Services, includes programs that prepare individuals to provide a variety of services to individual consumers as well as to organizations such as businesses and industries. Category 34, Health-Related Knowledge and Skills, includes programs that describe the promotion of personal and family health. Category 51, Health Professions and Related Sciences, includes health professions and paraprofessional fields involving a wide range of types of patient/client care (*CIP* manual, page 181). Since the respondent reported participating in a Home Health Aide certificate program at a private vocational or trade school, this case is coded as 51, Health Professions and Related Sciences, although the placement is somewhat arbitrary.

Certified production inventory: Although the coder questioned how this case should be coded, a review of the CIP categories indicates that this response is not ambiguous. Possible categories include 01, Agricultural Business and Production, 14, Engineering, 27, Mathematics, and 52, Business Management and Administrative Services. Agricultural Business and Production includes programs that apply specifically to agricultural business and production. There is no information from the respondent to indicate that this program was agriculturally oriented. Engineering (and more specifically, Engineering/Industrial Management) applies to engineering principles of planning and operational management of enterprises and organizations. The Operations Research subcategory under Mathematics describes programs in the development and application of complex mathematical or simulation models to solve problems involving operational systems. The respondent reported participating in a professional degree program at a 2-year community or junior college. The *CIP* manual includes inventory control programs in CIP category 52 (*CIP* manual, page 188), and the case is assigned to 52, Business Management and Administrative Services.

Communication and media art: This case could be coded in 09, Communications, 10, Communications Technologies, or 50, Visual & Performing Arts. Communications includes communications technology, photographic technology, and radio and television broadcasting and technology. Communications Technologies includes programs that prepare individuals to support and assist communications professionals and skilled communications workers. Nothing in the verbatim string indicates that this describes this course. Visual and performing arts includes fine arts, theater and dramatic arts, film and photographic arts. The field of study as reported

by the respondent did not indicate performance-related activities, which characterize visual and performing arts fields. In the *CIP* manual, journalism and mass communication programs, including media such as newspapers journalism and radio and television broadcasting, are included in *CIP* category 9 (*CIP* manual, page 68). This case is assigned to 09, Communications.

Also see *Multimedia*, below.

Communications/accounting: This case appears to be a double major and thus is coded 91, Indeterminable.

Computer and accounting: The ambiguity in this response is a question as to whether it is possible to code this case since two fields are reported together. However, the substantive area of the program appears to be computer-related accounting. The *CIP* manual includes computer-related accounting programs (e.g., accounting software applications) in *CIP* category 52 (*CIP* manual, page 189). This case is coded 52, Business Management & Administrative Services.

Computer drafting auto CAD: This case could be assigned to either 11, Computer & Information Sciences or 48, Precision Production Trades. The computer and information sciences field is examined because the term “computer” was reported in the response. However, computer drafting is not found in the computer and information sciences field. The *CIP* manual includes computer drafting programs in precision production trades (*CIP* manual, page 155). The respondent was enrolled in a vocational/technical program at a public 2-year vocational/technical school. This case is assigned to 48, Precision Production Trades.

See also, *Computerized drafting*, below.

Computer graphics: This case could be coded in 11, Computer and Information Sciences or 50, Visual & Performing Arts. Computer and information sciences is examined because the response included “computer” in the name. Graphics programs, also part of the string, are included in the creative arts. The *CIP* category of computer and information science, however, does not include graphics. The *CIP* manual indicates that computer graphics programs are included in category 50 (*CIP* manual, page 162). This case is coded 50, Visual & Performing Arts.

Computerized drafting: This case could be assigned to either 11, Computer & Information Sciences or 48, Precision Production Trades. As noted above (see “Computer Drafting Auto CAD,” above), the computer and information sciences field is examined because the term “computerized” was reported in the response. However, computer drafting is not found in the computer and information sciences field. The *CIP* manual places drafting programs including computer-assisted design programs in *CIP* category 48 (*CIP* manual, page 155). This case is assigned to 48, Precision Production Trades.

Conflict resolution: The only reference to “conflict” found in the *CIP* manual is in category 30, Multi/Interdisciplinary, which includes peace and conflict studies (*CIP* manual, page 122). However, it is not clear whether this MFOS refer to peace and conflict study, methods of dealing with conflict among persons or groups within a business, school, or other institution, or across institutions. Even under the latter possibility, the field is considered highly likely to be interdisciplinary in its content. As a result, this case is coded 30, Multi/Interdisciplinary.

Corporate fitness: The information provided by the respondent is not sufficient to determine an appropriate MFOS code. For example, this could be a program for someone earning a certificate in a management field that involves assessing the soundness of a company, or could be for someone earning a certificate in fitness (health) programs administered in a corporate environment. This case is coded 91, Indeterminable.

Counseling: This case could be coded in either 13, Education or 42, Psychology. The field of education includes student counseling and personnel services (*CIP* manual, page 79), and the field of psychology includes clinical psychology and counseling psychology (*CIP* manual, pages 136-137). Since the reported name of the program does not contain the string “education,” this case is assigned to 42, Psychology (*CIP* manual, page 137).

See also, *Group counseling*, below.

Data processing: The *CIP* manual indicates that data processing technology programs are classified in CIP category 11 (*CIP* manual, page 71). Business Management and Administrative support are also reviewed; however, that category includes data entry, generally a clerical activity, but not data processing, generally a programming activity. This case is coded 11, Computer & Information Sciences.

Developing training programs: The type of training program is not specified in this response, resulting in the coder questioning its placement. Education is eliminated as a possible code because the string does not include education or specify a school environment. A very common venue for training programs is in the workplace, where people may be trained in policy, procedures, technical skills, and so on. As a result, the business categories are reviewed. Training programs are not a separate category under Human Resources in the *CIP* manual, but they are included in CIP category 52 (*CIP* manual, page 195). Thus, this case is coded 52, Business Management & Administrative Services.

Disciplinary studies: This case is an undifferentiated program and it is coded 91, Indeterminable. Multi/interdisciplinary studies is considered as a possible code, but the response as given does not specify multiple fields or an interdisciplinary approach.

Early childhood development: This case appears as if it could fit into 13, Education or 20, Vocational Home Economics. Because the name of the program appears to be very similar to an instruction in child growth and development, which is a home economics major title (*CIP* manual, page 106), and because education is not mentioned in the program name by the respondent, this case is coded 20, Vocational Home Economics.

Early childhood education: The response is not ambiguous. Categories 19, Home Economics, and 42, Psychology, may at first glance be considered but a closer look shows that Home Economics describes individual and family development studies while Psychology describes psychology programs, not education programs. This case is assigned to 13, Education because the substantive area of the program is education and the *CIP* manual includes early childhood education in CIP category 13 (*CIP* manual, page 80).

Electives: This case is coded 91, Indeterminable because there is insufficient information to determine an appropriate MFOS code.

English as a Second Language: Although the *CIP* manual explicitly includes “teaching English as a Second Language,” the name of the program reported by the respondent suggests that this is an education program covering how to teach ESL because the degree type is a bachelor’s degree or higher. Since the *CIP* manual includes ESL teacher education programs in CIP category 13 (*CIP* manual, page 84), this case is assigned to 13, Education.

Food engineering: This case could be assigned to either 02, Agricultural Sciences (which includes food sciences and technology) or 19, Home Economics (which includes food and nutrition services). However, since the name of the program reported by the respondent does not provide sufficient information to assign a code, this case is coded 91, Indeterminable.

Genealogy: Coders and supervisors considered codes 24, Liberal Arts & Sciences or 45, Social Sciences & History. However, since the name of the program reported by the respondent does not provide sufficient information to assign a code and the *CIP* manual does not include the reported verbatim string, this case is coded 91, Indeterminable.

Gifted children: The name of the program reported by the respondent suggests that this program might be designed for people who want to be or are teachers of gifted children. Since the *CIP* manual includes education of the gifted and talented in CIP category 13 (*CIP* manual, page 78), this case is assigned to 13, Education.

Group counseling: This case could be assigned to either 13, Education or 42, Psychology. The field of education includes student counseling, and psychology includes clinical psychology and counseling psychology. Since the reported name of the program does not contain the string “education” and the *CIP* manual includes large group counseling in CIP category 42 (*CIP* manual, page 137), this case is assigned to 42, Psychology.

Hazardous chemical: The *CIP* manual includes environmental and pollution control technology/technician programs in CIP category 15 (*CIP* manual, page 95). This case is coded 15, Engineering-Related Technologies.

Hazardous material response: In the *CIP* manual, environmental and pollution control technology/technician programs including hazardous materials are included in CIP category 15 (*CIP* manual, page 95). This case is coded 15, Engineering-Related Technologies.

Hazardous materials: This is a case questioned by coders, but it is not ambiguous. In the *CIP* manual, environmental and pollution control technology/technician programs including hazardous materials are included in CIP category 15 (*CIP* manual, page 95). This case is coded 15, Engineering-Related Technologies.

See also, *Hazardous material response* and *Hazardous chemical*, following.

Horology: The term horology was unfamiliar to the coders. The *CIP* manual indicates that programs that deal with making, repairing, and maintaining timepieces are included in CIP category 47 (*CIP* manual, page 153). This case is coded 47, Mechanics & Repairs.

Human & organizational behavior: Organizational behavior studies is found in CIP category 52, Business Management and Administrative Services (*CIP* manual, page 195). Organizational psychology is included in 42, Psychology (*CIP* manual, page 138). Although the field of psychology generally deals with human behavior, psychology is not specifically mentioned in the string, suggesting that this is not a psychology major. As a result, this case is coded 52, Business Management & Administrative Services.

Also see *Human relations* and *Industrial relations*, following.

Human relations: This field could be in 45, Social Sciences and History, 43, Psychology, or 52, Business Management and Administrative Services, depending on the context of the human relations program. Contrary to the previous response, which refer to organizational behavior, this response does not explicitly suggest an organizational setting or application. Since the information reported by the respondent is not sufficient to determine an appropriate MFOS code, the case is coded 91, Indeterminable.

Industrial relations: Since the substantive area of the program appears to be relations, but within an industry context, and the *CIP* manual includes programs associated with various relations in CIP category 52 (*CIP* manual, page 195), this case should be assigned to 52, Business Management & Administrative Services. Comparing this response to the two previous responses, a specific context is given, as in human and organizational behavior, and contrary to the less clear field of human relations, immediately above.

Information systems management: This case could be assigned to either 11, Computer & Information Sciences or 52, Business Management & Administrative Services. However, since the reported name of the program does not contain the string “computer” and the *CIP* manual contains management information systems and business systems networking in CIP category 52 (*CIP* manual, page 196-197), this case is assigned to 52, Business Management & Administrative Services.

Interdisciplinary: Although the reported verbatim string is not found in the Alphabetic Index of the All CIP Codes, the *CIP* manual includes this kind of program in the multi/interdisciplinary section (*CIP* manual, page 122). This case is coded 30, Multi/Interdisciplinary.

Lab management: The reported verbatim string suggests that it could be a science program or business management program. This case is assigned to 91, Indeterminable because the information is not sufficient to determine an appropriate MFOS code.

Math certificate in actuarial science: This response includes references to two fields -- mathematics and business management. The substantive area of the program appears to be mathematics, or more narrowly, actuarial science since the response indicates that the person is/was working on a “math certificate.” Applied mathematics is listed under actuarial science in category 52, Business Management, and refers to category 27, Mathematics for correct code assignment (see *CIP* manual, page 193). This case is coded 27, Mathematics.

Merchandizing & management: It appears that this case could be assigned to either 08, Business (which includes marketing, which is related to merchandizing) or 52, Business Management & Administrative Services. Programs covering purchasing, procurement and contracts management are included in CIP category 52 (*CIP* manual, page 188), and the response specifically refers to management. This case is assigned to 52, Business Management & Administrative Services.

Multimedia: This case could be assigned to 09, Communication or 50, Visual and Performing Arts. In this case, the name of the program reported by the respondent suggests that the substantive area of the program is media-communication. Also, communications technology, photographic technology, and radio and television broadcasting and technology are included in 09, Communication. The case was coded 09, Communication (*CIP* manual, page 68).

National security: For this case, coders may consider 43, Protective Services, or 45, Social Sciences and History. Protective Services includes programs that describe the principles and procedures for providing police, fire, and other safety services, and for managing penal institutions. A closer inspection of these categories eliminates 43, Protective Services. Since national security is a sub-specialty of international relations (*CIP* manual, page 147), the case is assigned to 45, Social Sciences and History.

Policy analysis: The verbatim string suggests that this case is 45, Social Sciences and History. The *CIP* manual includes various policy-related programs in CIP category 45 (*CIP* manual, page 147). While public policy is also included in category 42, Public Administration, the response does not suggest that this is a public administration program or that the policy analysis focuses on governmental actions or management. As a result, category 45 is selected for this case.

Psychology in early education: This case could potentially be assigned to either 13, Education or 42, Psychology, since both fields are mentioned in the response. Since the reported verbatim string contains the word “education,” and educational psychology is included under education (*CIP* manual, page 77) this case is coded 13, Education.

Psychology/social work: This case appears to be a double major and thus is coded 91, Indeterminable. While Multi/Interdisciplinary Studies was considered for placement, that field is comprised of areas of study that explicitly cut across fields but are within a single curriculum. Therefore, treating this case as a double major and coding it as Indeterminable is preferred.

Quality management: The substantive area of the program appears to be quality control and the management of quality control activities. Two substantive areas are reviewed -- business management, and engineering-related technology. No quality control programs are found in business management. Statistical process control is an engineering-related technologies program, similar in nature to quality management. Also, the *CIP* manual includes quality control and safety technology programs in CIP category 15 (*CIP* manual, page 96). Thus, this case is assigned to 15, Engineering-Related Technologies.

Radiologic technology: The coder apparently was uncertain as to whether this was a technology program or an allied health program. However, radiologic technology is a Health Professions and Related Sciences field. This case is coded 51, Health Professions & Related Sciences.

See also, *Radiology*, following.

Radiology: This string is not ambiguous. The response indicates that the program is health-related. This case is coded 51, Health Professions & Related Sciences.

Reading and math: The reported name of the program suggests that this might be a reading and math education program. However, the reading and math program may also be a basic skills program leading to a certificate or credential of some kind. Additional information from the case indicates that the degree type is a bachelor’s degree or higher. As a result, it appears reasonable to assume that this is an education program, and this case is assigned to 13, Education.

Science: This case could be coded in one of three categories: 26, Biological Sciences/Life Sciences; 40, Physical Sciences; or 41, Science Technology. Since the reported name of the program is science and the vast majority of science-related MFOS codes, except biological sciences, is listed in the physical sciences section in the *CIP* manual (page 129), this case is assigned to 40, Physical Sciences.

Also see *Associate of Science*, above.

Scientific illustration: The substantive area of the program appears to be illustration because the word “illustration” is part of the program name. However, both science fields and visual and performing arts are examined. Science fields (biological, physical, and scientific technology) do not specify any programs in illustration. Since the *CIP* manual includes graphic design, commercial art and illustration programs in CIP category 50 (*CIP* manual, page 162), this case is assigned to 50, Visual and Performing Arts.

Services: Since the information is not sufficient to determine an appropriate MFOS code, the case is coded 91, Indeterminable.

Spanish/cross culture: The reported verbatim string appears to be a combined program covering both language and culture. Considering the foreign language listed first to be the substantive area, and given that the *CIP* manual includes foreign languages, area and cultural studies in *CIP* category 16 (*CIP* manual, page 99), this case is coded 16, Foreign Languages and Literatures.

Speech communication: This case could be assigned to either 09, Communication or 23, English Language & Literature/Letters, which includes speech and rhetorical studies. Because the substantive area of the program appears to be communication and the *CIP* manual includes communication programs in *CIP* category 9 (*CIP* manual, page 68), this case is assigned to 09, Communication.

Taxes: This response is actually not ambiguous. Because all tax programs are included in the business management section in the *CIP* manual (page 198), this case is assigned to 52, Business Management & Administrative Services.

Urban planning: This case could be assigned to 04, Architecture & Related Programs; 44, or 45, Social Sciences & History, or possibly to 44 Public Administration and Services, if urban planning is interpreted in terms of city management. Architecture and related programs includes city/urban, community, and regional planning. Social science appears to focus more on urban studies and affairs, but not planning. Public administration includes fields related to the administration and management of entities including cities. This case is assigned to 04, Architecture & Related Programs, since it specifically refers to urban planning (and not study/analysis or management), which the *CIP* manual includes in category 04.

Veterinarian animal science: There is a question as to whether this response should be included in agriculture or in health sciences. The *CIP* manual indicates that veterinary sciences is included in the health-related category rather than in agriculture (*CIP* manual, page 186). This case is assigned to 51, Health Professions and Related Sciences.

Waste management: This string is not ambiguous. Since the *CIP* manual includes waste disposal procedures in *CIP* category 15 (*CIP* manual, page 95), this case is coded 15, Engineering-Related Technologies).

IV. LIST OF 2-DIGIT CIP CATEGORIES

Code	Titles
01	Agricultural Business & Production
02	Agricultural Sciences
03	Conservation & Renewable Natural Resources
04	Architecture & Related Programs
05	Area, Ethnic & Cultural Studies
08	Business
09	Communications
10	Communications Technologies
11	Computer & Information Sciences
12	Personal & Miscellaneous Services
13	Education
14	Engineering
15	Engineering-Related Technologies
16	Foreign Languages & Literatures
19	Home Economics
20	Vocational Home Economics
21	Technology Education/Industrial Arts
22	Law & Legal Studies
23	English Language & Literature/Letters
24	Liberal Arts & Sciences, General Studies & Humanities
25	Library Sciences
26	Biological Sciences/Life Sciences
27	Mathematics
28	Reserve Officers' Training Corps Programs
29	Military Technologies
30	Multi/Interdisciplinary Studies
31	Parks, Recreation, Leisure & Fitness Studies
32	Basic Skills
33	Citizenship Activities
34	Health-Related Knowledge & Skills
35	Interpersonal & Social Skills
36	Leisure & Recreational Activities
37	Personal Awareness & Self-Improvement
38	Philosophy & Religion
39	Theological Studies & Religious Vocations
40	Physical Sciences
41	Science Technologies
42	Psychology
43	Protective Services
44	Public Administration & Services
45	Social Sciences & History
46	Construction Trades
47	Mechanics & Repairers
48	Precision Production Trades

Code	Titles
49	Transportation & Materials Moving Workers
50	Visual & Performing Arts
51	Health Professions & Related Sciences
52	Business Management & Administrative Services
91	Indeterminable/Other/Unknown

V. ALPHABETIC INDEX OF ALL CIP CODES

Code	Titles
52	Accounting
52	Accounting, Other
52	Accounting Technician
40	Acoustics
50	Acting and Directing
52	Actuarial Science
51	Acupuncture and Oriental Medicine
31	Adapted Physical Education/Therapeutic Recreation
34	Addiction Prevention and Treatment
13	Administration of Special Education
52	Administrative and Secretarial Services, Other
52	Administrative Assistant/Secretarial Science, General
13	Adult and Continuing Education Administration
13	Adult and Continuing Teacher Education
09	Advertising
15	Aeronautical and Aerospace Engineering Tech./Technician
14	Aerospace, Aeronautical and Astronautical Engineering
51	Aerospace Medicine Residency
05	African Studies
05	Afro-American (Black) Studies
01	Agricultural and Food Products Processing Operations and Mgmt.
02	Agricultural Animal Breeding and Genetics
02	Agricultural Animal Health
01	Agricultural Animal Husbandry and Production Management
02	Agricultural Animal Nutrition
02	Agricultural Animal Physiology
01	Agricultural Business/Agribusiness Operations
01	Agricultural Business and Management, General
01	Agricultural Business and Management, Other
01	Agricultural Business and Production, Other
01	Agricultural Economics
14	Agricultural Engineering
02	Agricultural Extension
01	Agricultural Mechanization, General
01	Agricultural Mechanization, Other
02	Agricultural Plant Pathology
02	Agricultural Plant Physiology
01	Agricultural Power Machinery Operator
01	Agricultural Production Workers and Managers, Other
01	Agricultural Production Workers and Managers, General
01	Agricultural Supplies and Related Services, Other
01	Agricultural Supplies Retailing and Wholesaling
13	Agricultural Teacher Education (Vocational)
02	Agriculture/Agricultural Sciences, General
02	Agriculture/Agricultural Sciences, Other
02	Agronomy and Crop Science
28	Air Force R.O.T.C./Air Science

Code	Titles
49	Air Traffic Controller
49	Air Transportation Workers, Other
47	Aircraft Mechanic/Technician, Airframe
47	Aircraft Mechanic/Technician, Powerplants
49	Aircraft Pilot (Private)
49	Aircraft Pilot and Navigator (Professional)
51	Alcohol/Drug Abuse Counseling
51	Allergies and Immunology Residency
45	American (United States) History
33	American Citizenship Education
45	American Government and Politics
05	American Indian/Native American Studies
23	American Literature (United States)
05	American Studies/Civilization
40	Analytical Chemistry
26	Anatomy
51	Anesthesiology Residency
02	Animal Sciences, General
02	Animal Sciences, Other
01	Animal Trainer
45	Anthropology
08	Apparel and Accessories Marketing Operations, Other
08	Apparel and Accessories Marketing Operations, General
45	Applied and Resource Economics
27	Applied Mathematics, General
27	Applied Mathematics, Other
01	Aquaculture Operations and Production Management
16	Arabic Language and Literature
45	Archeology
48	Architectural Drafting
14	Architectural Engineering
15	Architectural Engineering Tech./Technician
04	Architectural Environmental Design
04	Architectural Urban Design and Planning
04	Architecture
04	Architecture and Related Programs, Other
05	Area, Ethnic and Cultural Studies, Other
05	Area Studies, Other
28	Army R.O.T.C./Military Science
36	Art
50	Art, General
50	Art History, Criticism and Conservation
13	Art Teacher Education
51	Art Therapy
50	Arts Management
05	Asian-American Studies
05	Asian Studies
40	Astronomy
40	Astrophysics

Code	Titles
31	Athletic Training and Sports Medicine
40	Atmospheric Sciences and Meteorology
08	Auctioneering
51	Audiology/Hearing Sciences
47	Auto/Automotive Body Repairer
47	Auto/Automotive Mechanic/Technician
15	Automotive Engineering Tech./Technician
49	Aviation and Airway Science
49	Aviation Management
47	Aviation Systems and Avionics Main Technologist/Technician
12	Baker/Pastry Chef
52	Banking and Financial Support Services
12	Barber/Hairstylist
12	Bartender/Mixologist
51	Basic Medical Sciences, Other
32	Basic Skills, General
32	Basic Skills, Other
39	Bible/Biblical Studies
39	Biblical and Other Theological Languages and Literatures
47	Bicycle Mechanic and Repairer
13	Bilingual/Bicultural Education
26	Biochemistry
14	Bioengineering and Biomedical Engineering
30	Biological and Physical Sciences
26	Biological Immunology
26	Biological Sciences/Life Sciences, Other
41	Biological Tech./Technician
26	Biology, General
13	Biology Teacher Education
15	Biomedical Engineering-Related Tech./Technician
26	Biometrics
26	Biophysics
30	Biopsychology
26	Biostatistics
26	Biotechnology Research
34	Birthing and Parenting Knowledge and Skills
51	Blood Bank Tech./Technician
51	Blood Banking Residency
36	Board, Card and Role-Playing Games
26	Botany, General
26	Botany, Other
09	Broadcast Journalism
46	Building/Property Main. and Manager
52	Business Administration and Management, General
52	Business Administration and Management, Other
08	Business and Personal Services Marketing Operations, Other
35	Business and Social Skills
52	Business Communications
52	Business Computer Facilities Operator

Code	Titles
52	Business Computer Programming/Programmer
52	Business, General
19	Business Home Economics
52	Business Information and Data Processing Services, Other
47	Business Machine Repairer
52	Business Management and Administrative Services, Other
52	Business/Managerial Economics
52	Business Marketing and Marketing Management
52	Business Quantitative Methods and Management Science, Other
08	Business Services Marketing Operations
52	Business Statistics
52	Business Systems Analysis and Design
52	Business Systems Networking and Telecommunications
13	Business Teacher Education (Vocational)
48	Cabinet Maker and Millworker
05	Canadian Studies
12	Card Dealer
51	Cardiology Residency
51	Cardiovascular Tech./Technician
32	Career Exploration/Awareness Skills
46	Carpenter
45	Cartography
26	Cell and Molecular Biology, Other
26	Cell Biology
14	Ceramic Sciences and Engineering
50	Ceramics Arts and Ceramics
53	Certificate of IEP Completion
40	Chemical and Atomic/Molecular Physics
14	Chemical Engineering
51	Chemical Pathology Residency
41	Chemical Tech./Technician
40	Chemistry, General
40	Chemistry, Other
13	Chemistry Teacher Education
20	Child Care and Guidance Workers and Managers, General
20	Child Care and Guidance Workers and Managers, Other
20	Child Care Provider/Assistant
20	Child Care Services Manager
20	Child Development, Care and Guidance
19	Child Growth, Care and Development Studies
51	Child/Pediatric Neurology Residency
51	Child Psychiatry Residency
16	Chinese Language and Literature
51	Chiropractic (D.C., D.C.M.)
33	Citizenship Activities, General
33	Citizenship Activities, Other
04	City/Urban, Community and Regional Planning
15	Civil Engineering/Civil Tech./Technician
14	Civil Engineering, General

Code	Titles
14	Civil Engineering, Other
48	Civil/Structural Drafting
16	Classical and Ancient Near Eastern Languages and Literatures, Other
16	Classics and Classical Languages and Literatures
51	Clinical and Medical Social Work
42	Clinical Psychology
20	Clothing and Textiles
19	Clothing/Apparel and Textile Studies
20	Clothing, Apparel and Textile Workers and Managers, Other
20	Clothing, Apparel and Textile Workers and Managers, General
42	Cognitive Psychology and Psycholinguistics
36	Collecting
13	College/Postsecondary Student Counseling and Personnel Services
53	College Preparatory High School Diploma
51	Colon and Rectal Surgery Residency
20	Commercial Garment and Apparel Worker
50	Commercial Photography
51	Communication Disorders, General
51	Communication Disorders Sciences and Services, Other
47	Communication Systems Installer and Repairer
09	Communications, General
09	Communications, Other
10	Communications Technol./Technicians, Other
13	Community and Junior College Administration
33	Community Awareness
51	Community Health Liaison
33	Community Involvement
44	Community Organization, Resources and Services
42	Community Psychology
23	Comparative Literature
20	Comprehensive Consumer and Homemaking Education
32	Computational Skills
11	Computer and Information Sciences, General
11	Computer and Information Sciences, Other
14	Computer Engineering
15	Computer Engineering Tech./Technician
36	Computer Games and Programming Skills
47	Computer Installer and Repairer
15	Computer Main. Tech./Technician
11	Computer Programming
11	Computer Science
11	Computer Systems Analysis
13	Computer Teacher Education
48	Computer Typography and Composition Equipment Operator
03	Conservation and Renewable Natural Resources, Other
46	Construction and Building Finishers and Managers, Other
46	Construction/Building Inspector
15	Construction/Building Tech./Technician
49	Construction Equipment Operator
46	Construction Trades, Other

Code	Titles
20	Consumer and Homemaking Education, Other
19	Consumer Economics and Science
20	Consumer Education
36	Cooking and Other Domestic Skills
43	Corrections/Correctional Administration
12	Cosmetic Services, General
12	Cosmetic Services, Other
12	Cosmetologist
42	Counseling Psychology
13	Counselor Education Counseling and Guidance Services
52	Court Reporter
50	Crafts, Folk Art and Artisanry
43	Criminal Justice and Corrections, Other
43	Criminal Justice/Law Enforcement Administration
43	Criminal Justice Studies
45	Criminology
51	Critical Care Anesthesiology Residency
51	Critical Care Medicine Residency
51	Critical Care Surgery Residency
01	Crop Production Operations and Management
12	Culinary Arts and Related Services, Other
12	Culinary Arts/Chef Training
13	Curriculum and Instruction
20	Custodial, Housekeeping and Home Services Workers and Managers, Gen.
20	Custodial, Housekeeping and Home Services Workers and Managers, Other
20	Custodian/Caretaker
20	Custom Tailor
51	Cytotechnologist
02	Dairy Science
50	Dance
51	Dance Therapy
36	Dancing
11	Data Processing Tech./Technician
45	Demography/Population Studies
51	Dental Assistant
50	Design and Visual Communications
48	Desktop Publishing Equipment Operator
45	Development Economics and International Development
42	Developmental and Child Psychology
51	Diagnostic Medical Sonography
51	Diagnostic Radiology Residency
47	Diesel Engine Mechanic and Repairer
19	Dietetics/Human Nutritional Services
20	Dietician Assistant
49	Diver (Professional)
39	Divinity/Ministry (B.D., M.Div.)
48	Drafting, General
48	Drafting, Other
13	Drama and Dance Teacher Education
50	Drama/Theater Arts, General
50	Drama/Theater Literature, History and Criticism
50	Dramatic/Theater Arts and Stagecraft, Other

Code	Titles
50	Drawing
13	Driver and Safety Teacher Education
20	Drycleaner and Launderer (Commercial)
40	Earth and Planetary Sciences
16	East and Southeast Asian Languages and Literatures, Other
05	East Asian Studies
16	East European Languages and Literatures, Other
05	Eastern European Area Studies
26	Ecology
45	Econometrics and Quantitative Economics
45	Economics, General
45	Economics, Other
13	Education Administration and Supervision, General
13	Education Administration and Supervision, Other
13	Education, General
13	Education of the Autistic
13	Education of the Blind and Visually Handicapped
13	Education of the Deaf and Hearing Impaired
13	Education of the Emotionally Handicapped
13	Education of the Gifted and Talented
13	Education of the Mentally Handicapped
13	Education of the Multiple Handicapped
13	Education of the Physically Handicapped
13	Education of the Specific Learning Disabled
13	Education of the Speech Impaired
13	Education, Other
13	Educational Assessment, Testing and Measurement
13	Educational Evaluation and Research
13	Educational Evaluation, Research and Statistics, Other
13	Educational/Instructional Media Design
10	Educational/Instructional Media Tech./Technician
13	Educational Psychology
13	Educational Statistics and Research Methods
13	Educational Supervision
20	Elder Care Provider/Companion
15	Electrical and Electronic Engin.-Related Technol./Technicians, Other
47	Electrical and Electronics Equipment Installer and Repairer, General
47	Electrical and Electronics Equipment Installer and Repairer, Other
46	Electrical and Power Transmission Installer, Other
46	Electrical and Power Transmission Installer, General
15	Electrical, Electronic and Communications Engin. Tech./Technician
14	Electrical, Electronics and Communication Engineering
48	Electrical/Electronics Drafting
46	Electrician
51	Electrocardiograph Tech./Technician
51	Electroencephalograph Tech./Technician
12	Electrolysis Technician
15	Electromechanical Instrumentation and Main. Technol./Technicians, Other
15	Electromechanical Tech./Technician

Code	Titles
13	Elementary, Middle and Secondary Education Administration
40	Elementary Particle Physics
13	Elementary Teacher Education
51	Emergency Medical Tech./Technician
51	Emergency Medicine Residency
51	Endocrinology and Metabolism Residency
51	Endodontics Specialty
15	Energy Management and Systems Tech./Technician
14	Engineering Design
14	Engineering, General
14	Engineering/Industrial Management
14	Engineering Mechanics
14	Engineering, Other
14	Engineering Physics
15	Engineering-Related Tech./Technician, General
15	Engineering-Related Technol./Technicians, Other
14	Engineering Science
23	English Composition
23	English Creative Writing
23	English Language and Literature, General
23	English Language and Literature/Letters, Other
23	English Literature (British and Commonwealth)
13	English Teacher Education
23	English Technical and Business Writing
52	Enterprise Management and Operation, General
52	Enterprise Management and Operation, Other
26	Entomology
08	Entrepreneurship
15	Environmental and Pollution Control Tech./Technician
15	Environmental Control Technol./Technicians, Other
14	Environmental/Environmental Health Engineering
51	Environmental Health
03	Environmental Science/Studies
51	Epidemiology
01	Equestrian/Equine Studies, Horse Management and Training
05	Ethnic and Cultural Studies, Other
45	European History
05	European Studies
26	Evolutionary Biology
52	Executive Assistant/Secretary
20	Executive Housekeeper
31	Exercise Sciences/Physiology and Movement Studies
42	Experimental Psychology
20	Exploratory Homemaking
19	Family and Community Studies
19	Family and Marriage Counseling
19	Family/Consumer Resource Management, Other
20	Family/Individual Health

Code	Titles
19	Family Life and Relations Studies
20	Family Living and Parenthood
51	Family Medicine Residency
19	Family Resource Management Studies
01	Farm and Ranch Management
20	Fashion and Fabric Consultant
50	Fashion Design and Illustration
08	Fashion Merchandising
08	Fashion Modeling
50	Fiber, Textile and Weaving Arts
50	Film/Cinema Studies
50	Film/Video and Photographic Arts, Other
50	Film-Video Making/Cinematography and Production
52	Finance, General
52	Financial Management and Services, Other
52	Financial Planning
08	Financial Services Marketing Operations
50	Fine Arts and Art Studies, Other
50	Fine/Studio Arts
43	Fire Protection and Safety Tech./Technician
43	Fire Protection, Other
43	Fire Science/Firefighting
43	Fire Services Administration
03	Fishing and Fisheries Sciences and Management
49	Fishing Tech./Commercial Fishing
49	Flight Attendant
08	Floristry Marketing Operations
12	Food and Beverage/Restaurant Operations Manager
20	Food and Nutrition
20	Food Caterer
08	Food Products Retailing and Wholesaling Operations
08	Food Sales Operations
02	Food Sciences and Tech.
19	Food Systems Administration
19	Foods and Nutrition Science
19	Foods and Nutrition Studies, General
19	Foods and Nutrition Studies, Other
16	Foreign Language Interpretation and Translation
16	Foreign Languages and Literatures, General
16	Foreign Languages and Literatures, Other
13	Foreign Languages Teacher Education
51	Forensic Pathology Residency
43	Forensic Tech./Technician
03	Forest Harvesting and Production Tech./Technician
03	Forest Management
03	Forest Production and Processing, Other
03	Forest Products Tech./Technician
03	Forestry and Related Sciences, Other
03	Forestry, General
03	Forestry Sciences
52	Franchise Operation

Code	Titles
16	French Language and Literature
13	French Language Teacher Education
12	Funeral Services and Mortuary Science
48	Furniture Designer and Maker
12	Gaming and Sports Officiating Services, Other
51	Gastroenterology Residency
08	General Buying Operations
08	General Distribution Operations
08	General Marketing Operations
52	General Office/Clerical and Typing Services
08	General Retailing and Wholesaling Operations and Skills, Other
08	General Retailing Operations
08	General Selling Skills and Sales Operations
24	General Studies
51	General Surgery Residency
13	General Teacher Education, Other
26	Genetics, Plant and Animal
40	Geochemistry
45	Geography
40	Geological and Related Sciences, Other
14	Geological Engineering
40	Geology
14	Geophysical Engineering
40	Geophysics and Seismology
14	Geotechnical Engineering
51	Geriatric Medicine Residency
16	German Language and Literature
13	German Language Teacher Education
16	Germanic Languages and Literatures, Other
19	Gerontological Services
30	Gerontology
48	Graphic and Printing Equipment Operator, General
48	Graphic and Printing Equipment Operators, Other
50	Graphic Design, Commercial Art and Illustration
16	Greek Language and Literature (Ancient and Medieval)
16	Greek Language and Literature (Modern)
01	Greenhouse Operations and Management
47	Gunsmith
51	Hand Surgery Residency
36	Handicrafts and Model-Making
51	Health Aide
51	Health and Medical Administrative Services, Other
51	Health and Medical Assistants, Other
51	Health and Medical Biostatistics
51	Health and Medical Diagnostic and Treatment Services, Other
51	Health and Medical Laboratory Technol./Technicians, Other
51	Health and Medical Preparatory Programs, Other
31	Health and Physical Education/Fitness, Other
31	Health and Physical Education, General

Code	Titles
13	Health Occupations Teacher Education (Vocational)
51	Health Physics/Radiologic Health
08	Health Products and Services Marketing Operations
51	Health Professions and Related Sciences, Other
34	Health-Related Knowledge and Skills, Other
51	Health System/Health Services Administration
13	Health Teacher Education
51	Health Unit Coordinator/Ward Clerk
51	Health Unit Manager/Ward Supervisor
15	Heating, Air Conditioning and Refrigeration Tech./Technician
47	Heating, Air Conditioning and Refrigeration Mechanic and Repairer
47	Heavy Equipment Main. and Repairer
16	Hebrew Language and Literature
51	Hematological Pathology Residency
51	Hematology Residency
51	Hematology Tech./Technician
53	High School Certificate of Competence
53	High School Certificates, Other
53	High School Equivalence Certificate
53	High School/Secondary Diplomas, Other
13	Higher Education Administration
05	Hispanic-American Studies
30	Historic Preservation, Conservation and Architectural History
45	History and Philosophy of Science and Tech.
45	History, General
45	History, Other
13	History Teacher Education
08	Home and Office Products Marketing Operations, Other
19	Home Economics Communications
19	Home Economics, General
19	Home Economics, Other
13	Home Economics Teacher Education (Vocational)
20	Home Furnishings and Equipment Installers and Consultants, Other
20	Home Furnishings and Equipment Installers and Consultants, General
51	Home Health Aide
36	Home Maintenance and Improvement
20	Home Management
08	Home Products Marketing Operations
20	Homemaker's Aide
53	Honors/Regents High School Diploma
02	Horticulture Science
01	Horticulture Services Operations and Management, General
01	Horticulture Services Operations and Management, Other
51	Hospital/Health Facilities Administration
52	Hospitality/Administration Management
08	Hospitality and Recreation Marketing Operations, Other
08	Hospitality and Recreation Marketing Operations, General
52	Hospitality Services Management, Other
52	Hotel/Motel and Restaurant Management
08	Hotel/Motel Services Marketing Operations

Code	Titles
20	Housing, Home Furnishings, and Equipment
19	Housing Studies, General
19	Housing Studies, Other
52	Human Resources Management
52	Human Resources Management, Other
24	Humanities/Humanistic Studies
15	Hydraulic Tech./Technician
51	Hypnotherapy
51	Immunopathology Residency
19	Individual and Family Development Studies, General
19	Individual and Family Development Studies, Other
42	Industrial and Organizational Psychology
50	Industrial Design
47	Industrial Electronics Installer and Repairer
47	Industrial Equipment Main. and Repairers, Other
47	Industrial Machinery Main. and Repairer
14	Industrial/Manufacturing Engineering
15	Industrial/Manufacturing Tech./Technician
15	Industrial Production Technol./Technicians, Other
41	Industrial Radiologic Tech./Technician
51	Infectious Disease Residency
52	Information Processing/Data Entry Technician
11	Information Sciences and Systems
40	Inorganic Chemistry
20	Institutional Food Services Administrator
20	Institutional Food Workers and Administrators, General
20	Institutional Food Workers and Administrators, Other
47	Instrument Calibration and Repairer
15	Instrumentation Tech./Technician
52	Insurance and Risk Management
08	Insurance Marketing Operations
04	Interior Architecture
50	Interior Design
19	Interior Environments
50	Intermedia
51	Internal Medicine Residency
01	International Agriculture
13	International and Comparative Education
52	International Business
52	International Business Marketing
45	International Economics
52	International Finance
45	International Relations and Affairs
35	Interpersonal and Social Skills, General
35	Interpersonal and Social Skills, Other
35	Interpersonal Relationships Skills
52	Investments and Securities
05	Islamic Studies
16	Italian Language and Literature
16	Japanese Language and Literature
05	Jewish/Judaic Studies

Code	Titles
32	Job Seeking/Changing Skills
09	Journalism
09	Journalism and Mass Communication, Other
13	Junior High/Intermediate/Middle School Teacher Education
22	Juridical Science/Legal Specialization(LL.M.,M.C.L.,J.S.D./S.J.D.)
12	Kitchen Personnel/Cook and Assistant Training
52	Labor/Personnel Relations and Studies
51	Laboratory Animal Medicine
51	Laboratory Medicine Residency
04	Landscape Architecture
01	Landscaping Operations and Management
15	Laser and Optical Tech./Technician
05	Latin American Studies
16	Latin Language and Literature (Ancient and Medieval)
22	Law (LL.B., J.D.)
22	Law and Legal Studies, Other
43	Law Enforcement/Police Science
48	Leatherworkers and Upholsterers, Other
52	Legal Administrative Assistant/Secretary
36	Leisure and Recreational Activities, General
36	Leisure and Recreational Activities, Other
24	Liberal Art and Sciences, General Studies and Humanities, Other
24	Liberal Arts and Sciences/Liberal Studies
25	Library Assistant
25	Library Science/Librarianship
25	Library Science, Other
46	Lineworker
16	Linguistics
48	Lithographer and Platemaker
47	Locksmith and Safe Repairer
03	Logging/Timber Harvesting
52	Logistics and Materials Management
48	Machine Shop Assistant
48	Machinist/Machine Technologist
47	Major Appliance Installer and Repairer
12	Make-Up Artist
52	Management Information Systems and Business Data Processing, General
52	Management Science
26	Marine/Aquatic Biology
49	Marine Main. and Ship Repairer
49	Marine Science/Merchant Marine Officer
52	Marketing Management and Research, Other
08	Marketing Operations/Marketing and Distribution, Other
13	Marketing Operations Teacher Ed./Mkt. & Distribution Teacher Ed. (Voc.)
52	Marketing Research
46	Mason and Tile Setter
09	Mass Communications
12	Massage

Code	Titles
14	Material Engineering
14	Materials Science
27	Mathematical Statistics
27	Mathematics
30	Mathematics and Computer Science
27	Mathematics, Other
13	Mathematics Teacher Education
12	Meatcutter
48	Mechanical Drafting
14	Mechanical Engineering
15	Mechanical Engineering/Mechanical Tech./Technician
15	Mechanical Engineering-Related Technol./Technicians, Other
48	Mechanical Typesetter and Composer
47	Mechanics and Repairers, Other
52	Medical Administrative Assistant/Secretary
51	Medical Anatomy
51	Medical Assistant
51	Medical Biochemistry
51	Medical Biomathematics and Biometrics
51	Medical Cell Biology
51	Medical Clinical Sciences (M.S., Ph.D.)
51	Medical Dietician
51	Medical Genetics
51	Medical Illustrating
51	Medical Immunology
51	Medical Laboratory Assistant
51	Medical Laboratory Technician
51	Medical Microbiology
51	Medical Molecular Biology
51	Medical Neurobiology
51	Medical Nutrition
51	Medical Office Management
51	Medical Pathology
51	Medical Pharmacology and Pharmaceutical Sciences
51	Medical Physics/Biophysics
51	Medical Physiology
51	Medical Radiologic Tech./Technician
51	Medical Records Administration
51	Medical Records Tech./Technician
51	Medical Residency Programs, Other
51	Medical Technology
51	Medical Toxicology
51	Medical Transcription
40	Medicinal/Pharmaceutical Chemistry
51	Medicine (M.D.)
30	Medieval and Renaissance Studies
51	Mental Health Services, Other
50	Metal and Jewelry Arts

Code	Titles
14	Metallurgical Engineering
15	Metallurgical Tech./Technician
40	Metallurgy
26	Microbiology/Bacteriology
16	Middle Eastern Languages and Literatures, Other
05	Middle Eastern Studies
29	Military Technologies
14	Mining and Mineral Engineering
15	Mining and Petroleum Technol./Technicians, Other
15	Mining Tech./Technician
26	Miscellaneous Biological Specializations, Other
47	Miscellaneous Mechanics and Repairers, Other
40	Miscellaneous Physical Sciences, Other
39	Missions/Missionary Studies and Misology
26	Molecular Biology
47	Motorcycle Mechanic and Repairer
51	Movement Therapy
30	Multi/Interdisciplinary Studies, Other
51	Musculoskeletal Oncology Residency
30	Museology/Museum Studies
36	Music
50	Music Business Management and Merchandising
50	Music Conducting
50	Music, General
50	Music - General Performance
50	Music History and Literature
50	Music, Other
50	Music - Piano and Organ Performance
13	Music Teacher Education
50	Music Theory and Composition
51	Music Therapy
50	Music - Voice and Choral/Opera Performance
47	Musical Instrument Repairer
50	Musicology and Ethnomusicology
03	Natural Resources Conservation, General
03	Natural Resources Law Enforcement and Protective Services
03	Natural Resources Management and Policy
03	Natural Resources Management and Protective Services, Other
36	Nature Appreciation
51	Naturopathic Medicine
14	Naval Architecture and Marine Engineering
28	Navy/Marine Corps R.O.T.C./Naval Science
51	Neonatal-Perinatal Medicine Residency
51	Nephrology Residency
51	Neurological Surgery/Neurosurgery Residency
51	Neurology Residency
51	Neuropathology Residency
26	Neuroscience

Code	Titles
52	Non-Profit and Public Management
41	Nuclear and Industrial Radiologic Technol./Technicians, Other
14	Nuclear Engineering
51	Nuclear Medical Tech./Technician
51	Nuclear Medicine Residency
41	Nuclear/Nuclear Power Tech./Technician
40	Nuclear Physics
51	Nuclear Radiology Residency
51	Nurse Assistant/Aide
01	Nursery Operations and Management
51	Nursing (R.N. Training)
51	Nursing Administration (Post-R.N.)
51	Nursing, Adult Health (Post-R.N.)
51	Nursing Anesthetist (Post-R.N.)
51	Nursing, Family Practice (Post-R.N.)
51	Nursing, Maternal/Child Health (Post-R.N.)
51	Nursing Midwifery (Post-R.N.)
51	Nursing, Other
51	Nursing, Pediatric (Post-R.N.)
51	Nursing, Psychiatric/Mental Health (Post-R.N.)
51	Nursing, Public Health (Post-R.N.)
51	Nursing Science (Post-R.N.)
51	Nursing, Surgical (Post-R.N.)
26	Nutritional Sciences
51	Obstetrics and Gynecology Residency
51	Occupational Health and Industrial Hygiene
51	Occupational Medicine Residency
15	Occupational Safety and Health Tech./Technician
51	Occupational Therapy
51	Occupational Therapy Assistant
14	Ocean Engineering
40	Oceanography
08	Office Products Marketing Operations
52	Office Supervision and Management
51	Oncology Residency
52	Operations Management and Supervision
27	Operations Research
51	Ophthalmic Medical Assistant
51	Ophthalmic Medical Technologist
51	Ophthalmic/Optometric Services, Other
51	Ophthalmology Residency
51	Optical Technician/Assistant
51	Opticianry/Dispensing Optician
40	Optics
51	Optometric/Ophthalmic Laboratory Technician
51	Optometry (O.D.)
51	Oral Pathology Specialty
40	Organic Chemistry
52	Organizational Behavior Studies
01	Ornamental Horticulture Operations and Management
51	Orthodontics Specialty

Code	Titles
51	Orthopedics/Orthopedic Surgery Residency
51	Orthoptics
51	Orthotics/Prosthetics
51	Osteopathic Medicine (D.O.)
51	Otolaryngology Residency
05	Pacific Area Studies
46	Painter and Wall Coverer
50	Painting
40	Paleontology
22	Paralegal/Legal Assistant
26	Parasitology
31	Parks, Recreation and Leisure Facilities Management
31	Parks, Recreation and Leisure Studies
31	Parks, Recreation, Leisure and Fitness Studies, Other
39	Pastoral Counseling and Specialized Ministries
26	Pathology, Human and Animal
51	Pathology Residency
30	Peace and Conflict Studies
51	Pediatric Cardiology Residency
51	Pediatric Endocrinology Residency
51	Pediatric Hemato-Oncology Residency
51	Pediatric Nephrology Residency
51	Pediatric Orthopedics Residency
51	Pediatric Surgery Residency
51	Pediatrics Residency
51	Pedodontics Specialty
51	Perfusion Tech./Technician
51	Periodontics Specialty
12	Personal and Miscellaneous Services, Other
37	Personal Awareness and Self-Improvement, Other
37	Personal Decision-Making Skills
34	Personal Health Improvement and Maintenance
08	Personal Services Marketing Operations
36	Pet Ownership and Care
14	Petroleum Engineering
08	Petroleum Products Retailing Operations
15	Petroleum Tech./Technician
26	Pharmacology, Human and Animal
51	Pharmacy (B. Pharm., Pharm.D.)
51	Pharmacy Administration and Pharmaceutics
51	Pharmacy, Other
51	Pharmacy Technician/Assistant
38	Philosophy
38	Philosophy and Religion
10	Photographic Tech./Technician
50	Photography
51	Physical and Rehabilitation Medicine Residency
40	Physical and Theoretical Chemistry
13	Physical Education Teaching and Coaching
41	Physical Science Technol./Technicians, Other

Code	Titles
40	Physical Sciences, General
40	Physical Sciences, Other
51	Physical Therapy
51	Physical Therapy Assistant
51	Physician Assistant
40	Physics, General
40	Physics, Other
13	Physics Teacher Education
42	Physiological Psychology/Psychobiology
26	Physiology, Human and Animal
02	Plant Breeding and Genetics
26	Plant Pathology
26	Plant Physiology
02	Plant Protection (Pest Management)
02	Plant Sciences, General
02	Plant Sciences, Other
40	Plasma and High-Temperature Physics
51	Plastic Surgery Residency
15	Plastics Tech./Technician
50	Playwriting and Screenwriting
46	Plumber and Pipefitter
51	Podiatry (D.P.M., D.P., Pod.D.)
45	Political Science and Government, Other
45	Political Science, General
40	Polymer Chemistry
14	Polymer/Plastics Engineering
16	Portuguese Language and Literature
02	Poultry Science
51	Practical Nurse (L.P.N. Training)
51	Pre-Dentistry Studies
13	Pre-Elementary/Early Childhood/Kindergarten Teacher Education
22	Pre-Law Studies
51	Pre-Medicine Studies
51	Pre-Pharmacy Studies
39	Pre-Theological/Pre-Ministerial Studies
51	Pre-Veterinary Studies
48	Precision Metal Workers, Other
48	Precision Production Trades, Other
51	Preventive Medicine Residency
48	Printing Press Operator
50	Printmaking
51	Prosthodontics Specialty
43	Protective Services, Other
51	Psychiatric/Mental Health Services Technician
51	Psychiatry Residency
51	Psychoanalysis
42	Psychology, General
42	Psychology, Other

Code	Titles
44	Public Administration
44	Public Administration and Services, Other
45	Public/Applied History and Archival Administration
52	Public Finance
51	Public Health Education and Promotion
51	Public Health, General
51	Public Health Medicine Residency
51	Public Health, Other
44	Public Policy Analysis
09	Public Relations and Organizational Communications
51	Pulmonary Disease Residency
52	Purchasing, Procurement and Contracts Management
15	Quality Control and Safety Technol./Technicians, Other
15	Quality Control Tech./Technician
39	Rabbinical and Talmudic Studies (M.H.L./Rav)
26	Radiation Biology/Radiobiology
51	Radiation Oncology Residency
09	Radio and Television Broadcasting
10	Radio and Television Broadcasting Tech./Technician
51	Radioisotopic Pathology Residency
02	Range Science and Management
36	Reading
32	Reading, Literacy and Communication Skills
13	Reading Teacher Education
52	Real Estate
52	Receptionist
08	Recreation Products/Services Marketing Operations
51	Recreational Therapy
53	Regular High School Diploma
51	Rehabilitation/Therapeutic Services, Other
38	Religion/Religious Studies
39	Religious Education
39	Religious/Sacred Music
51	Respiratory Therapy Technician
51	Rheumatology Residency
15	Robotics Tech./Technician
16	Romance Languages and Literatures, Other
05	Russian and Slavic Area Studies
16	Russian Language and Literature
05	Scandinavian Area Studies
16	Scandinavian Languages and Literatures
42	School Psychology
13	Science Teacher Education, General
30	Science, Tech. and Society
41	Science Technol./Technicians, Other
50	Sculpture
13	Secondary Teacher Education
43	Security and Loss Prevention Services
37	Self-Awareness and Personal Assessment

Code	Titles
37	Self-Esteem and Values Clarification
48	Sheet Metal Worker
48	Shoe, Boot and Leather Repairer
51	Sign Language Interpreter
16	Slavic Languages and Literatures (Other Than Russian)
47	Small Engine Mechanic and Repairer
13	Social and Philosophical Foundations of Education
42	Social Psychology
13	Social Science Teacher Education
45	Social Sciences and History, Other
45	Social Sciences, General
13	Social Studies Teacher Education
44	Social Work
31	Socio-Psychological Sports Studies
45	Sociology
02	Soil Sciences
15	Solar Tech./Technician
40	Solid State and Low-Temperature Physics
16	South Asian Languages and Literatures
05	South Asian Studies
05	Southeast Asian Studies
16	Spanish Language and Literature
13	Spanish Language Teacher Education
13	Special Education, General
13	Special Education, Other
23	Speech and Rhetorical Studies
51	Speech-Language Pathology
51	Speech-Language Pathology and Audiology
13	Speech Teacher Education
31	Sport and Fitness Administration/Management
36	Sports and Exercise
51	Sports Medicine Residency
47	Stationary Energy Sources Installer and Operator
37	Stress Management and Coping Skills
14	Structural Engineering
51	Surgical/Operating Room Technician
15	Surveying
14	Systems Engineering
30	Systems Science and Theory
52	Taxation
13	Teacher Assistant/Aide
13	Teacher Education, Multiple Levels
13	Teacher Education, Specific Academic and Vocational Programs, Other
13	Teaching English as a Second Language/Foreign Language
13	Technical Teacher Education (Vocational)
50	Technical Theater/Theater Design and Stagecraft
21	Technology Education/Industrial Arts
13	Technology Teacher Education/Industrial Arts Teacher Education
14	Textile Sciences and Engineering
36	Theater
39	Theological and Ministerial Studies, Other
39	Theological Studies and Religious Vocations, Other

Code	Titles
39	Theology/Theological Studies
40	Theoretical and Mathematical Physics
51	Theriogenology
51	Thoracic Surgery Residency
48	Tool and Die Maker/Technologist
08	Tourism and Travel Services Marketing Operations, Other
08	Tourism Promotion Operations
26	Toxicology
13	Trade and Industrial Teacher Education (Vocational)
14	Transportation and Highway Engineering
49	Transportation and Materials Moving Workers, Other
36	Travel and Exploration
08	Travel Services Marketing Operations
52	Travel-Tourism Management
49	Truck, Bus and Other Commercial Vehicle Operator
01	Turf Management
12	Umpires and Other Sports Officials
48	Upholsterer
45	Urban Affairs/Studies
51	Urology Residency
51	Vascular Surgery Residency
49	Vehicle and Equipment Operators, Other
47	Vehicle and Mobile Equipment Mechanics and Repairers, Other
08	Vehicle and Petroleum Products Marketing Operations, Other
08	Vehicle Marketing Operations
08	Vehicle Parts and Accessories Marketing Operations
51	Veterinarian Assistant/Animal Health Technician
51	Veterinary Anesthesiology
51	Veterinary Clinical Sciences (M.S., Ph.D.)
51	Veterinary Dentistry
51	Veterinary Dermatology
51	Veterinary Emergency and Critical Care Medicine
51	Veterinary Internal Medicine
51	Veterinary Medicine (D.V.M.)
51	Veterinary Microbiology
51	Veterinary Nutrition
51	Veterinary Ophthalmology
51	Veterinary Pathology
51	Veterinary Practice
51	Veterinary Preventive Medicine
51	Veterinary Radiology
51	Veterinary Residency Programs, Other
51	Veterinary Surgery
51	Veterinary Toxicology
26	Virology
50	Visual and Performing Arts
50	Visual and Performing Arts, Other
53	Vocational High School Diploma
20	Vocational Home Economics, Other
51	Vocational Rehabilitation Counseling
12	Waiter/Waitress and Dining Room Manager
47	Watch, Clock and Jewelry Repairer

Code	Titles
15	Water Quality and Wastewater Treatment Tech./Technician
14	Water Resources Engineering
49	Water Transportation Workers, Other
48	Welder/Welding Technologist
05	Western European Studies
03	Wildlife and Wildlands Management
20	Window Treatment Maker and Installer
05	Women's Studies
03	Wood Science and Pulp/Paper Tech.
48	Woodworkers, General
48	Woodworkers, Other
36	Writing
51	Zoological Medicine
26	Zoology, General
26	Zoology, Other

VI. LIST OF MFOS EXAMPLES IN EACH CODING CATEGORY

Code	CIP Category	Examples of MFOS
01	Agricultural Business & Production	Agricultural economics Farm and ranch management
02	Agricultural Sciences	Dairy science Poultry science
03	Conservation & Renewable Natural Resources	Environmental sciences/studies Natural resources management and policy
04	Architecture & Related Programs	City/urban, community & regional planning Landscape architecture
05	Area, Ethnic & Cultural Studies	African studies Women's studies
08	Business	Financial services marketing operations Travel and tourism General selling and sales skills
09	Communications	Advertising Speech communications
10	Communications Technologies	Radio and television broadcasting technology Communications technology
11	Computer & Information Sciences	Computer science Systems analysis
12	Personal & Miscellaneous Services	Barber/hairstylist Bartender Waiter/waitress
13	Education	English as a second language Literature
14	Engineering	Electrical engineering Civil engineering Chemical engineering
15	Engineering-Related Technologies	Engineering technology Robotics technology Plastics technology
16	Foreign Languages & Literatures	Linguistics Foreign languages and literature Foreign language interpretation/translation

Code	CIP Category	Examples of MFOS
19	Home Economics	Foods and nutrition science Family and marriage counseling Family development studies
20	Vocational Home Economics	Child care and elder care Tailor Housekeeper
21	Technology Education/Industrial Arts	Industrial arts
22	Law & Legal Studies	Pre-law studies Paralegal/legal assistant
23	English Language & Literature/Letters	Business writing Speech and rhetorical studies
24	Liberal Arts & Sciences, General Studies & Humanities	General studies Humanities/humanistic studies
25	Library Sciences	Library science Library assistant
26	Biological Sciences/Life Sciences	Biochemistry Microbiology Anatomy
27	Mathematics	Applied mathematics Mathematical statistics
28	Reserve Officers' Training Corps Programs	Air Force R.O.T.C./air science Navy/Marine Corps R.O.T.C./naval science
29	Military Technologies	Military technologies
30	Multi/Interdisciplinary Studies	Peace and conflict Biological and physical sciences Museum studies
31	Parks, Recreation, Leisure & Fitness Studies	Health and physical education General athletic training and Sports medicine
32	Basic Skills	Basic skills, General career skills
33	Citizenship Activities	Becoming a U.S. citizen Community involvement

Code	CIP Category	Examples of MFOS
34	Health-Related Knowledge & Skills	Birthing classes
35	Interpersonal & Social Skills	Business and social skills Interpersonal relationships skills
36	Leisure & Recreational Activities	Arts & crafts
37	Personal Awareness & Self-Improvement	Stress management and coping skills
38	Philosophy & Religion	Philosophy Philosophy and religion
39	Theological Studies & Religious Vocations	Bible/biblical studies Religious/sacred music
40	Physical Sciences	Chemistry Oceanography Earth and planetary sciences
41	Science Technologies	Nuclear/nuclear power technology
42	Psychology	Social psychology Most types of counseling
43	Protective Services	Police Fire protection Criminal justice and corrections
44	Public Administration & Services	Social work Public policy analysis
45	Social Sciences & History	Economics Urban studies Criminology
46	Construction Trades	Plumbers Pipefitters Masons Carpenters
47	Mechanics & Repairers	Locksmith/gunsmith Watch/jewelry repair Refrigerator repairmen

Code	CIP Category	Examples of MFOS
48	Precision Production Trades	Drafting Upholsterers Meat cutters Metal cutters
49	Transportation & Materials Moving Workers	Airline pilots/ air traffic controllers Bus driver Equipment operators
50	Visual & Performing Arts	Graphic design Fine arts
51	Health Professions & Related Sciences	Pre-medicine studies Medicine Nursing
52	Business Management & Administrative Services	Real estate Human resources Accounting Business communications Insurance Risk management Taxes
91	Indeterminable/Other/Unknown	Human relations Double/multiple majors