NATIONAL CENTER FOR EDUCATION STATISTICS

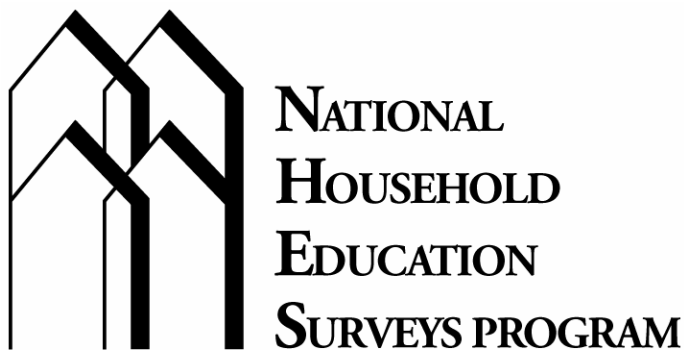User's Manual   April 2003

National Household Education Surveys of 2001

Data File User's Manual

Volume IV

Adult Education and Lifelong Learning Survey

NATIONAL
HOUSEHOLD
EDUCATION
SURVEYS PROGRAM

NATIONAL CENTER FOR EDUCATION STATISTICS

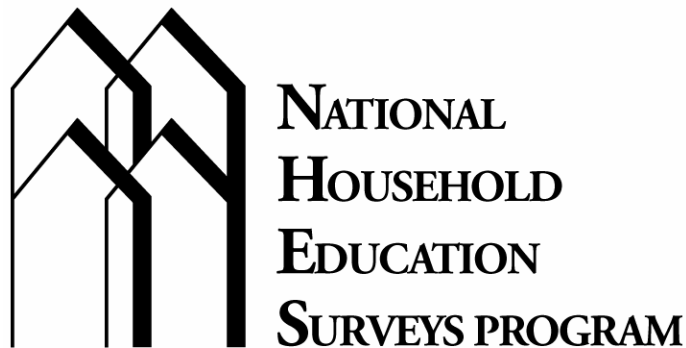User's Manual   April 2003

National Household Education Surveys of 2001

Data File User's Manual

Volume IV

Adult Education and Lifelong Learning Survey

NATIONAL
HOUSEHOLD
EDUCATION
SURVEYS PROGRAM

Mary Hagedorn, Project Director
Jill Montaquila, Senior Statistician
Mary Jo Nolin
Kwang Kim
Brian Kleiner
Tiffany Waits
Westat

Christopher Chapman
Kathryn Chandler
National Center for Education Statistics

U.S. Department of Education
Rod Paige
Secretary

Institute of Education Sciences
Grover J. Whitehurst
Assistant Secretary

National Center for Education Statistics
Val Plisko
Associate Commissioner

The National Center for Education Statistics (NCES) is the primary federal entity for collecting, analyzing, and reporting data related to education in the United States and other nations. It fulfills a congressional mandate to collect, collate, analyze, and report full and complete statistics on the condition of education in the United States; conduct and publish reports and specialized analyses of the meaning and significance of such statistics; assist state and local education agencies in improving their statistical systems; and review and report on education activities in foreign countries.

NCES activities are designed to address high priority education data needs; provide consistent, reliable, complete, and accurate indicators of education status and trends; and report timely, useful, and high quality data to the U.S. Department of Education, the Congress, the states, other education policymakers, practitioners, data users, and the general public.

We strive to make our products available in a variety of formats and in language that is appropriate to a variety of audiences. You, as our customer, are the best judge of our success in communicating information effectively. If you have any comments or suggestions about this or any other NCES product or report, we would like to hear from you. Please direct your comments to:

> National Center for Education Statistics
> Institute of Education Sciences
> U.S. Department of Education
> 1990 K Street, NW
> Washington, DC 20006–5650

April 2003

The NHES World Wide Web Home Page is
http://nces.ed.gov/nhes

Suggested Citation

U.S. Department of Education. National Center for Education Statistics. *National Household Education Surveys of 2001: Data File User's Manual, Volume IV, Adult Education and Lifelong Learning Survey,* NCES 2003–082, by Mary Hagedorn, Jill Montaquila, Mary Jo Nolin, Kwang Kim, Brian Kleiner, Tiffany Waits, Christopher Chapman, and Kathryn Chandler. Washington, DC: 2003.

Contact:
Christopher Chapman
(202) 502–7414
(e-mail) nhes@ed.gov

TABLE OF CONTENTS

Figures **Page**

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 2001 administration (NHES:2001) was conducted by Westat from January 2 through April 14, 2001. In the NHES:2001 Screener, household members were enumerated and demographic and educational information that determined eligibility for the surveys was collected. The NHES:2001 surveys are as follows:

- Early Childhood Program Participation survey (ECPP-NHES:2001), which gathered information on the nonparental care arrangements and educational programs of preschool children, comprising care by relatives, care by persons to whom they were not related, and participation in day care centers and preschool programs including Head Start;

- Before- and After-School Programs and Activities survey (ASPA-NHES:2001), which addressed relative and nonrelative care during the out-of-school hours of school-age children, as well as participation in before- and/or after-school programs, activities, and self-care; and

- Adult Education and Lifelong Learning survey (AELL-NHES:2001), in which data such as type of program, employer support, and credential sought were collected for participation in the following types of adult educational activities: English as a Second Language, basic skills education, credential programs, apprenticeships, work-related courses, and personal interest courses. Some information on work-related informal learning activities was gathered as well.

Three populations of interest corresponded to the three surveys that composed the NHES:2001:

- Children from birth through age 6 who were not yet enrolled in kindergarten or above, whose parents completed either the infant path (ages 0 through 2) or the preschool path (ages 3 through 6) of the ECPP-NHES:2001 survey;

- Children age 15 and younger enrolled in kindergarten through 8th grade, whose parents completed the ASPA-NHES:2001 survey; and

- Adults (persons age 16 or older), who were not enrolled in grade 12 or below and also not on active duty in the military, who responded to the AELL-NHES:2001 survey.

This manual, the *National Household Education Survey of 2001: Data File User's Manual, Volume IV, Adult Education and Lifelong Learning Survey*, provides documentation and guidance for users of the public-use data file for the AELL-NHES:2001 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 appendixes are the public-use data file layout, SAS code for creating derived variables, the codebook for the AELL-NHES:2001 public-use data file, and directions and sample code for linking the NHES:2001 data files.

Volume IV is meant to be read in conjunction with Volume I of the *NHES:2001 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 the ECPP-NHES:2001 and the ASPA-NHES:2001 can be found in Volumes II and III, respectively.

This page is intentionally blank.

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 and Lifelong Learning survey (AELL) of the 2001 National Household Education Surveys Program (NHES:2001), which includes data from interviews with 10,873 adult respondents, of whom 6,094 were participants in educational activities (including full-time credential programs only) and 4,779 were not. This file contains data from all completed AELL interviews. There is one record for each interview; therefore, the file contains 10,873 cases. 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 C. 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, except MAINRSLT, CRDIPLM1, CRDIPLM2, and CRDIPLM3 in the AELL survey file 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

System variables are created during the conduct of an interview and are instrumental in the successful administration of the interview. Their creation is transparent to the interviewer and to the respondent. System variables fall into two categories: linking variables (record identifiers or ID numbers), and interview status variables. Linking variables are record identifiers that provide a link to other interviews completed in the same household. (See appendix F for more information about linking between files.) Status variables are set at the completion of each interview to define completion status. The following are the system variables in the AELL file.

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:2001 surveys is always 01.

ENUMID is the 10-digit identifier variable for the subject of the interview. It is composed of the 8-digit household identifier and the 2-digit household member person number of the subject of the interview. ENUMID can be used to link the AELL interview to the ECPP or ASPA interviews. See appendix F for instructions for linking the NHES:2001 data files.

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

The values for MAINRSLT are:

CP = Complete AELL interview; sampled as participant, completed as participant
CU = Complete AELL interview; sampled as non-participant, completed as non-participant
CX = Complete AELL interview; sampled as participant, completed as non-participant
CZ = Complete AELL interview; sampled as non-participant, completed as participant

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

The values for ENGLSPAN are:

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 AELL survey, all household members were enumerated in the Screener interview. Data collected included age and sex of each household member (S6). 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. The variables appear on the data file as follows:

AAGE2000 is the sampled adult's age as of December 31, 2000.

SEX is the sex of the sampled adult.

AGE1 through AGE10 are the age of each enumerated household member other than the sampled adult.

SEX1 through SEX10 designate the sex of each enumerated household member other than the sampled adult.

6.1.3   Questionnaire Item Variables

The questionnaire item variables appear on the file in the same order as they were asked. Refer to the questionnaire in Volume I, appendix A, for the order. The items on participation status in any educational activities and high school diploma status appear in the Screener and the AELL questionnaire. The response given by the adult him/herself, whether in the Screener (if the sampled adult was the Screener respondent) or in the AELL interview, is contained in the data file.

Some variables were excluded from the file for confidentiality reasons. These include the names of household members, verbatim string responses, which might identify persons or places, and the individual ZIP Codes (HZIPCODE). Some of these variables are included in a separate restricted-use data file (see section 6.3 below). The AELL survey questionnaire appears with the Screener, the Before- and After-School Programs and Activities survey, and the Early Childhood Program Participation survey 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 Web site 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 are three "code all that apply" questions in the AELL survey: CRTYASC, CRTYBCH, CRTYMAS, CRTYDOC, CRTYPRF, CRTYOTH (AD2); CRPOSBAC, CRPOSMAS, CRPOSDOC (AD4); and VOVOC, VOTECH, VOASSOC, VOOTHDIP (AE2).

Some variables present in the questionnaire never arose in any interview and thus are not present on the data file. These were questions where the conditions for asking them were not met for any respondents. The following variables were not included on the AELL data file for this reason: CRASSIS3, CRCLSHR3, VOASSIS2, and VOCLSHR2.

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) or 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 1990 Census of Population Summary Tape File 3B (STF3B).

The derived variables appear together on the file in their own section in alphabetical order. They are listed below in the same order with an explanation of how they were derived. Because 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 D with the exception of household counter variables which were created in CATI and CENREG (Census region) because the source variables are not on the data file. All unique NHES:2001 ZIP Codes were matched to

ZIP Codes on the STF3B to extract urbanicity, the percent of Black or Hispanic residents, and the percent of persons under age 18 living in poverty. The AELL derived variables are as follows:

AEPARANY indicates whether the adult participated in any types of adult education activities in the previous 12 months, including English as a Second Language classes, basic skills education, apprenticeships, full-time <u>and</u> part-time college/university or vocational/technical credential programs, work-related courses, and personal interest courses. This variable was created from the variables ESLANG (AB1), BSIMPROV (AC1A), BSGED (AC1B), BSHSEQUV (AC1C), IBDIPLYR (AA3), IBHSREQ (AA4), CRDEGREE (AD1), CRPOSTDG (AD3), CRVOCDIP (AE1), APPRENTI (AF1), WRACTY, AND SAACTY.

The values of AEPARANY are:

0 = No
1 = Yes

AEPARTIC indicates whether the adult partic ipated in adult education activities in the previous 12 months, including English as a Second Language classes, basic skills education, apprenticeships, part-time <u>only</u> college/university or vocational/technical credential programs, work-related courses, and personal interest courses. This excludes full-time college/university or vocational/technical credential programs. It was created from the responses to ESLANG (AB1), BSIMPROV (AC1A), BSGED (AC1B), BSHSEQUV (AC1C), IBDIPLYR (AA3), IBHSREQ (AA4), CRDEGREE (AD1), CRPOSTDG (AD3), CRPTFT1 (AD17), CRPTFT2 (AD17), CRPTFT3 (AD17), CRVOCDIP (AE1), VOPTFT (AE15), VOPTFT2 (AE15), APPRENTI (AF1), WRACTY, AND SAACTY.

The values of AEPARTIC are:

0 = No
1 = Yes

ANYSUPP indicates whether the respondent's employer provided support for adult education and lifelong learning, including providing instruction, 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 English as a Second Language (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. This derived variable was created from the variables AEPARANY, ESSUPP, BSSUPP, COLSUPP, VOCSUPP, WRSUPP, and SASUPP.

The values of ANYSUPP are:

0 = No
1 = Yes
-1 = Nonparticipant

BSPARTIC indicates whether the adult participated in English as a Second Language (ESL) classes, adult basic education (ABE), or General Education Development (GED) preparation classes in the previous 12 months. This variable was created from the variables ESLANG (AB1), BSIMPROV (AC1A), BSGED (AC1B), BSHSEQUV (AC1C), IBDIPLYR (AA3), and IBHSREQ (AA4).

The values of BSPARTIC are:

0 = No
1 = Yes

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. The measure of employer support for participating adults was created from the variables BSIMPROV (AC1A), BSGED (AC1B), BSHSEQUV (AC1C), IBDIPLYR (AA3), IBHSREQ (AA4), BSPROVEM (AC7), BSWRKPL (AC18), BSWRKHR (AC19), BSEMPAID (AC20), BSEMPTUI (AC21A), BSEMPMAT (AC21B). 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 (BSWORK = 2). Adults were coded -1, nonparticipant, if they were not participants in basic skills education.

The values of BSSUPP are:

0 = No
1 = Yes
-1 = Nonparticipant

CENREG identifies the Census region for each record. This variable was created by linking states and telephone area codes of sampled adults. Once the link between states and adults was established, the Census regions were assigned as given below.

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, NV, NM, OR, UT, WA, WY

The values of CENREG are:

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

COLSUPP indicates whether the respondent's employer provided support for college or university degree programs, including providing instruction, providing programs at the workplace, providing programs during regular work hours, or paying for degree programs. The measure of employer support for participating adults was created from the variables CRDEGREE (AD1), CRPOSTDG (AD3), CRPROVE1 (AD14), CRWRKHR1 (AD31), CRWRKPL1 (AD30), CREMPAI1 (AD32), CREMPTU1 (AD33A), CREMPMA1 (AD33B), CRPROVE2 (AD14), CRWRKHR2 (AD31), CRWRKPL2 (AD30), CREMPAI2 (AD32), CREMPTU2 (AD33A), CREMPMA2 (AD33B), CRPROVE3 (AD14), CRWRKHR3 (AD31), CRWRKPL3 (AD30), CREMPAI3 (AD32), CREMPTU3 (AD33A), and CREMPMA3 (AD33B). 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 (CRWORK1 = 2 and CRWORK2 = 2 and CRWORK3 = 2). Adults were coded -1, nonparticipant, if they were not participants in college or university degree programs.

The values of COLSUPP are:

0 = No
1 = Yes
-1 = Nonparticipant

CRDIPART is a composite variable that indicates whether the adult participated in college/university degree programs or vocational/technical diploma programs in either part-time or full-time status in the past 12 months. This variable was created from the variables CRDEGREE (AD1), CRPOSTDG (AD3), and CRVOCDIP (AE1).

The values of CRDIPART are:

0 = No
1 = Yes

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.

EDUCLEVL indicates the respondent's highest level of education. If the respondent indicated that his/her highest level of schooling is vocational or technical school 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"). This derived variable was created from the variables IBGRADE (AA1) and IBDIPL (AA2).

The values of EDUCLEVL are:

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

ESSUPP indicates whether the respondent's employer provided support for English as a Second Language (ESL) classes, including providing instruction, providing classes at the workplace, providing classes during regular work hours, or paying for classes. The measure of employer support for participating adults was created from the variables ESLANG (AB1), ESPROVEM (AB7), ESWRKPL (AB18), ESWRKHR (AB19), ESEMPAID (AB20), ESEMPTUI (AB21A), ESEMPMAT (AB21B). Adults were coded 0 (no) if they were participants in ESL classes and did not work during the time they took ESL classes (ESWORK = 2). Adults were coded -1, nonparticipant, if they were not participants in ESL classes.

The values of ESSUPP are:

0 = No
1 = Yes
-1 = Nonparticipant

HH18OVER is the counter-derived variable that indicates the number of household members age 18 and older, including the sampled adults.

HHTOTAL is the counter-derived variable that indicates the total number of household members.

HHUNDR10 is the counter-derived variable that indicates the number of household members younger than 10 years old.

HHUNDR18 is the counter-derived variable that indicates the number of household members younger than 18 years old, including the sampled adult.

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

The values of HIGHEDUC are:

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

RACEETHN classifies the race and ethnicity of the adult in a single measure. It was created using the variables ARACE (AK3) and AHISPANI (AK5). If the respondent identified his or her ethnicity as Hispanic, RACEETHN is Hispanic regardless of whether race was identified as White, Black, or another race.

The values for RACEETHN are:

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

RACEETH2 is an alternative measure of the respondent's race and ethnicity with a separate category for Asian or Pacific Islander. This variable was created using ARACE (AK3) and AHISPANI (AK5).

The values of RACEETH2 are:

1 = White, non-Hispanic
2 = Black, non-Hispanic
3 = Hispanic
4 = Asian or Pacific Islander
5 = All other races (e.g., American Indian or Alaska Native), non-Hispanic

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

The values of SAACTY are:

1 = Yes
2 = No

SACOST shows the total cost of participation in personal interest courses. It is a continuous variable and is derived from the variables SAACTY, SATUITO1 (AI9A), SAMATLS1 (AI9B), SATUITO2 (AI9A), SAMATLS2 (AI9B), and SAWGT (course weighting factor). Adults were coded -1, nonparticipant, if they were not participants in personal interest courses.

SANEW indicates the number of personal interest courses in which the respondent participated. Nonparticipants in personal interest courses were set to -1, nonparticipant.

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. It was created using the variables SAACTY, SAPROVE1 (AI3), SAWRKPL1 (AI12), SAWRKHR1 (AI13), SAEMPAI1 (AI14), SAEMPTU1 (AI15A), SAEMPMA1 (AI15B), SAPROVE2 (AI3), SAWRKPL2 (AI12), SAWRKHR2 (AI13), SAEMPAI2 (AI14), SAEMPTU2 (AI15A), SAEMPMA2 (AI15B), SAOPAY (AI16C), and SAOTIME (AI16D). Adults were coded 0 (no) if they were participants in personal interest courses and did not work during the time they took the courses (SAWORK1 = 2 and SAWORK2 = 2). If adults were not participants in personal interest courses, they were coded -1, nonparticipant.

The values of SASUPP are:

 0 = No
 1 = Yes
-1 = Nonparticipant

SATIME shows the total hours of participation in personal interest courses. It is a continuous variable. Adults were coded -1, nonparticipant, if they were not participants in personal interest courses. This was created using the variables SAACTY, SACLSHR1, SACLSHR2, and SAWGT (course weighting factor).

TECHINST indicates whether the respondent has participated in any courses or programs in which instruction was provided using technology. Technologies used in instruction include television, video, radio, computers, computer conferencing, or the Internet or WWW. Those cases in which the adult did not participate in any of the relevant types of adult education (i.e., college or university degree programs, vocational or technical diploma programs, work-related courses, or personal interest courses) were coded nonparticipants, -1. This variable was created from CRDEGREE (AD1), CRPOSTDG (AD3), CRVOCDIP (AE1), WRACTY, SAACTY, CRINTV1 (AD22A), CRINCOM1 (AD22B), CRINCON1 (AD22C), CRINWWW1 (A22D), CRINTV2 (AD22A), CRINCOM2 (AD22B), CRINCON2 (AD22C), CRINWWW2 (A22D), CRINTV3 (AD22A), CRINCOM3 (AD22B), CRINCON3 (AD22C), CRINWWW3 (A22D), VOINTV1 (AD20A), VOINCOM1 (AE20B), VOINCON1 (AE20C), VOINWWW1 (AE20D), VOINTV2 (AE20A), VOINCOM2 (AE20B), VOINCON2 (AE20C), VOINWWW2 (AE20D), WRINTV1 (AH8A), WRINCOM1 (AH8B), WRINCON1 (AH8C), WRINWWW1 (AH8D), WRINTV2 (AH8A), WRINCOM2 (AH8B), WRINCON2 (AH8C), WRINWWW2 (AH8D), WRINTV3 (AH8A), WRINCOM3 (AH8B), WRINCON3 (AH8C), WRINWWW3 (AH8D), WRINTV4 (AH8A), WRINCOM4 (AH8B), WRINCON4

(AH8C), WRINWWW4 (AH8D), WROTECH (AH20F), SAINTV1 (AI7A), SAINCOM1 (AI7B), SAINCON1 (AI7C), SAINWWW1 (AI7D), SAINTV2 (AI7A), SAINCOM2 (AI7B), SAINCON2 (AI7C), SAINWWW2 (AI7D), AND SAOTECH (AI16E).

The values of TECHINST are:

0 = No
1 = Yes
-1 = Nonparticipant

VOCSUPP indicates whether the respondent's employer provided support for vocational or technical diploma programs, including providing instruction, 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 (VOWORK1 = 2 and VOWORK2 = 2). Adults were coded -1, nonparticipant, if they were not participants in vocational or technical diploma programs. This measure of employer support for participating adults was created from the variables CRVOCDIP (AE1), VOPROVE1 (AE12), VOWRKHR1 (AE29), VOWRKPL1 (AE28), VOEMPAI1 (AE30), VOEMPTU1 (AE31A), VOEMPMA1 (AE31B), VOPROVE2 (AE12), VOWRKHR2 (AE29), VOWRKPL2 (AE28), VOEMPAI2 (AE30), VOEMPTU2 (AE31A), and VOEMPMA2 (AE31B).

The values of VOCSUPP are:

0 = No
1 = Yes
-1 = Nonparticipant

VONEW indicates the number of vocational or technical diploma programs in which the respondent has participated. Nonparticipants in vocational or technical diploma programs were set to -1, nonparticipant.

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

The values of WRACTY are:

1 = Yes
2 = No

WRCOST shows the total cost of participation in work-related courses. It is a continuous variable. Adults were coded -1, nonparticipant, if they were not participants in work-related courses. This variable was derived from WRTUITO1 (AH11A), WRTUITO2 (AH11A), WRTUITO3 (AH11A), WRTUITO4 (AH11A), WRMATLS1 (AH11B), WRMATLS2 (AH11B), WRMATLS3 (AH11B), WRMATLS4 (AH11B), and WRWGT (course weighting factor).

WRNEW indicates the number of work-related courses in which the respondent participated. Nonparticipants in work-related courses were set to -1, nonparticipant.

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 (WRWORK1 = 2 and WRWORK2 = 2 and WRWORK3 = 2 and WRWORK4 = 2). Adults were coded -1, inapplic able, if they were not participants in work-related courses. This variable was created from WRACTY, WRPROVE1 (AH4), WRWRKPL1 (AH16), WRWRKHR1 (AH17), WREMPAI1 (AH18), WREMPTU1 (AH19A), WREMPMA1 (AH19B), WRPROVE2 (AH4), WRWRKPL2 (AH16), WRWRKHR2 (AH17), WREMPAI2 (AH18), WREMPTU2 (AH19A), WREMPMA2 (AH19B), WRPROVE3 (AH4), WRWRKPL3 (AH16), WRWRKHR3 (AH17), WREMPAI3 (AH18), WREMPTU3 (AH19A), WREMPMA3 (AH19B), WRPROVE4 (AH4), WRWRKPL4 (AH16), WRWRKHR4 (AH17), WREMPAI4 (AH18), WREMPTU4 (AH19A), WREMPMA4 (AH19B), WROPAY (AH20C), and WROTIME (AH20D).

The values of WRSUPP are:

0 = No
1 = Yes
-1 = Nonparticipant

WRTIME shows the total hours of participation in work-related courses. It is a continuous variable. Adults were coded -1, nonparticipant, if they were not participants in work-related courses. This variable was created from the variables WRACTY, WRCLSHR1, WRCLSHR2, WRCLSHR3, WRCLSHR4, and WRWGT (course weighting factor).

ZIP18PO2 is a linked-derived variable that categorizes the percentage of families with children under age 18 who were below the 1989 poverty line in the subject's ZIP Code.

The values of ZIP18PO2 are:

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

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

The values of ZIPBLHI2 are:

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

ZIPURBAN is a linked-derived variable that categorizes the subject's ZIP Code as urban or rural. The definitions for these categories are taken directly from the 1990 Census of Population (U.S. Department of Commerce 1992). An urbanized area (UA) comprises a place and the adjacent densely settled surrounding territory that together have a minimum population of 50,000 people. The term "place" in the UA definition includes both incorporated places, such as cities and villages, and Census-designated places (unincorporated population clusters for which the Census Bureau delineated boundaries in cooperation with state and local agencies to permit tabulation of data for Census Bureau products). The "densely settled surrounding territory" adjacent to the place consists of contiguous and noncontiguous territory of relatively high population density within short distances. The specific density and distance requirements are defined in the *Federal Register*, Vol. 55, No. 204.

The second category is urban, outside of UA. This category includes incorporated or unincorporated places outside of a UA with a minimum population of 2,500 people. One exception is for those who live in extended cities.[1] Persons living in rural portions of extended cities are classified as rural rather than urban. Places not classified as urban are rural.

Since a ZIP Code can cut across geographic areas that are classified in any of the three categories, the ZIPURBAN variable is classified into the category that has the largest number of persons. For example, if a ZIP Code has 5,000 persons in the first category (urban, inside UA), 0 persons in the second category (urban, outside UA), and 1,200 persons in the third category (rural), it is classified as inside UA.

The values for ZIPURBAN are:

1 = Urban, inside UA (urbanized area)
2 = Urban, outside UA (urbanized area)
3 = 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 AELL 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 AELL-NHES:2001 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.

---

[1] An extended city is either an incorporated place of any population size inside a UA, or an incorporated place with a population of 2,500 or more people outside a UA that contains one or more component rural areas. Each component rural area must have a population density of less than 100 people per square mile, consist of at least one entire Census block, and include at least 5 square miles of continuous area. An extended city can have both urban and rural population and land areas.

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.[2] 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 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 WRCOST, the total cost for work-related courses. To form this variable, the cost variables for work-related courses (WRTUITO1, WRTUITO2, etc.) were added together and the sum was multiplied by the work-related course weight (WRWGT). (This variable is described on page 11 and the code used to create the derived variable appears on page D-3.)

The calculated variable WRCOST 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 AELL 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.

---

[2] The questionnaire allowed for the collection of up to 20 course names, however, no adult reported more than 19 courses.

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 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 with various complex sample survey data analysis software packages that use replication methodology, such as WesVar, 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 with WesVar are given in Volume I, chapter 3, along with an approximation method that does not involve using the WesVar procedure.

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.

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:2001 data, the missing data were imputed, that is, obtained from a donor case using statistical procedures. For each variable on the AELL public-use file with imputed data, an imputation flag variable was created. If there is no imputation flag, then no imputation was performed on that variable. This flag can be used to identify imputed values. 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 was 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 AELL 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' 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 ILSELF is ILSEFF. 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 AELL survey file, except MAINRSLT, CRDIPLM1, CRDIPLM2, and CRDIPLM3, have numeric formats.

6.2 Guide to the Codebook

The codebook, shown in appendix E, 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 the 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 AELL 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, which that might identify persons, and respondents' individual ZIP Codes (HZIPCODE). Some of these variables (e.g., verbatim strings of other-specify categories, HZIPCODE) that are excluded from the public-use file are included on a separate restricted-use file. These variables are indicated with "/R" on the AELL survey questionnaire in Volume I, appendix A. The restricted-use data file also contains close to 100 ZIP Code variables from the 1990 Census of Population Summary Tape File 3B (STF3B), including the median household income of the area, the level of community mobility in the area, and the percentage of owner-occupied households in the area. The restricted-use data file may be obtained through a special licensing agreement with NCES. Go to the NCES Web site at http://nces.ed.gov/pubsearch/licenses.asp to learn more about getting a license.

6.4 Linking the AELL Data File to Other NHES:2001 Data Files

It is possible to link the AELL, ECPP, and ASPA data files. Instructions for doing so are presented in appendix F.

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** : 101-102
(5) **Format** : N2.

(6) Response	(7) Codes	(8) Frequency	(9) Percent	(10) Weighted Frequency	(11) Weighted Percent
1 YES	1	1,453	13.4	25,466,334	17.5
2 NO	2	6,426	59.1	119,783,120	82.5
RESERVED CODE: -1 INAPPLICABLE	-1	2,994	27.5	53,553,389	
		10,873	100.0%	198,802,843	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.

This page is intentionally blank.

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 NHES:2001 Adult Education and Lifelong Learning survey data, to describe the nature of those anomalies, and, where appropriate, to identify possible means of taking them into account when analyzing 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 AELL public-use data file: AAGE2000 (21 cases), AGE1 (13 cases), AGE2 (3 cases), and AGE4 (1 case).

7.1.2 Participation in English as a Second Language Classes

In the AELL-NHES:2001, 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 as a result of this coverage limitation. About 0.8 percent of households could not be screened for the NHES:2001 because of language barriers.

7.1.3 Deletion of Courses by Respondents

In the AELL 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 SANEW, respectively) exceeds the number of course segment variables with valid values (i.e., not -1). There were 8 cases of deleted sampled courses in the work-related courses section and 1 case in the personal interest courses section. The counter variables WRNEW and SANEW 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, AK21) was truncated at $100,000 per year to limit the disclosure of 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 (AK21) was set to 6 (per year). There is a flag variable on the file that identifies the cases for which EARNAMT was truncated, called EARNFLAG (1 = truncated; 0 = not truncated). As EARNFLAG indicates, EARNAMT was truncated for 441 cases.

7.1.5   Course Weighting Factors

These are course weighting factors (WRWGT and SAWGT), and 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.

7.2   Data Anomalies

Data anomalies include responses out of the expected range and real or apparent inconsistencies in the data. The following anomaly is documented here for the purpose of bringing it 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.

REFERENCES

Shah, B.V., Barnwell, B.G., Hunt, P.N., and LaVange, L.M. (1995). *SUDAAN User's Manual.* Raleigh, NC: Research Triangle Institute.

U.S. Department of Commerce. (1992). Census of Population and Housing, 1990: Summary Tape File 3 [machine-readable data files], Technical Documentation. Washington, DC: Bureau of the Census.

This page is intentionally blank.

APPENDIX C

AELL PUBLIC-USE DATA FILE LAYOUT IN POSITION ORDER

This page is intentionally blank.

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
1	BASMID	ADULT CASE IDENTIFICATION	N	12	1	12
2	ENUMID	SUBJECT ID NUMBER	N	10	13	22
3	MAINRSLT	RESULT CODE FOR EXTENDED	C	2	23	24
4	ENGLSPAN	WHETHER EXTENDED IN ENGLISH OR SPANISH	N	2	25	26
5	AAGE2000	AGE AS OF 12/31/2000	N	2	27	28
6	SEX	GENDER AT SCREENER	N	2	29	30
7	AGE1	O/HH MEM - #1'S AGE AS OF 12/31/2000	N	3	31	33
8	SEX1	O/HH MEM - #1'S GENDER AT SCREENER	N	2	34	35
9	AGE2	O/HH MEM - #2'S AGE AT SCREENER	N	3	36	38
10	SEX2	O/HH MEM - #2'S GENDER AT SCREENER	N	2	39	40
11	AGE3	O/HH MEM - #3'S AGE AT SCREENER	N	3	41	43
12	SEX3	O/HH MEM - #3'S GENDER AT SCREENER	N	2	44	45
13	AGE4	O/HH MEM - #4'S AGE AT SCREENER	N	3	46	48
14	SEX4	O/HH MEM - #4'S GENDER AT SCREENER	N	2	49	50
15	AGE5	O/HH MEM - #5'S AGE AT SCREENER	N	3	51	53
16	SEX5	O/HH MEM - #5'S GENDER AT SCREENER	N	2	54	55
17	AGE6	O/HH MEM - #6'S AGE AT SCREENER	N	3	56	58
18	SEX6	O/HH MEM - #6'S GENDER AT SCREENER	N	2	59	60
19	AGE7	O/HH MEM - #7'S AGE AT SCREENER	N	3	61	63
20	SEX7	O/HH MEM - #7'S GENDER AT SCREENER	N	2	64	65
21	AGE8	O/HH MEM - #8'S AGE AT SCREENER	N	3	66	68
22	SEX8	O/HH MEM - #8'S GENDER AT SCREENER	N	2	69	70
23	AGE9	O/HH MEM - #9'S AGE AT SCREENER	N	3	71	73
24	SEX9	O/HH MEM - #9'S GENDER AT SCREENER	N	2	74	75
25	AGE10	O/HH MEM - #10'S AGE AT SCREENER	N	3	76	78
26	SEX10	O/HH MEM - #10'S GENDER AT SCREENER	N	2	79	80
27	IBGRADE	AA1-HIGHEST GRADE/YEAR SCHOOL COMPLETED	N	2	81	82
28	IBGRAD1	AA1-ACTUAL GRADE 0-8 COMPLETED	N	2	83	84
29	IBGRAD2	AA1-ACTUAL GRADE 9-11 COMPLETED	N	2	85	86
30	IBVOCDIP	AA1OV-RECEIVED VOC/TECH DIPLOMA	N	2	87	88
31	IBDIPL	AA2-HAS HS DIPLOMA/GED	N	2	89	90
32	IBUSDIPL	AA2OV-RECEIVED HS DIPLOMA/GED IN U.S.	N	2	91	92
33	IBDIPLYR	AA3-HS DIPLOMA/GED IN LAST 12 MONTHS	N	2	93	94
34	IBHSREQ	AA4-COMPLETED HS REQUIREMENTS	N	2	95	96
35	IBGEDCLS	AA5-TOOK COURSE/TUTOR TO PREPARE FOR GED	N	2	97	98
36	IBWORK12	AA6-WORK AT JOB IN PAST 12 MONTHS	N	2	99	100
37	IBSELFEM	AA7-SELF-EMPLOYED IN THE PAST 12 MONTHS	N	2	101	102
38	IBOTHEMP	AA8-WORKED FOR ANOTHER EMPLOYER ALSO	N	2	103	104
39	IBEMPNUM	AA9-NUMBER EMPLOYERS IN PAST 12 MONTHS	N	2	105	106
40	IBLANG	AA10-FIRST LANGUAGE LEARNED TO SPEAK	N	2	107	108
41	IBSPEAK	AA11-LANGUAGE SPOKEN MOST AT HOME NOW	N	2	109	110
42	ESLANG	AB1-TOOK ESL CLASSES	N	2	111	112
43	ESNOW	AB2-CURRENTLY TAKING ESL CLASSES	N	2	113	114
44	ESAGAIN	AB3-WOULD YOU TAKE ESL AGAIN	N	2	115	116
45	ESREAS	AB4-ESL FOR WORK OR PERSONAL REASONS	N	2	117	118
46	ESCHIL	AB5A-HELP CHILDREN WITH SCHOOL WORK	N	2	119	120
47	ESUSCIT	AB5B-GET U.S. CITIZENSHIP	N	2	121	122
48	ESJOB	AB5C-GET A NEW JOB	N	2	123	124
49	ESRAISE	AB5D-GET RAISE OR PROMOTION	N	2	125	126

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
50	ESCOLVOC	AB5E-ATTEND COLLEGE OR VOCATIONAL SCHOOL	N	2	127	128
51	ESPUBAST	AB5F-MEET REQMNT FOR PUBLIC ASSISTANCE	N	2	129	130
52	ESFEEL	AB5G-IMPROVE THE WAY YOU FEEL ABOUT SELF	N	2	131	132
53	ESLIFE	AB5H-IMPROVE DAILY TASK	N	2	133	134
54	ESRSOTH	AB5I-SOME OTHER REASON	N	2	135	136
55	ESPRTYP	AB6-TYPE OF INSTRUCTION PROVIDER	N	2	137	138
56	ESPROVEM	AB7-INSTRUCTION PROVIDER WAS EMPLOYER	N	2	139	140
57	ESCOLL	AB8-EARNED COLLEGE CREDIT	N	2	141	142
58	ESHRYR	AB10-TOTAL HRS ATTEND ESL CLASSES	N	7. 2	143	149
59	ESTUITON	AB13A-PERSONAL EXPENSES FOR TUITION/FEES	N	4	150	153
60	ESMATLS	AB13B-PERSONAL EXPENSES FOR BOOKS/MTLS	N	4	154	157
61	ESINCBK	AB14-TUITON & FEES INCLUDE BOOKS/MTLS	N	2	158	159
62	ESWORK	AB15-WORK WHILE TAKING ESL CLASSES	N	2	160	161
63	ESEMPREQ	AB16-EMPLOYER REQUIRED TO TAKE ESL	N	2	162	163
64	ESEMPSUG	AB17-EMPLOYER SUGGESTED TO TAKE ESL	N	2	164	165
65	ESWRKPL	AB18-TOOK ESL CLASSES AT WORKPLACE	N	2	166	167
66	ESWRKHR	AB19-TOOK ESL CLASSES DURING WORK HRS	N	2	168	169
67	ESEMPAID	AB20-BEING PAID WHILE TAKING ESL CLASSES	N	2	170	171
68	ESEMPTUI	AB21A-EMPLOYER PAID TUITION/FEE	N	2	172	173
69	ESEMPMAT	AB21B-EMPLOYER PAID BOOKS/MTLS	N	2	174	175
70	ESEVER	AB22-EVER TAKEN ESL CLASSES	N	2	176	177
71	READENGL	AB23-HOW WELL READS ENGLISH	N	2	178	179
72	WRITENGL	AB24-HOW WELL WRITES ENGLISH	N	2	180	181
73	BSIMPROV	AC1A-BASIC SKILLS CLASSES	N	2	182	183
74	BSGED	AC1B-GED PREPARATION CLASSES	N	2	184	185
75	BSHSEQUV	AC1C-OTHER HS EQUIVALENCY PROGRAM	N	2	186	187
76	BSNOW	AC2-CURRENTLY TAKING ABE/GED CLASSES	N	2	188	189
77	BSAGAIN	AC3-WOULD YOU TAKE ABE/GED AGAIN	N	2	190	191
78	BSREAS	AC4-ABE/GED FOR WORK OR PERSONAL REASONS	N	2	192	193
79	BSCHIL	AC5A-HELP CHILDREN WITH SCHOOL WORK	N	2	194	195
80	BSJOB	AC5B-GET A NEW JOB	N	2	196	197
81	BSRAISE	AC5C-GET RAISE OR PROMOTION	N	2	198	199
82	BSCOLVOC	AC5D-ATTEND COLLEGE OR VOCATIONAL SCHOOL	N	2	200	201
83	BSPUBAST	AC5E-MEET REQMNT FOR PUBLIC ASSISTANCE	N	2	202	203
84	BSFEEL	AC5F-IMPROVE THE WAY YOU FEEL ABOUT SELF	N	2	204	205
85	BSLIFE	AC5G-IMPROVE DAILY TASK	N	2	206	207
86	BSRSOTH	AC5H-SOME OTHER REASON	N	2	208	209
87	BSPRTYP	AC6-TYPE OF INSTRUCTION PROVIDER	N	2	210	211
88	BSPROVEM	AC7-INSTRUCTION PROVIDER WAS EMPLOYER	N	2	212	213
89	BSFMLIT	AC9-ABE/GED WAS PART OF FAM LITERACY	N	2	214	215
90	BSHRYR	AC10-TOTAL HRS ATTENDED ABE/GED	N	7. 2	216	222
91	BSTUITON	AC13A-PERSONAL EXPENSES FOR TUITION/FEES	N	4	223	226
92	BSMATLS	AC13B-PERSONAL EXPENSES FOR BOOKS/MTLS	N	4	227	230
93	BSINCBK	AC14-TUITION/FEES INCLUDE BOOKS/MTLS	N	2	231	232
94	BSWORK	AC15-WORK WHILE TAKING ABE/GED	N	2	233	234
95	BSEMPREQ	AC16-EMPLOYER REQUIRED TO TAKE ABE/GED	N	2	235	236
96	BSEMPSUG	AC17-EMPLOYER SUGGESTED TO TAKE ABE/GED	N	2	237	238
97	BSWRKPL	AC18-TOOK ABE/GED AT WORKPLACE	N	2	239	240
98	BSWRKHR	AC19-TOOK ABE/GED DURING REGULAR WORK HR	N	2	241	242
99	BSEMPAID	AC20-PAID WHILE TAKING ABE/GED	N	2	243	244

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
100	BSEMPTUI	AC21A-EMPLOYER PAID TUITION/FEE	N	2	245	246
101	BSEMPMAT	AC21B-EMPLOYER PAID BOOKS/MTLS	N	2	247	248
102	BSEVER	AC22-EVER TAKEN ABE/GED CLASSES	N	2	249	250
103	CRDEGREE	AD1-COL OR UNIV DEGREE PROGRAM	N	2	251	252
104	CRTYASC	AD2-TYPE OF PRGM-ASSOCIATE'S DEGREE	N	2	253	254
105	CRTYBCH	AD2-TYPE OF PRGM-BACHELOR'S DEGREE	N	2	255	256
106	CRTYMAS	AD2-TYPE OF PRGM-MASTER'S DEGREE	N	2	257	258
107	CRTYDOC	AD2-TYPE OF PRGM-DOCTORATE	N	2	259	260
108	CRTYPRF	AD2-TYPE OF PRGM-PROFESSIONAL DEGREE	N	2	261	262
109	CRTYOTH	AD2-TYPE OF PRGM-ANOTHER DEGREE	N	2	263	264
110	CRPOSTDG	AD3-ENROLLED IN POST-DEGREE PROGRAM	N	2	265	266
111	CRPOSBAC	AD4-POST-BACCALAUREATE CERTIFICATE	N	2	267	268
112	CRPOSMAS	AD4-POST-MASTER'S CERTIFICATE	N	2	269	270
113	CRPOSDOC	AD4-POST-DOCTORAL CERTIFICATE	N	2	271	272
114	CRDIPLM1	TYPE OF COL/UNIV DEGREE PRGM AT AD2-1	C	2	273	274
115	CRCIPF1	MAJOR FIELD OF STUDY-1	N	2	275	276
116	CRREAS1	AD6-PRGM FOR WORK OR PERSONAL REASONS-1	N	2	277	278
117	CRCERT1	AD7-GET/KEEP CERTIFICATE/LICENSE-1	N	2	279	280
118	CREXAM1	AD8-TOOK EXAM TO GET CERT/LICENSE-1	N	2	281	282
119	CRCERMO1	AD10-RECEIVED CERT BEFORE LAST YEAR-1	N	2	283	284
120	CRSTRTM1	AD11-CRED START MONTH-1	N	2	285	286
121	CRSTRTY1	AD11-CRED START YEAR-1	N	4	287	290
122	CRCOMPM1	AD12-CRED COMPLETION MONTH-1	N	2	291	292
123	CRCOMPY1	AD12-CRED COMPLETION YEAR-1	N	4	293	296
124	CRPROVE1	AD14-INSTRUCTION PROVIDER WAS EMPLOYER-1	N	2	297	298
125	CRFACUL1	AD15-MEMBER OF FACULTY-1	N	2	299	300
126	CRASSIS1	AD16-ASSTSHIP/FLWSHIP/WORK STUDY-1	N	2	301	302
127	CRPTFT1	AD17-ENROLLED PART-TIME/FULL-TIME/BOTH-1	N	2	303	304
128	CRENRNU1	AD18-HOW LONG ENROLLED IN PGRM-1	N	2	305	306
129	CRENRUN1	AD18-UNIT ENROLLED IN PGRM-1	N	2	307	308
130	CRCRSNU1	AD19-NUMBER OF COURSES TOOK IN PRGM-1	N	2	309	310
131	CRCRDHR1	AD20-TOTAL CREDIT HRS ENROLLED-1	N	2	311	312
132	CRCLSHR1	AD21-TOTAL CLASSROOM HRS-1	N	2	313	314
133	CRINTV1	AD22A-INSTR BY TV/VIDEO/RADIO-1	N	2	315	316
134	CRINCOM1	AD22B-INSTR BY COMPUTER-1	N	2	317	318
135	CRINCON1	AD22C-INSTR BY COMPUTER CONFERENCING-1	N	2	319	320
136	CRINWWW1	AD22D-INSTR BY INTERNET/WWW-1	N	2	321	322
137	CRINOTH1	AD22E-INSTR BY OTHER TECHNOLOGY-1	N	2	323	324
138	CRTECHN1	AD23-NUM OF COURSES USED TECHNOLOGY-1	N	2	325	326
139	CRTECHP1	AD24-PERCENT INSTR USED TECHNOLOGY-1	N	3	327	329
140	CRTUITO1	AD25A-PERSONAL EXPENSE FOR TUITION/FEE-1	N	5	330	334
141	CRMATLS1	AD25B-PERSONAL EXPENSE FOR BOOKS/MTLS-1	N	5	335	339
142	CRINCBK1	AD26-TUITION/FEES INCLUDE BOOKS/MTLS-1	N	2	340	341
143	CRWORK1	AD27-WORK WHILE TAKING PRGM-1	N	2	342	343
144	CREMPRE1	AD28-EMPLOYER REQUIRED TO TAKE PRGM-1	N	2	344	345
145	CREMPSU1	AD29-EMPLOYER SUGGESTED TO TAKE PRGM-1	N	2	346	347
146	CRWRKPL1	AD30-TOOK PRGM AT WORKPLACE-1	N	2	348	349
147	CRWRKHR1	AD31-TOOK PRGM DURING WORK HRS-1	N	2	350	351
148	CREMPAI1	AD32-BEING PAID WHILE TAKING PRGM-1	N	2	352	353
149	CREMPTU1	AD33A-EMPLOYER PAID TUITION/FEE-1	N	2	354	355

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
150	CREMPMA1	AD33B-EMPLOYER PAID BOOKS/MTLS-1	N	2	356	357
151	CRDIPLM2	TYPE OF COL/UNIV DEGREE PRGM AT AD2-2	C	2	358	359
152	CRCIPF2	MAJOR FIELD OF STUDY-2	N	2	360	361
153	CRREAS2	AD6-PRGM FOR WORK OR PERSONAL REASONS-2	N	2	362	363
154	CRCERT2	AD7-GET/KEEP CERTIFICATE/LICENSE-2	N	2	364	365
155	CREXAM2	AD8-TOOK EXAM TO GET CERT/LICENSE-2	N	2	366	367
156	CRCERMO2	AD10-RECEIVED CERT BEFORE LAST YEAR-2	N	2	368	369
157	CRSTRTM2	AD11-CRED START MONTH-2	N	2	370	371
158	CRSTRTY2	AD11-CRED START YEAR-2	N	4	372	375
159	CRCOMPM2	AD12-CRED COMPLETION MONTH-2	N	2	376	377
160	CRCOMPY2	AD12-CRED COMPLETION YEAR-2	N	4	378	381
161	CRPROVE2	AD14-INSTRUCTION PROVIDER WAS EMPLOYER-2	N	2	382	383
162	CRFACUL2	AD15-MEMBER OF FACULTY-2	N	2	384	385
163	CRASSIS2	AD16-ASSTSHIP/FLWSHIP/WORK STUDY-2	N	2	386	387
164	CRPTFT2	AD17-ENROLLED PART-TIME/FULL-TIME/BOTH-2	N	2	388	389
165	CRENRNU2	AD18-HOW LONG ENROLLED IN PGRM-2	N	2	390	391
166	CRENRUN2	AD18-UNIT ENROLLED IN PGRM-2	N	2	392	393
167	CRCRSNU2	AD19-NUMBER OF COURSES TOOK IN PRGM-2	N	2	394	395
168	CRCRDHR2	AD20-TOTAL CREDIT HRS ENROLLED-2	N	2	396	397
169	CRCLSHR2	AD21-TOTAL CLASSROOM HRS-2	N	2	398	399
170	CRINTV2	AD22A-INSTR BY TV/VIDEO/RADIO-2	N	2	400	401
171	CRINCOM2	AD22B-INSTR BY COMPUTER-2	N	2	402	403
172	CRINCON2	AD22C-INSTR BY COMPUTER CONFERENCING-2	N	2	404	405
173	CRINWWW2	AD22D-INSTR BY INTERNET/WWW-2	N	2	406	407
174	CRINOTH2	AD22E-INSTR BY OTHER TECHNOLOGY-2	N	2	408	409
175	CRTECHN2	AD23-NUM OF COURSES USED TECHNOLOGY-2	N	2	410	411
176	CRTECHP2	AD24-PERCENT INSTR USED TECHNOLOGY-2	N	3	412	414
177	CRTUITO2	AD25A-PERSONAL EXPENSE FOR TUITION/FEE-2	N	5	415	419
178	CRMATLS2	AD25B-PERSONAL EXPENSE FOR BOOKS/MTLS-2	N	5	420	424
179	CRINCBK2	AD26-TUITION/FEES INCLUDE BOOKS/MTLS-2	N	2	425	426
180	CRWORK2	AD27-WORK WHILE TAKING PRGM-2	N	2	427	428
181	CREMPRE2	AD28-EMPLOYER REQUIRED TO TAKE PRGM-2	N	2	429	430
182	CREMPSU2	AD29-EMPLOYER SUGGESTED TO TAKE PRGM-2	N	2	431	432
183	CRWRKPL2	AD30-TOOK PRGM AT WORKPLACE-2	N	2	433	434
184	CRWRKHR2	AD31-TOOK PRGM DURING WORK HRS-2	N	2	435	436
185	CREMPAI2	AD32-BEING PAID WHILE TAKING PRGM-2	N	2	437	438
186	CREMPTU2	AD33A-EMPLOYER PAID TUITION/FEE-2	N	2	439	440
187	CREMPMA2	AD33B-EMPLOYER PAID BOOKS/MTLS-2	N	2	441	442
188	CRDIPLM3	TYPE OF COL/UNIV DEGREE PRGM AT AD2-3	C	2	443	444
189	CRCIPF3	MAJOR FIELD OF STUDY-3	N	2	445	446
190	CRREAS3	AD6-PRGM FOR WORK OR PERSONAL REASONS-3	N	2	447	448
191	CRCERT3	AD7-GET/KEEP CERTIFICATE/LICENSE-3	N	2	449	450
192	CREXAM3	AD8-TOOK EXAM TO GET CERT/LICENSE-3	N	2	451	452
193	CRCERMO3	AD10-RECEIVED CERT BEFORE LAST YEAR-3	N	2	453	454
194	CRSTRTM3	AD11-CRED START MONTH-3	N	2	455	456
195	CRSTRTY3	AD11-CRED START YEAR-3	N	4	457	460
196	CRCOMPM3	AD12-CRED COMPLETION MONTH-3	N	2	461	462
197	CRCOMPY3	AD12-CRED COMPLETION YEAR-3	N	4	463	466
198	CRPROVE3	AD14-INSTRUCTION PROVIDER WAS EMPLOYER-3	N	2	467	468
199	CRFACUL3	AD15-MEMBER OF FACULTY-3	N	2	469	470

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
200	CRPTFT3	AD17-ENROLLED PART-TIME/FULL-TIME/BOTH-3	N	2	471	472
201	CRENRNU3	AD18-HOW LONG ENROLLED IN PGRM-3	N	2	473	474
202	CRENRUN3	AD18-UNIT ENROLLED IN PGRM-3	N	2	475	476
203	CRCRSNU3	AD19-NUMBER OF COURSES TOOK IN PRGM-3	N	2	477	478
204	CRCRDHR3	AD20-TOTAL CREDIT HRS ENROLLED-3	N	2	479	480
205	CRINTV3	AD22A-INSTR BY TV/VIDEO/RADIO-3	N	2	481	482
206	CRINCOM3	AD22B-INSTR BY COMPUTER-3	N	2	483	484
207	CRINCON3	AD22C-INSTR BY COMPUTER CONFERENCING-3	N	2	485	486
208	CRINWWW3	AD22D-INSTR BY INTERNET/WWW-3	N	2	487	488
209	CRINOTH3	AD22E-INSTR BY OTHER TECHNOLOGY-3	N	2	489	490
210	CRTECHN3	AD23-NUM OF COURSES USED TECHNOLOGY-3	N	2	491	492
211	CRTECHP3	AD24-PERCENT INSTR USED TECHNOLOGY-3	N	3	493	495
212	CRTUITO3	AD25A-PERSONAL EXPENSE FOR TUITION/FEE-3	N	5	496	500
213	CRMATLS3	AD25B-PERSONAL EXPENSE FOR BOOKS/MTLS-3	N	5	501	505
214	CRINCBK3	AD26-TUITION/FEES INCLUDE BOOKS/MTLS-3	N	2	506	507
215	CRWORK3	AD27-WORK WHILE TAKING PRGM-3	N	2	508	509
216	CREMPRE3	AD28-EMPLOYER REQUIRED TO TAKE PRGM-3	N	2	510	511
217	CREMPSU3	AD29-EMPLOYER SUGGESTED TO TAKE PRGM-3	N	2	512	513
218	CRWRKPL3	AD30-TOOK PRGM AT WORKPLACE-3	N	2	514	515
219	CRWRKHR3	AD31-TOOK PRGM DURING WORK HRS-3	N	2	516	517
220	CREMPAI3	AD32-BEING PAID WHILE TAKING PRGM-3	N	2	518	519
221	CREMPTU3	AD33A-EMPLOYER PAID TUITION/FEE-3	N	2	520	521
222	CREMPMA3	AD33B-EMPLOYER PAID BOOKS/MTLS-3	N	2	522	523
223	CRVOCDIP	AE1-VOCATIONAL OR TECHNICAL DIPLOMA PRGM	N	2	524	525
224	VOVOC	AE2-TYPE OF PRGM-VOCATIONAL DIPLOMA	N	2	526	527
225	VOTECH	AE2-TYPE OF PRGM-TECHNICAL DIPLOMA	N	2	528	529
226	VOASSOC	AE2-TYPE OF PRGM-ASSOCIATE'S DEGREE	N	2	530	531
227	VOOTHDIP	AE2-TYPE OF PRGM-ANOTHER DIPLOMA	N	2	532	533
228	VODIPLM1	TYPE OF VOC/TECH DIPLOMA PRGM AT AE2-1	N	2	534	535
229	VOCIPF1	MAJOR FIELD OF STUDY -1	N	2	536	537
230	VOREAS1	AE4-PRGM FOR WORK OR PERSONAL REASONS-1	N	2	538	539
231	VOCERT1	AE5-GET/KEEP CERTIFICATE/LICENSE-1	N	2	540	541
232	VOEXAM1	AE6-TOOK EXAM TO GET CERT/LICENSE-1	N	2	542	543
233	VOCERMO1	AE8-RECEIVED CERT BEFORE LAST YEAR-1	N	2	544	545
234	VOSTRTM1	AE9-VOCA START MONTH-1	N	2	546	547
235	VOSTRTY1	AE9-VOCA START YEAR-1	N	4	548	551
236	VOCOMPM1	AE10-VOCA COMPLETION MONTH-1	N	2	552	553
237	VOCOMPY1	AE10-VOCA COMPLETION YEAR-1	N	4	554	557
238	VOPROVE1	AE12-INSTRUCTION PROVIDER WAS EMPLOYER-1	N	2	558	559
239	VOFACUL1	AE13-MEMBER OF FACULTY-1	N	2	560	561
240	VOASSIS1	AE14-ASSTSHIP/FLWSHIP/WORK STUDY -1	N	2	562	563
241	VOPTFT1	AE15-ENROLLED PART-TIME/FULL-TIME/BOTH-1	N	2	564	565
242	VOENRNU1	AE16-HOW LONG ENROLLED IN PGRM-1	N	2	566	567
243	VOENRUN1	AE16-UNIT ENROLLED IN PRGM-1	N	2	568	569
244	VOCRSNU1	AE17-NUMBER OF COURSES TOOK IN PRGM-1	N	2	570	571
245	VOCRDHR1	AE18-TOTAL CREDIT HRS ENROLLED-1	N	2	572	573
246	VOCLSHR1	AE19-TOTAL CLASSROOM HRS-1	N	3	574	576
247	VOINTV1	AE20A-INSTR BY TV/VIDEO/RADIO-1	N	2	577	578
248	VOINCOM1	AE20B-INSTR BY COMPUTER-1	N	2	579	580
249	VOINCON1	AE20C-INSTR BY COMPUTER CONFERENCING-1	N	2	581	582

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
250	VOINWWW1	AE20D-INSTR BY INTERNET/WWW-1	N	2	583	584
251	VOINOTH1	AE20E-INSTR BY OTHER TECHNOLOGY-1	N	2	585	586
252	VOTECHN1	AE21-NUMBER COURSES USED TECHNOLOGY-1	N	2	587	588
253	VOTECHP1	AE22-PERCENT INSTR TECHNOLGY USE-1	N	3	589	591
254	VOTUITO1	AE23A-PERSONAL EXPENSE FOR TUITION/FEE-1	N	5	592	596
255	VOMATLS1	AE23B-PERSONAL EXPENSE FOR BKS/MTLS-1	N	5	597	601
256	VOINCBK1	AE24-TUITION/FEES INCLUDE BOOKS/MTLS-1	N	2	602	603
257	VOWORK1	AE25-WORK WHILE TAKING PRGM-1	N	2	604	605
258	VOEMPRE1	AE26-EMPLOYER REQUIRED TO TAKE PRGM-1	N	2	606	607
259	VOEMPSU1	AE27-EMPLOYER SUGGESTED TO TAKE PRGM-1	N	2	608	609
260	VOWRKPL1	AE28-TOOK PRGM AT WORKPLACE-1	N	2	610	611
261	VOWRKHR1	AE29-TOOK PRGM DURING WORK HRS-1	N	2	612	613
262	VOEMPAI1	AE30-BEING PAID WHILE TAKING PRGM-1	N	2	614	615
263	VOEMPTU1	AE31A-EMPLOYER PAID TUITION/FEE-1	N	2	616	617
264	VOEMPMA1	AE31B-EMPLOYER PAID BOOKS/MTLS-1	N	2	618	619
265	VODIPLM2	TYPE OF VOC/TECH DIPLOMA PRGM AT AE2-2	N	2	620	621
266	VOCIPF2	MAJOR FIELD OF STUDY-2	N	2	622	623
267	VOREAS2	AE4-PRGM FOR WORK OR PERSONAL REASONS-2	N	2	624	625
268	VOCERT2	AE5-GET/KEEP CERTIFICATE/LICENSE-2	N	2	626	627
269	VOEXAM2	AE6-TOOK EXAM TO GET CERT/LICENSE-2	N	2	628	629
270	VOCERMO2	AE8-RECEIVED CERT BEFORE LAST YEAR-2	N	2	630	631
271	VOSTRTM2	AE9-VOCA START MONTH-2	N	2	632	633
272	VOSTRTY2	AE9-VOCA START YEAR-2	N	4	634	637
273	VOCOMPM2	AE10-VOCA COMPLETION MONTH-2	N	2	638	639
274	VOCOMPY2	AE10-VOCA COMPLETION YEAR-2	N	4	640	643
275	VOPROVE2	AE12-INSTRUCTION PROVIDER WAS EMPLOYER-2	N	2	644	645
276	VOFACUL2	AE13-MEMBER OF FACULTY-2	N	2	646	647
277	VOPTFT2	AE15-ENROLLED PART-TIME/FULL-TIME/BOTH-2	N	2	648	649
278	VOENRNU2	AE16-HOW LONG ENROLLED IN PGRM-2	N	2	650	651
279	VOENRUN2	AE16-UNIT ENROLLED IN PRGM-2	N	2	652	653
280	VOCRSNU2	AE17-NUMBER OF COURSES TOOK IN PRGM-2	N	2	654	655
281	VOCRDHR2	AE18-TOTAL CREDIT HRS ENROLLED-2	N	2	656	657
282	VOINTV2	AE20A-INSTR BY TV/VIDEO/RADIO-2	N	2	658	659
283	VOINCOM2	AE20B-INSTR BY COMPUTER-2	N	2	660	661
284	VOINCON2	AE20C-INSTR BY COMPUTER CONFERENCING-2	N	2	662	663
285	VOINWWW2	AE20D-INSTR BY INTERNET/WWW-2	N	2	664	665
286	VOINOTH2	AE20E-INSTR BY OTHER TECHNOLOGY-2	N	2	666	667
287	VOTECHN2	AE21-NUMBER COURSES USED TECHNOLOGY-2	N	2	668	669
288	VOTECHP2	AE22-PERCENT INSTR TECHNOLGY USE-2	N	3	670	672
289	VOTUITO2	AE23A-PERSONAL EXPENSE FOR TUITION/FEE-2	N	5	673	677
290	VOMATLS2	AE23B-PERSONAL EXPENSE FOR BKS/MTLS-2	N	5	678	682
291	VOINCBK2	AE24-TUITION/FEES INCLUDE BOOKS/MTLS-2	N	2	683	684
292	VOWORK2	AE25-WORK WHILE TAKING PRGM-2	N	2	685	686
293	VOEMPRE2	AE26-EMPLOYER REQUIRED TO TAKE PRGM-2	N	2	687	688
294	VOEMPSU2	AE27-EMPLOYER SUGGESTED TO TAKE PRGM-2	N	2	689	690
295	VOWRKPL2	AE28-TOOK PRGM AT WORKPLACE-2	N	2	691	692
296	VOWRKHR2	AE29-TOOK PRGM DURING WORK HRS-2	N	2	693	694
297	VOEMPAI2	AE30-BEING PAID WHILE TAKING PRGM-2	N	2	695	696
298	VOEMPTU2	AE31A-EMPLOYER PAID TUITION/FEE-2	N	2	697	698
299	VOEMPMA2	AE31B-EMPLOYER PAID BOOKS/MTLS-2	N	2	699	700

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
300	APPRENTI	AF1-APPRENTICESHIP PROGRAM	N	2	701	702
301	APEMPLOY	AF3A-EMPLOYER PROVIDED	N	2	703	704
302	APUNION	AF3B-LABOR UNION PROVIDED	N	2	705	706
303	APSTAGOV	AF3C-LOCAL OR STATE GOVERNMENT PROVIDED	N	2	707	708
304	APFEDGOV	AF3D-FED GOVERNMENT PROVIDED	N	2	709	710
305	APOTHER	AF3E-SOMEONE ELSE PROVIDED	N	2	711	712
306	APSTRTMM	AF4-APPR PRGM START MONTH	N	2	713	714
307	APSTRTYY	AF4-APPR PRGM START YEAR	N	4	715	718
308	APCOMPMM	AF5-APPR PRGM COMPLETION MONTH	N	2	719	720
309	APCOMPYY	AF5-APPR PRGM COMPLETION YEAR	N	4	721	724
310	APCLSHR	AF6-TOTAL CLASSROOM INST HRS	N	3	725	727
311	APCOLCR	AF7-EARNED COLLEGE CREDIT	N	2	728	729
312	APTUITON	AF8A-PERSONAL EXPENSE FOR TUITION/FEES	N	5	730	734
313	APMATLS	AF8B-PERSONAL EXPENSE FOR BOOKS/MTLS	N	5	735	739
314	APINCBK	AF9-TUITION/FEES INCLUDE BOOKS/MTRLS	N	2	740	741
315	FCACTY	AG1-TOOK ANY COURSES	N	2	742	743
316	FCACTOTH	AG2-TOOK ANY OTHER COURSES	N	2	744	745
317	FCOTH	AG6-COURSES FOR WORK OR PERSONAL REASONS	N	2	746	747
318	WRCRS1	COURSE CODE-1	N	3	748	750
319	WRCLSHR1	WORK-REL CRSE TOTAL HRS/YEAR-1	N	3	751	753
320	WRCURR1	AH1-CURRENTLY TAKING COURSE-1	N	2	754	755
321	WRRSSKI1	AH2A-MAINTAIN OR IMPROVE SKILLS/KNOWDG-1	N	2	756	757
322	WRNWSKI1	AH2B-LEARN NEW SKILLS OR METHODS-1	N	2	758	759
323	WRRSRAI1	AH2C-GET A RAISE OR PROMOTION-1	N	2	760	761
324	WRRSNEW1	AH2D-GET A NEW JOB-1	N	2	762	763
325	WRRSCER1	AH2E-GET/KEEP CERTIFICATE/LICENSE-1	N	2	764	765
326	WRRSREQ1	AH2F-BECAUSE IT WAS REQUIRED-1	N	2	766	767
327	WRRSOTH1	AH2G-SOME OTHER REASON-1	N	2	768	769
328	WREXAM1	AH2OV1-TOOK EXAM TO GET CERT/LICENSE-1	N	2	770	771
329	WRCERMO1	AH2OV3-RECEIVE CERT BEFORE LAST YEAR-1	N	2	772	773
330	WRPRTYP1	AH3-TYPE OF INSTRUCTION PROVIDER-1	N	2	774	775
331	WRPROVE1	AH4-INSTRUCTION PROVIDER WAS EMPLOYER-1	N	2	776	777
332	WRCRED1	AH5-EARNED COLLEGE CREDIT-1	N	2	778	779
333	WRCEU1	AH6-EARNED CEU-1	N	2	780	781
334	WRINTV1	AH8A-INSTR BY TV, VIDEO, OR RADIO-1	N	2	782	783
335	WRINCOM1	AH8B-INSTR BY COMPUTER-1	N	2	784	785
336	WRINCON1	AH8C-INSTR BY COMPUTER CONFERENCING-1	N	2	786	787
337	WRINWWW1	AH8D-INSTR BY INTERNET/WWW-1	N	2	788	789
338	WRINOTH1	AH8E-INSTR BY OTHER TECHNOLOGY-1	N	2	790	791
339	WRTECHP1	AH9-PERCENT INSTR USED TECHNOLOGY-1	N	3	792	794
340	WRJOBSK1	AH10-HOW USEFUL SKILLS IN JOB-1	N	2	795	796
341	WRTUITO1	AH11A-PERSONAL EXPENSES FOR COURSES-1	N	5	797	801
342	WRMATLS1	AH11B-PERSONAL EXPENSES FOR BOOKS/MTLS-1	N	4	802	805
343	WRINCBK1	AH12-TUITION/FEES INCLUDE BOOKS/MTLS-1	N	2	806	807
344	WRWORK1	AH13-WORK WHILE TAKING COURSE-1	N	2	808	809
345	WREMPRE1	AH14-EMPLOYER REQUIRED TO TAKE COURSE-1	N	2	810	811
346	WREMPSU1	AH15-EMPLOYER SUGGESTED TO TAKE COURSE-1	N	2	812	813
347	WRWRKPL1	AH16-TOOK COURSE AT WORKPLACE-1	N	2	814	815
348	WRWRKHR1	AH17-TOOK COURSE DURING WORK HRS-1	N	2	816	817
349	WREMPAI1	AH18-BEING PAID WHILE TAKING COURSE-1	N	2	818	819

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
350	WREMPTU1	AH19A-EMPLOYER PAID TUITION/FEE-1	N	2	820	821
351	WREMPMA1	AH19B-EMPLOYER PAID BOOKS/MTLS-1	N	2	822	823
352	WRCRS2	COURSE CODE-2	N	3	824	826
353	WRCLSHR2	WORK-REL CRSE TOTAL HRS/YEAR-2	N	3	827	829
354	WRCURR2	AH1-CURRENTLY TAKING COURSE-2	N	2	830	831
355	WRRSSKI2	AH2A-MAINTAIN OR IMPROVE SKILLS/KNOWDG-2	N	2	832	833
356	WRNWSKI2	AH2B-LEARN NEW SKILLS OR METHODS-2	N	2	834	835
357	WRRSRAI2	AH2C-GET A RAISE OR PROMOTION-2	N	2	836	837
358	WRRSNEW2	AH2D-GET A NEW JOB-2	N	2	838	839
359	WRRSCER2	AH2E-GET/KEEP CERTIFICATE/LICENSE-2	N	2	840	841
360	WRRSREQ2	AH2F-BECAUSE IT WAS REQUIRED-2	N	2	842	843
361	WRRSOTH2	AH2G-SOME OTHER REASON-2	N	2	844	845
362	WREXAM2	AH2OV1-TOOK EXAM TO GET CERT/LICENSE-2	N	2	846	847
363	WRCERMO2	AH2OV3-RECEIVE CERT BEFORE LAST YEAR-2	N	2	848	849
364	WRPRTYP2	AH3-TYPE OF INSTRUCTION PROVIDER-2	N	2	850	851
365	WRPROVE2	AH4-INSTRUCTION PROVIDER WAS EMPLOYER-2	N	2	852	853
366	WRCRED2	AH5-EARNED COLLEGE CREDIT-2	N	2	854	855
367	WRCEU2	AH6-EARNED CEU-2	N	2	856	857
368	WRINTV2	AH8A-INSTR BY TV, VIDEO, OR RADIO-2	N	2	858	859
369	WRINCOM2	AH8B-INSTR BY COMPUTER-2	N	2	860	861
370	WRINCON2	AH8C-INSTR BY COMPUTER CONFERENCING-2	N	2	862	863
371	WRINWWW2	AH8D-INSTR BY INTERNET/WWW-2	N	2	864	865
372	WRINOTH2	AH8E-INSTR BY OTHER TECHNOLOGY-2	N	2	866	867
373	WRTECHP2	AH9-PERCENT INSTR USED TECHNOLOGY-2	N	3	868	870
374	WRJOBSK2	AH10-HOW USEFUL SKILLS IN JOB-2	N	2	871	872
375	WRTUITO2	AH11A-PERSONAL EXPENSES FOR COURSES-2	N	5	873	877
376	WRMATLS2	AH11B-PERSONAL EXPENSES FOR BOOKS/MTLS-2	N	4	878	881
377	WRINCBK2	AH12-TUITION/FEES INCLUDE BOOKS/MTLS-2	N	2	882	883
378	WRWORK2	AH13-WORK WHILE TAKING COURSE-2	N	2	884	885
379	WREMPRE2	AH14-EMPLOYER REQUIRED TO TAKE COURSE-2	N	2	886	887
380	WREMPSU2	AH15-EMPLOYER SUGGESTED TO TAKE COURSE-2	N	2	888	889
381	WRWRKPL2	AH16-TOOK COURSE AT WORKPLACE-2	N	2	890	891
382	WRWRKHR2	AH17-TOOK COURSE DURING WORK HRS-2	N	2	892	893
383	WREMPAI2	AH18-BEING PAID WHILE TAKING COURSE-2	N	2	894	895
384	WREMPTU2	AH19A-EMPLOYER PAID TUITION/FEE-2	N	2	896	897
385	WREMPMA2	AH19B-EMPLOYER PAID BOOKS/MTLS-2	N	2	898	899
386	WRCRS3	COURSE CODE-3	N	3	900	902
387	WRCLSHR3	WORK-REL CRSE TOTAL HRS/YEAR-3	N	3	903	905
388	WRCURR3	AH1-CURRENTLY TAKING COURSE-3	N	2	906	907
389	WRRSSKI3	AH2A-MAINTAIN OR IMPROVE SKLLS/KNOWDG-3	N	2	908	909
390	WRNWSKI3	AH2B-LEARN NEW SKILLS OR METHODS-3	N	2	910	911
391	WRRSRAI3	AH2C-GET A RAISE OR PROMOTION-3	N	2	912	913
392	WRRSNEW3	AH2D-GET A NEW JOB-3	N	2	914	915
393	WRRSCER3	AH2E-GET/KEEP CERTIFICATE/LICENSE-3	N	2	916	917
394	WRRSREQ3	AH2F-BECAUSE IT WAS REQUIRED-3	N	2	918	919
395	WRRSOTH3	AH2G-SOME OTHER REASON-3	N	2	920	921
396	WREXAM3	AH2OV1-TOOK EXAM TO GET CERT/LICENSE-3	N	2	922	923
397	WRCERMO3	AH2OV3-RECEIVE CERT BEFORE LAST YEAR-3	N	2	924	925
398	WRPRTYP3	AH3-TYPE OF INSTRUCTION PROVIDER-3	N	2	926	927
399	WRPROVE3	AH4-INSTRUCTION PROVIDER WAS EMPLOYER-3	N	2	928	929

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
400	WRCRED3	AH5-EARNED COLLEGE CREDIT-3	N	2	930	931
401	WRCEU3	AH6-EARNED CEU-3	N	2	932	933
402	WRINTV3	AH8A-INSTR BY TV, VIDEO, OR RADIO-3	N	2	934	935
403	WRINCOM3	AH8B-INSTR BY COMPUTER-3	N	2	936	937
404	WRINCON3	AH8C-INSTR BY COMPUTER CONFERENCING-3	N	2	938	939
405	WRINWWW3	AH8D-INSTR BY INTERNET/WWW-3	N	2	940	941
406	WRINOTH3	AH8E-INSTR BY OTHER TECHNOLOGY-3	N	2	942	943
407	WRTECHP3	AH9-PERCENT INSTR USED TECHNOLOGY-3	N	3	944	946
408	WRJOBSK3	AH10-HOW USEFUL SKILLS IN JOB-3	N	2	947	948
409	WRTUITO3	AH11A-PERSONAL EXPENSES FOR COURSES-3	N	5	949	953
410	WRMATLS3	AH11B-PERSONAL EXPENSES FOR BOOKS/MTLS-3	N	4	954	957
411	WRINCBK3	AH12-TUITION/FEES INCLUDE BOOKS/MTLS-3	N	2	958	959
412	WRWORK3	AH13-WORK WHILE TAKING COURSE-3	N	2	960	961
413	WREMPRE3	AH14-EMPLOYER REQUIRED TO TAKE COURSE-3	N	2	962	963
414	WREMPSU3	AH15-EMPLOYER SUGGESTED TO TAKE COURSE-3	N	2	964	965
415	WRWRKPL3	AH16-TOOK COURSE AT WORKPLACE-3	N	2	966	967
416	WRWRKHR3	AH17-TOOK COURSE DURING WORK HRS-3	N	2	968	969
417	WREMPAI3	AH18-BEING PAID WHILE TAKING COURSE-3	N	2	970	971
418	WREMPTU3	AH19A-EMPLOYER PAID TUITION/FEE-3	N	2	972	973
419	WREMPMA3	AH19B-EMPLOYER PAID BOOKS/MTLS-3	N	2	974	975
420	WRCRS4	COURSE CODE-4	N	3	976	978
421	WRCLSHR4	WORK-REL CRSE TOTAL HRS/YEAR-4	N	3	979	981
422	WRCURR4	AH1-CURRENTLY TAKING COURSE-4	N	2	982	983
423	WRRSSKI4	AH2A-MAINTAIN OR IMPROVE SKILLS/KNOWDG-4	N	2	984	985
424	WRNWSKI4	AH2B-LEARN NEW SKILLS OR METHODS-4	N	2	986	987
425	WRRSRAI4	AH2C-GET A RAISE OR PROMOTION-4	N	2	988	989
426	WRRSNEW4	AH2D-GET A NEW JOB-4	N	2	990	991
427	WRRSCER4	AH2E-GET/KEEP CERTIFICATE/LICENSE-4	N	2	992	993
428	WRRSREQ4	AH2F-BECAUSE IT WAS REQUIRED-4	N	2	994	995
429	WRRSOTH4	AH2G-SOME OTHER REASON-4	N	2	996	997
430	WREXAM4	AH2OV1-TOOK EXAM TO GET CERT/LICENSE-4	N	2	998	999
431	WRCERMO4	AH2OV3-RECEIVE CERT BEFORE LAST YEAR-4	N	2	1000	1001
432	WRPRTYP4	AH3-TYPE OF INSTRUCTION PROVIDER-4	N	2	1002	1003
433	WRPROVE4	AH4-INSTRUCTION PROVIDER WAS EMPLOYER-4	N	2	1004	1005
434	WRCRED4	AH5-EARNED COLLEGE CREDIT-4	N	2	1006	1007
435	WRCEU4	AH6-EARNED CEU-4	N	2	1008	1009
436	WRINTV4	AH8A-INSTR BY TV, VIDEO, OR RADIO-4	N	2	1010	1011
437	WRINCOM4	AH8B-INSTR BY COMPUTER-4	N	2	1012	1013
438	WRINCON4	AH8C-INSTR BY COMPUTER CONFERENCING-4	N	2	1014	1015
439	WRINWWW4	AH8D-INSTR BY INTERNET/WWW-4	N	2	1016	1017
440	WRINOTH4	AH8E-INSTR BY OTHER TECHNOLOGY-4	N	2	1018	1019
441	WRTECHP4	AH9-PERCENT INSTR USED TECHNOLOGY-4	N	3	1020	1022
442	WRJOBSK4	AH10-HOW USEFUL SKILLS IN JOB-4	N	2	1023	1024
443	WRTUITO4	AH11A-PERSONAL EXPENSES FOR COURSES-4	N	5	1025	1029
444	WRMATLS4	AH11B-PERSONAL EXPENSES FOR BOOKS/MTLS-4	N	4	1030	1033
445	WRINCBK4	AH12-TUITION/FEES INCLUDE BOOKS/MTLS-4	N	2	1034	1035
446	WRWORK4	AH13-WORK WHILE TAKING COURSE-4	N	2	1036	1037
447	WREMPRE4	AH14-EMPLOYER REQUIRED TO TAKE COURSE-4	N	2	1038	1039
448	WREMPSU4	AH15-EMPLOYER SUGGESTED TO TAKE COURSE-4	N	2	1040	1041
449	WRWRKPL4	AH16-TOOK COURSE AT WORKPLACE-4	N	2	1042	1043

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
450	WRWRKHR4	AH17-TOOK COURSE DURING WORK HRS-4	N	2	1044	1045
451	WREMPAI4	AH18-BEING PAID WHILE TAKING COURSE-4	N	2	1046	1047
452	WREMPTU4	AH19A-EMPLOYER PAID TUITION/FEE-4	N	2	1048	1049
453	WREMPMA4	AH19B-EMPLOYER PAID BOOKS/MTLS-4	N	2	1050	1051
454	WROREQ	AH20A-REQUIRED BY EMPLOYER	N	2	1052	1053
455	WROCOLL	AH20B-TAUGHT BY COLLEGE/UNIVERSITY	N	2	1054	1055
456	WROPAY	AH20C-EMPLOYER PAID ALL/PART OF COST	N	2	1056	1057
457	WROTIME	AH20D-EMPLOYER GAVE TIME OFF WITH PAY	N	2	1058	1059
458	WROCERT	AH20E-TO GET/KEEP CERTIFICATE/LICENSE	N	2	1060	1061
459	WROTECH	AH20F-TAUGHT BY USING TECHNOLOGY	N	2	1062	1063
460	SACRS1	PERSONAL INTEREST COURSE CODE-1	N	3	1064	1066
461	SACLSHR1	PERSONAL INTEREST COURSE TOTAL HRS-1	N	3	1067	1069
462	SACURR1	AI1-CURRENTLY TAKING COURSE-1	N	2	1070	1071
463	SAPRTYP1	AI2-TYPE OF INSTRUCTION PROVIDER-1	N	2	1072	1073
464	SAPROVE1	AI3-INSTRUCTION PROVIDER WAS EMPLOYER-1	N	2	1074	1075
465	SACRED1	AI4-EARNED COLLEGE CREDIT-1	N	2	1076	1077
466	SACEU1	AI5-EARNED CEUS-1	N	2	1078	1079
467	SAINTV1	AI7A-INSTR BY TV/VIDEO/RADIO-1	N	2	1080	1081
468	SAINCOM1	AI7B-INSTR BY COMPUTER-1	N	2	1082	1083
469	SAINCON1	AI7C-INSTR BY COMPUTER CONFERENCING-1	N	2	1084	1085
470	SAINWWW1	AI7D-INSTR BY INTERNET/WWW-1	N	2	1086	1087
471	SAINOTH1	AI7E-INSTR BY OTHER TECHNOLOGY-1	N	2	1088	1089
472	SATECHP1	AI8-PERCENT INSTR USED TECHNOLOGY-1	N	3	1090	1092
473	SATUITO1	AI9A-PERSONAL EXPENSES FOR TUITION/FEE-1	N	5	1093	1097
474	SAMATLS1	AI9B-PERSONAL EXPENSES FOR BOOKS/MTLS-1	N	4	1098	1101
475	SAINCBK1	AI10-TUITION/FEES INCLUDE BOOKS/MTLS-1	N	2	1102	1103
476	SAWORK1	AI11-WORK WHILE TAKING COURSE-1	N	2	1104	1105
477	SAWRKPL1	AI12-TOOK COURSE AT WORKPLACE-1	N	2	1106	1107
478	SAWRKHR1	AI13-TOOK COURSE DURING WORK HRS-1	N	2	1108	1109
479	SAEMPAI1	AI14-BEING PAID WHILE TAKING COURSE-1	N	2	1110	1111
480	SAEMPTU1	AI15A-EMPLOYER PAID TUITON/FEES-1	N	2	1112	1113
481	SAEMPMA1	AI15B-EMPLOYER PAID BOOKS/MTLS-1	N	2	1114	1115
482	SACRS2	PERSONAL INTEREST COURSE CODE-2	N	3	1116	1118
483	SACLSHR2	PERSONAL INTEREST COURSE TOTAL HRS-2	N	3	1119	1121
484	SACURR2	AI1-CURRENTLY TAKING COURSE-2	N	2	1122	1123
485	SAPRTYP2	AI2-TYPE OF INSTRUCTION PROVIDER-2	N	2	1124	1125
486	SAPROVE2	AI3-INSTRUCTION PROVIDER WAS EMPLOYER-2	N	2	1126	1127
487	SACRED2	AI4-EARNED COLLEGE CREDIT-2	N	2	1128	1129
488	SACEU2	AI5-EARNED CEUS-2	N	2	1130	1131
489	SAINTV2	AI7A-INSTR BY TV/VIDEO/RADIO-2	N	2	1132	1133
490	SAINCOM2	AI7B-INSTR BY COMPUTER-2	N	2	1134	1135
491	SAINCON2	AI7C-INSTR BY COMPUTER CONFERENCING-2	N	2	1136	1137
492	SAINWWW2	AI7D-INSTR BY INTERNET/WWW-2	N	2	1138	1139
493	SAINOTH2	AI7E-INSTR BY OTHER TECHNOLOGY-2	N	2	1140	1141
494	SATECHP2	AI8-PERCENT INSTR USED TECHNOLOGY-2	N	3	1142	1144
495	SATUITO2	AI9A-PERSONAL EXPENSES FOR TUITION/FEE-2	N	5	1145	1149
496	SAMATLS2	AI9B-PERSONAL EXPENSES FOR BOOKS/MTLS-2	N	4	1150	1153
497	SAINCBK2	AI10-TUITION/FEES INCLUDE BOOKS/MTLS-2	N	2	1154	1155
498	SAWORK2	AI11-WORK WHILE TAKING COURSE-2	N	2	1156	1157
499	SAWRKPL2	AI12-TOOK COURSE AT WORKPLACE-2	N	2	1158	1159

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
500	SAWRKHR2	AI13-TOOK COURSE DURING WORK HRS-2	N	2	1160	1161
501	SAEMPAI2	AI14-BEING PAID WHILE TAKING COURSE-2	N	2	1162	1163
502	SAEMPTU2	AI15A-EMPLOYER PAID TUITON/FEES-2	N	2	1164	1165
503	SAEMPMA2	AI15B-EMPLOYER PAID BOOKS/MTLS-2	N	2	1166	1167
504	SAOREQ	AI16A-REQUIRED BY EMPLOYER	N	2	1168	1169
505	SAOCOLL	AI16B-TAUGHT BY COLLEGE/UNIVERSITY	N	2	1170	1171
506	SAOPAY	AI16C-EMPLOYER PAID ALL/PART OF COST	N	2	1172	1173
507	SAOTIME	AI16D-EMPLOYER GAVE TIME OFF WITH PAY	N	2	1174	1175
508	SAOTECH	AI16E-TAUGHT BY USING TECHNOLOGY	N	2	1176	1177
509	ILMENTOR	AJ1A-RECEIVED SUPERVISED TRAINING	N	2	1178	1179
510	ILSELF	AJ1B-SELF-PACED STUDY-BOOKS/MANUALS	N	2	1180	1181
511	ILCOMP	AJ1C-SELF-PACED STUDY-COMP SOFTWARE	N	2	1182	1183
512	ILBBAG	AJ1D-BROWN-BAG OR INFORMAL PRESENT	N	2	1184	1185
513	ILCONF	AJ1E-CONFERENCES OR CONVENTIONS	N	2	1186	1187
514	ILOMAG	AJ1F-READ PROFESSIONAL PUBLICATIONS	N	2	1188	1189
515	ILOTH	AJ1G-OTHER LESS FORMAL LEARNING	N	2	1190	1191
516	ILCERT	AJ2-GET/KEEP CERTIFICATE/LICENSE	N	2	1192	1193
517	ILEXAM	AJ2OV1-TOOK EXAM TO GET CERT/LICENSE	N	2	1194	1195
518	ILCERMO	AJ2OV3-RECEIVED CERT BEFORE LAST YEAR	N	2	1196	1197
519	ADOBMM	AK1-MONTH OF BIRTH	N	2	1198	1199
520	ADOBYY	AK1-YEAR OF BIRTH	N	4	1200	1203
521	ARACE	AK3-RACE	N	2	1204	1205
522	AOTHRACE	AK4-OTHER RACE	N	2	1206	1207
523	AHISPANI	AK5-HISPANIC ORIGIN	N	2	1208	1209
524	AMARSTAT	AK6-CURRENT MARITAL STATUS	N	2	1210	1211
525	ALIVWITH	AK6OV-LIVING WITH PARTNER	N	2	1212	1213
526	ADISABL	AK7-LONG TERM PROBLEMS THAT LIMITED YOU	N	2	1214	1215
527	ABORNUS	AK8-COUNTRY OF ORIGIN	N	2	1216	1217
528	AMOVEAGE	AK8OV-AGE WHEN MOVED TO U.S.	N	2	1218	1219
529	USGRADE	AK9-HIGHEST GRADE BEFORE MOVING TO US	N	2	1220	1221
530	ASTUENG	AK10-STUDY ENGLISH BEFORE CAME TO US	N	2	1222	1223
531	JOBEVER	AK11-EVER WORKED AT A JOB FOR PAY	N	2	1224	1225
532	IBWORKMO	AK12-MONTHS WORKED FOR PAY IN PAST YEAR	N	2	1226	1227
533	AUNEMP	AK13-PAST 12 MONTH UNEMP AND LOOKING	N	2	1228	1229
534	JOBACTY	AK14-MAIN ACT DONE MOST OF LAST WEEK	N	2	1230	1231
535	PAYHRS	AK15-HRS PER WEEK WORKED FOR PAY	N	2	1232	1233
536	FSIC	INDUSTRY CODE (SIC)	N	2	1234	1235
537	FSOC	OCCUPATION CODE (SOC)	N	2	1236	1237
538	CUREMP	AK19-CURRENTLY EMPLOYED	N	2	1238	1239
539	NUMPEEP	AK20-EMPLOYER SIZE	N	2	1240	1241
540	EARNAMT	AK21-AMOUNT OF EARNINGS	N	9. 2	1242	1250
541	EARNUNT	AK21-UNIT OF EARNINGS	N	2	1251	1252
542	SUPERV	AK22-HAVE ANY SUPERVISORY ROLE AT WORK	N	2	1253	1254
543	CERTJOB	AK23-HAVE CERT/LICENSURE FOR JOB	N	2	1255	1256
544	CERTPROF	AK24-HAVE OTHER CERT/LICENSURE	N	2	1257	1258
545	CONTREQ	AK25-REQUIRED CONTINUING EDUCATION	N	2	1259	1260
546	LABUNION	AK26-MEM OF LABOR UNION OR ORGANIZATI	N	2	1261	1262
547	UNIONCON	AK27-COVERED BY UNION CONTRACT	N	2	1263	1264
548	COMPHOME	AK28-HAVE HOME COMPUTER/LAPTOP	N	2	1265	1266
549	COMPWORK	AK29-HAVE ACCESS TO COMPUTER AT WORK	N	2	1267	1268

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
550	WEBHOME	AK30-HAVE ACCESS TO INTERNET AT HOME	N	2	1269	1270
551	WEBWORK	AK31-HAVE ACCESS TO INTERNET AT WORK	N	2	1271	1272
552	GILIFE	AK32A-HEARD LIFETIME LEARNING TAX CRED	N	2	1273	1274
553	GIHOPE	AK32B-HEARD OF HOPE SCHOLARSHIP TAX CRED	N	2	1275	1276
554	GILIFUS	AK33-USE LIFETIME LEARNING TAX CREDIT	N	2	1277	1278
555	GIHOPUS	AK34-USE HOPE SCHOLARSHIP TAX CREDIT	N	2	1279	1280
556	HOWNHOME	AL1-OWN, RENT HOME/OTHR ARRANGMNT	N	2	1281	1282
557	HOTHNUM	AL2-OTHR PHONE NMBRS/HOME USE	N	2	1283	1284
558	HNUMUSE	AL4-# OF OTHR PHONE NMBRS/HOME USE	N	2	1285	1286
559	HWIC	AL16A-FAMLY RECD WIC PAST 12 MO	N	2	1287	1288
560	HFOODST	AL16B-FAMLY RECD FOOD STMPS PST 12 MO	N	2	1289	1290
561	HMEDIC	AL16C-FAMLY RECD MEDICAID PAST 12 MO	N	2	1291	1292
562	HCHIP	AL16D-FAMLY RECD CHIP PAST 12 MO	N	2	1293	1294
563	HINCMRNG	AL17-TOTAL HH INCOME RANGE	N	2	1295	1296
564	HINCM50K	AL17OV -HH INCOME BELOW/ABOVE $50K	N	2	1297	1298
565	HINCOME	AL17OV -TOTAL HH INCOME RANGE 2	N	2	1299	1300
566	HINCMEXT	AL17OV2-EXCT HH INC NRST $1000	N	5	1301	1305
567	AEPARANY	D-PARTICIPATION-ALL TYPES OF AELL	N	2	1306	1307
568	AEPARTIC	D-PARTICIPATION- EXC FULL-TIME CRED	N	2	1308	1309
569	ANYSUPP	D-EMPLOYER SUPPORT-ANY AELL	N	2	1310	1311
570	BSPARTIC	D-PARTICIPATION-ABE/GED CLASSES	N	2	1312	1313
571	BSSUPP	D-EMPLOYER SUPPORTED ABE/GED CLASSES	N	2	1314	1315
572	CENREG	D-CENSUS REGION	N	2	1316	1317
573	COLSUPP	D-EMPLOYER SUPPORT-COL/UNIV PRGM	N	2	1318	1319
574	CRDIPART	D-PARTICIPATION-CREDENTIAL PROGRAMS	N	2	1320	1321
575	CRNEW	D-NUMBER OF COLLEGE DEGREE PROGRAMS	N	2	1322	1323
576	EDUCLEVL	D-HIGHEST LEVEL OF EDUCATION	N	2	1324	1325
577	ESSUPP	D-EMPLOYER SUPPORT- ESL CLASSES	N	2	1326	1327
578	HH18OVER	D-NUMBER OF HH MEMBERS 18 AND OLDER	N	2	1328	1329
579	HHTOTAL	D-TOTAL NUMBER OF HOUSEHOLD MEMBERS	N	2	1330	1331
580	HHUNDR10	D-NUMBER OF HH MEMBERS YOUNGER THAN 10	N	2	1332	1333
581	HHUNDR18	D-NUMBER OF HH MEMBERS YOUNGER THAN 18	N	2	1334	1335
582	HIGHEDUC	D-HIGHEST DEGREE OR CREDENTIAL OBTAINED	N	2	1336	1337
583	RACEETHN	D-RACE/ETHNICITY	N	2	1338	1339
584	RACEETH2	D-RACE/ETHNICITY-2	N	2	1340	1341
585	SAACTY	D-PERSONAL INTEREST COURSES	N	2	1342	1343
586	SACOST	D-TOTAL EXPENSES FOR PERSONAL-REL CRS	N	8. 2	1344	1351
587	SANEW	D-TOTAL NUM OF CRS FOR PERSONAL REASONS	N	2	1352	1353
588	SASUPP	D-EMPLOYER SUPPOR-PERSONAL-REL CRS	N	2	1354	1355
589	SATIME	D-TOTAL HOURS FOR PERSONAL-REL CRS	N	8. 2	1356	1363
590	TECHINST	D-INSTRUCTION USING TECHNOLOGY	N	2	1364	1365
591	VOCSUPP	D-EMPLOYER SUPPORT-VOC/TECH PRGM	N	2	1366	1367
592	VONEW	D-NUMBER OF VOC/TECH PROGRAMS	N	2	1368	1369
593	WRACTY	D-WORK RELATED COURSES	N	2	1370	1371
594	WRCOST	D-TOTAL EXPENSES FOR WORK-REL CRS	N	8. 2	1372	1379
595	WRNEW	D-TOTAL NUM OF CRS FOR WORK-REL REASONS	N	2	1380	1381
596	WRSUPP	D-EMPLOYER SUPPOR-WORK- REL CRS	N	2	1382	1383
597	WRTIME	D-TOTAL HOURS FOR WORK-REL CRS	N	8. 2	1384	1391
598	ZIP18PO2	D-PERCENT UNDER 18 BELOW POVERTY LINE	N	2	1392	1393
599	ZIPBLHI2	D-PERCENT OF PERSONS WHO ARE BLACK	N	2	1394	1395

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
600	ZIPURBAN	D-LIVE IN INSIDE, OUTSIDE URBANIZED AREA	N	2	1396	1397
601	FAWT	FINAL AELL INTV WEIGHT	N	10. 3	1398	1407
602	WRWGT	CRS WEIGHTING FACTOR/WORK-RELATED	N	4. 2	1408	1411
603	SAWGT	CRS WEIGHTING FACTOR/PERSONAL INTEREST	N	4. 2	1412	1415
604	FAWT1	FINAL AELL INTV WEIGHT, REPL1	N	10. 3	1416	1425
605	FAWT2	FINAL AELL INTV WEIGHT, REPL2	N	10. 3	1426	1435
606	FAWT3	FINAL AELL INTV WEIGHT, REPL3	N	10. 3	1436	1445
607	FAWT4	FINAL AELL INTV WEIGHT, REPL4	N	10. 3	1446	1455
608	FAWT5	FINAL AELL INTV WEIGHT, REPL5	N	10. 3	1456	1465
609	FAWT6	FINAL AELL INTV WEIGHT, REPL6	N	10. 3	1466	1475
610	FAWT7	FINAL AELL INTV WEIGHT, REPL7	N	10. 3	1476	1485
611	FAWT8	FINAL AELL INTV WEIGHT, REPL8	N	10. 3	1486	1495
612	FAWT9	FINAL AELL INTV WEIGHT, REPL9	N	10. 3	1496	1505
613	FAWT10	FINAL AELL INTV WEIGHT, REPL10	N	10. 3	1506	1515
614	FAWT11	FINAL AELL INTV WEIGHT, REPL11	N	10. 3	1516	1525
615	FAWT12	FINAL AELL INTV WEIGHT, REPL12	N	10. 3	1526	1535
616	FAWT13	FINAL AELL INTV WEIGHT, REPL13	N	10. 3	1536	1545
617	FAWT14	FINAL AELL INTV WEIGHT, REPL14	N	10. 3	1546	1555
618	FAWT15	FINAL AELL INTV WEIGHT, REPL15	N	10. 3	1556	1565
619	FAWT16	FINAL AELL INTV WEIGHT, REPL16	N	10. 3	1566	1575
620	FAWT17	FINAL AELL INTV WEIGHT, REPL17	N	10. 3	1576	1585
621	FAWT18	FINAL AELL INTV WEIGHT, REPL18	N	10. 3	1586	1595
622	FAWT19	FINAL AELL INTV WEIGHT, REPL19	N	10. 3	1596	1605
623	FAWT20	FINAL AELL INTV WEIGHT, REPL20	N	10. 3	1606	1615
624	FAWT21	FINAL AELL INTV WEIGHT, REPL21	N	10. 3	1616	1625
625	FAWT22	FINAL AELL INTV WEIGHT, REPL22	N	10. 3	1626	1635
626	FAWT23	FINAL AELL INTV WEIGHT, REPL23	N	10. 3	1636	1645
627	FAWT24	FINAL AELL INTV WEIGHT, REPL24	N	10. 3	1646	1655
628	FAWT25	FINAL AELL INTV WEIGHT, REPL25	N	10. 3	1656	1665
629	FAWT26	FINAL AELL INTV WEIGHT, REPL26	N	10. 3	1666	1675
630	FAWT27	FINAL AELL INTV WEIGHT, REPL27	N	10. 3	1676	1685
631	FAWT28	FINAL AELL INTV WEIGHT, REPL28	N	10. 3	1686	1695
632	FAWT29	FINAL AELL INTV WEIGHT, REPL29	N	10. 3	1696	1705
633	FAWT30	FINAL AELL INTV WEIGHT, REPL30	N	10. 3	1706	1715
634	FAWT31	FINAL AELL INTV WEIGHT, REPL31	N	10. 3	1716	1725
635	FAWT32	FINAL AELL INTV WEIGHT, REPL32	N	10. 3	1726	1735
636	FAWT33	FINAL AELL INTV WEIGHT, REPL33	N	10. 3	1736	1745
637	FAWT34	FINAL AELL INTV WEIGHT, REPL34	N	10. 3	1746	1755
638	FAWT35	FINA L AELL INTV WEIGHT, REPL35	N	10. 3	1756	1765
639	FAWT36	FINAL AELL INTV WEIGHT, REPL36	N	10. 3	1766	1775
640	FAWT37	FINAL AELL INTV WEIGHT, REPL37	N	10. 3	1776	1785
641	FAWT38	FINAL AELL INTV WEIGHT, REPL38	N	10. 3	1786	1795
642	FAWT39	FINAL AELL INTV WEIGHT, REPL39	N	10. 3	1796	1805
643	FAWT40	FINAL AELL INTV WEIGHT, REPL40	N	10. 3	1806	1815
644	FAWT41	FINAL AELL INTV WEIGHT, REPL41	N	10. 3	1816	1825
645	FAWT42	FINAL AELL INTV WEIGHT, REPL42	N	10. 3	1826	1835
646	FAWT43	FINAL AELL INTV WEIGHT, REPL43	N	10. 3	1836	1845
647	FAWT44	FINAL AELL INTV WEIGHT, REPL44	N	10. 3	1846	1855
648	FAWT45	FINAL AELL INTV WEIGHT, REPL45	N	10. 3	1856	1865
649	FAWT46	FINAL AELL INTV WEIGHT, REPL46	N	10. 3	1866	1875

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
650	FAWT47	FINAL AELL INTV WEIGHT, REPL47	N	10. 3	1876	1885
651	FAWT48	FINAL AELL INTV WEIGHT, REPL48	N	10. 3	1886	1895
652	FAWT49	FINAL AELL INTV WEIGHT, REPL49	N	10. 3	1896	1905
653	FAWT50	FINAL AELL INTV WEIGHT, REPL50	N	10. 3	1906	1915
654	FAWT51	FINAL AELL INTV WEIGHT, REPL51	N	10. 3	1916	1925
655	FAWT52	FINAL AELL INTV WEIGHT, REPL52	N	10. 3	1926	1935
656	FAWT53	FINAL AELL INTV WEIGHT, REPL53	N	10. 3	1936	1945
657	FAWT54	FINAL AELL INTV WEIGHT, REPL54	N	10. 3	1946	1955
658	FAWT55	FINAL AELL INTV WEIGHT, REPL55	N	10. 3	1956	1965
659	FAWT56	FINAL AELL INTV WEIGHT, REPL56	N	10. 3	1966	1975
660	FAWT57	FINAL AELL INTV WEIGHT, REPL57	N	10. 3	1976	1985
661	FAWT58	FINAL AELL INTV WEIGHT, REPL58	N	10. 3	1986	1995
662	FAWT59	FINAL AELL INTV WEIGHT, REPL59	N	10. 3	1996	2005
663	FAWT60	FINAL AELL INTV WEIGHT, REPL60	N	10. 3	2006	2015
664	FAWT61	FINAL AELL INTV WEIGHT, REPL61	N	10. 3	2016	2025
665	FAWT62	FINAL AELL INTV WEIGHT, REPL62	N	10. 3	2026	2035
666	FAWT63	FINAL AELL INTV WEIGHT, REPL63	N	10. 3	2036	2045
667	FAWT64	FINAL AELL INTV WEIGHT, REPL64	N	10. 3	2046	2055
668	FAWT65	FINAL AELL INTV WEIGHT, REPL65	N	10. 3	2056	2065
669	FAWT66	FINAL AELL INTV WEIGHT, REPL66	N	10. 3	2066	2075
670	FAWT67	FINAL AELL INTV WEIGHT, REPL67	N	10. 3	2076	2085
671	FAWT68	FINAL AELL INTV WEIGHT, REPL68	N	10. 3	2086	2095
672	FAWT69	FINAL AELL INTV WEIGHT, REPL69	N	10. 3	2096	2105
673	FAWT70	FINAL AELL INTV WEIGHT, REPL70	N	10. 3	2106	2115
674	FAWT71	FINAL AELL INTV WEIGHT, REPL71	N	10. 3	2116	2125
675	FAWT72	FINAL AELL INTV WEIGHT, REPL72	N	10. 3	2126	2135
676	FAWT73	FINAL AELL INTV WEIGHT, REPL73	N	10. 3	2136	2145
677	FAWT74	FINAL AELL INTV WEIGHT, REPL74	N	10. 3	2146	2155
678	FAWT75	FINAL AELL INTV WEIGHT, REPL75	N	10. 3	2156	2165
679	FAWT76	FINAL AELL INTV WEIGHT, REPL76	N	10. 3	2166	2175
680	FAWT77	FINAL AELL INTV WEIGHT, REPL77	N	10. 3	2176	2185
681	FAWT78	FINAL AELL INTV WEIGHT, REPL78	N	10. 3	2186	2195
682	FAWT79	FINAL AELL INTV WEIGHT, REPL79	N	10. 3	2196	2205
683	FAWT80	FINAL AELL INTV WEIGHT, REPL80	N	10. 3	2206	2215
684	APSU	PSU FOR TAYLOR SERIES VAR ESTIMATION	N	5	2216	2220
685	ASTRATUM	STRATUM FOR TAYLOR SERIES VAR ESTIMATION	N	2	2221	2222
686	SEF	IMPUTATION FLAG	N	2	2223	2224
687	AGF1	IMPUTATION FLAG	N	2	2225	2226
688	SEF1	IMPUTATION FLAG	N	2	2227	2228
689	AGF2	IMPUTATION FLAG	N	2	2229	2230
690	SEF2	IMPUTATION FLAG	N	2	2231	2232
691	AGF3	IMPUTATION FLAG	N	2	2233	2234
692	SEF3	IMPUTATION FLAG	N	2	2235	2236
693	AGF4	IMPUTATION FLAG	N	2	2237	2238
694	AGF5	IMPUTATION FLAG	N	2	2239	2240
695	AGF6	IMPUTATION FLAG	N	2	2241	2242
696	AGF7	IMPUTATION FLAG	N	2	2243	2244
697	AGF8	IMPUTATION FLAG	N	2	2245	2246
698	IBGRADF	IMPUTATION FLAG	N	2	2247	2248
699	IBGRAF1	IMPUTATION FLAG	N	2	2249	2250

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
700	IBGRAF2	IMPUTATION FLAG	N	2	2251	2252
701	IBVOCDIF	IMPUTATION FLAG	N	2	2253	2254
702	IBDIPF	IMPUTATION FLAG	N	2	2255	2256
703	IBUSDIPF	IMPUTATION FLAG	N	2	2257	2258
704	IBDIPLYF	IMPUTATION FLAG	N	2	2259	2260
705	IBHSREF	IMPUTATION FLAG	N	2	2261	2262
706	IBGEDCLF	IMPUTATION FLAG	N	2	2263	2264
707	IBWORF12	IMPUTATION FLAG	N	2	2265	2266
708	IBSELFEF	IMPUTATION FLAG	N	2	2267	2268
709	IBOTHEMF	IMPUTATION FLAG	N	2	2269	2270
710	IBEMPNUF	IMPUTATION FLAG	N	2	2271	2272
711	IBLANF	IMPUTATION FLAG	N	2	2273	2274
712	IBSPEAF	IMPUTATION FLAG	N	2	2275	2276
713	ESLANF	IMPUTATION FLAG	N	2	2277	2278
714	ESNOF	IMPUTATION FLAG	N	2	2279	2280
715	ESAGAIF	IMPUTATION FLAG	N	2	2281	2282
716	ESREAF	IMPUTATION FLAG	N	2	2283	2284
717	ESCHIF	IMPUTATION FLAG	N	2	2285	2286
718	ESUSCIF	IMPUTATION FLAG	N	2	2287	2288
719	ESJOF	IMPUTATION FLAG	N	2	2289	2290
720	ESRAISF	IMPUTATION FLAG	N	2	2291	2292
721	ESCOLVOF	IMPUTATION FLAG	N	2	2293	2294
722	ESPUBASF	IMPUTATION FLAG	N	2	2295	2296
723	ESFEEF	IMPUTATION FLAG	N	2	2297	2298
724	ESLIFF	IMPUTATION FLAG	N	2	2299	2300
725	ESRSOTF	IMPUTATION FLAG	N	2	2301	2302
726	ESPRTYF	IMPUTATION FLAG	N	2	2303	2304
727	ESPROVEF	IMPUTATION FLAG	N	2	2305	2306
728	ESCOLF	IMPUTATION FLAG	N	2	2307	2308
729	ESHRYF	IMPUTATION FLAG	N	2	2309	2310
730	ESHRF	IMPUTATION FLAG	N	2	2311	2312
731	ESTUITOF	IMPUTATION FLAG	N	2	2313	2314
732	ESMATLF	IMPUTATION FLAG	N	2	2315	2316
733	ESWORF	IMPUTATION FLAG	N	2	2317	2318
734	ESEMPREF	IMPUTATION FLAG	N	2	2319	2320
735	ESEMPSUF	IMPUTATION FLAG	N	2	2321	2322
736	ESWRKPF	IMPUTATION FLAG	N	2	2323	2324
737	ESWRKHF	IMPUTATION FLAG	N	2	2325	2326
738	ESEMPAIF	IMPUTATION FLAG	N	2	2327	2328
739	ESEMPTUF	IMPUTATION FLAG	N	2	2329	2330
740	ESEMPMAF	IMPUTATION FLAG	N	2	2331	2332
741	ESEVEF	IMPUTATION FLAG	N	2	2333	2334
742	READENGF	IMPUTATION FLAG	N	2	2335	2336
743	WRITENGF	IMPUTATION FLAG	N	2	2337	2338
744	BSIMPROF	IMPUTATION FLAG	N	2	2339	2340
745	BSGEF	IMPUTATION FLAG	N	2	2341	2342
746	BSHSEQUF	IMPUTATION FLAG	N	2	2343	2344
747	BSNOF	IMPUTATION FLAG	N	2	2345	2346
748	BSAGAIF	IMPUTATION FLAG	N	2	2347	2348
749	BSREAF	IMPUTATION FLAG	N	2	2349	2350

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
750	BSJOF	IMPUTATION FLAG	N	2	2351	2352
751	BSRAISF	IMPUTATION FLAG	N	2	2353	2354
752	BSCOLVOF	IMPUTATION FLAG	N	2	2355	2356
753	BSFEEF	IMPUTATION FLAG	N	2	2357	2358
754	BSLIFF	IMPUTATION FLAG	N	2	2359	2360
755	BSRSOTF	IMPUTATION FLAG	N	2	2361	2362
756	BSPRTYF	IMPUTATION FLAG	N	2	2363	2364
757	BSFMLIF	IMPUTATION FLAG	N	2	2365	2366
758	BSHRYF	IMPUTATION FLAG	N	2	2367	2368
759	BSHRF	IMPUTATION FLAG	N	2	2369	2370
760	BSTUITOF	IMPUTATION FLAG	N	2	2371	2372
761	BSMATLF	IMPUTATION FLAG	N	2	2373	2374
762	BSINCBF	IMPUTATION FLAG	N	2	2375	2376
763	BSWORF	IMPUTATION FLAG	N	2	2377	2378
764	BSEMPREF	IMPUTATION FLAG	N	2	2379	2380
765	BSEMPSUF	IMPUTATION FLAG	N	2	2381	2382
766	BSWRKPF	IMPUTATION FLAG	N	2	2383	2384
767	BSWRKHF	IMPUTATION FLAG	N	2	2385	2386
768	BSEMPAIF	IMPUTATION FLAG	N	2	2387	2388
769	BSEMPTUF	IMPUTATION FLAG	N	2	2389	2390
770	BSEMPMAF	IMPUTATION FLAG	N	2	2391	2392
771	BSEVEF	IMPUTATION FLAG	N	2	2393	2394
772	CRDEGREF	IMPUTATION FLAG	N	2	2395	2396
773	CRPOSTDF	IMPUTATION FLAG	N	2	2397	2398
774	CRREAF1	IMPUTATION FLAG	N	2	2399	2400
775	CRCERF1	IMPUTATION FLAG	N	2	2401	2402
776	CREXAF1	IMPUTATION FLAG	N	2	2403	2404
777	CRCERMF1	IMPUTATION FLAG	N	2	2405	2406
778	CRSTRMF1	IMPUTATION FLAG	N	2	2407	2408
779	CRSTRYF1	IMPUTATION FLAG	N	2	2409	2410
780	CRCOMMF1	IMPUTATION FLAG	N	2	2411	2412
781	CRCOMYF1	IMPUTATION FLAG	N	2	2413	2414
782	CRPROVF1	IMPUTATION FLAG	N	2	2415	2416
783	CRFACUF1	IMPUTATION FLAG	N	2	2417	2418
784	CRPTFF1	IMPUTATION FLAG	N	2	2419	2420
785	CRENRNF1	IMPUTATION FLAG	N	2	2421	2422
786	CRENRUF1	IMPUTATION FLAG	N	2	2423	2424
787	CRCRSNF1	IMPUTATION FLAG	N	2	2425	2426
788	CRCRDHF1	IMPUTATION FLAG	N	2	2427	2428
789	CRCLSHF1	IMPUTATION FLAG	N	2	2429	2430
790	CRINTF1	IMPUTATION FLAG	N	2	2431	2432
791	CRINCMF1	IMPUTATION FLAG	N	2	2433	2434
792	CRINCNF1	IMPUTATION FLAG	N	2	2435	2436
793	CRINWWF1	IMPUTATION FLAG	N	2	2437	2438
794	CRTECNF1	IMPUTATION FLAG	N	2	2439	2440
795	CRTECPF1	IMPUTATION FLAG	N	2	2441	2442
796	CRTUITF1	IMPUTATION FLAG	N	2	2443	2444
797	CRMATLF1	IMPUTATION FLAG	N	2	2445	2446
798	CRINCBF1	IMPUTATION FLAG	N	2	2447	2448
799	CRWORF1	IMPUTATION FLAG	N	2	2449	2450

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
800	CREMPRF1	IMPUTATION FLAG	N	2	2451	2452
801	CREMPSF1	IMPUTATION FLAG	N	2	2453	2454
802	CRWRKPF1	IMPUTATION FLAG	N	2	2455	2456
803	CRWRKHF1	IMPUTATION FLAG	N	2	2457	2458
804	CREMPAF1	IMPUTATION FLAG	N	2	2459	2460
805	CREMPTF1	IMPUTATION FLAG	N	2	2461	2462
806	CREMPMF1	IMPUTATION FLAG	N	2	2463	2464
807	CRREAF2	IMPUTATION FLAG	N	2	2465	2466
808	CRCERF2	IMPUTATION FLAG	N	2	2467	2468
809	CREXAF2	IMPUTATION FLAG	N	2	2469	2470
810	CRCERMF2	IMPUTATION FLAG	N	2	2471	2472
811	CRSTRMF2	IMPUTATION FLAG	N	2	2473	2474
812	CRSTRYF2	IMPUTATION FLAG	N	2	2475	2476
813	CRCOMMF2	IMPUTATION FLAG	N	2	2477	2478
814	CRCOMYF2	IMPUTATION FLAG	N	2	2479	2480
815	CRPROVF2	IMPUTATION FLAG	N	2	2481	2482
816	CRPTFF2	IMPUTATION FLAG	N	2	2483	2484
817	CRENRNF2	IMPUTATIO N FLAG	N	2	2485	2486
818	CRENRUF2	IMPUTATION FLAG	N	2	2487	2488
819	CRCRSNF2	IMPUTATION FLAG	N	2	2489	2490
820	CRCRDHF2	IMPUTATION FLAG	N	2	2491	2492
821	CRINTF2	IMPUTATION FLAG	N	2	2493	2494
822	CRINCMF2	IMPUTATION FLAG	N	2	2495	2496
823	CRINCNF2	IMPUTATION FLAG	N	2	2497	2498
824	CRINWWF2	IMPUTATION FLAG	N	2	2499	2500
825	CRTECNF2	IMPUTATION FLAG	N	2	2501	2502
826	CRTECPF2	IMPUTATION FLAG	N	2	2503	2504
827	CRTUITF2	IMPUTATION FLAG	N	2	2505	2506
828	CRMATLF2	IMPUTATION FLAG	N	2	2507	2508
829	CRINCBF2	IMPUTATION FLAG	N	2	2509	2510
830	CRWORF2	IMPUTATION FLAG	N	2	2511	2512
831	CREMPRF2	IMPUTATION FLAG	N	2	2513	2514
832	CREMPSF2	IMPUTATION FLAG	N	2	2515	2516
833	CRWRKPF2	IMPUTATION FLAG	N	2	2517	2518
834	CRWRKHF2	IMPUTATION FLA G	N	2	2519	2520
835	CREMPAF2	IMPUTATION FLAG	N	2	2521	2522
836	CREMPTF2	IMPUTATION FLAG	N	2	2523	2524
837	CREMPMF2	IMPUTATION FLAG	N	2	2525	2526
838	CRREAF3	IMPUTATION FLAG	N	2	2527	2528
839	CRCERF3	IMPUTATION FLAG	N	2	2529	2530
840	CRSTRMF3	IMPUTATION FLAG	N	2	2531	2532
841	CRSTRYF3	IMPUTATION FLAG	N	2	2533	2534
842	CRCOMMF3	IMPUTATION FLAG	N	2	2535	2536
843	CRCOMYF3	IMPUTATION FLAG	N	2	2537	2538
844	CRPROVF3	IMPUTATION FLAG	N	2	2539	2540
845	CRPTFF3	IMPUTATION FLAG	N	2	2541	2542
846	CRENRNF3	IMPUTATION FLAG	N	2	2543	2544
847	CRENRUF3	IMPUTATION FLAG	N	2	2545	2546
848	CRCRSNF3	IMPUTATION FLAG	N	2	2547	2548
849	CRCRDHF3	IMPUTATION FLAG	N	2	2549	2550

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
850	CRINTF3	IMPUTATION FLAG	N	2	2551	2552
851	CRINCMF3	IMPUTATION FLAG	N	2	2553	2554
852	CRINCNF3	IMPUTATION FLAG	N	2	2555	2556
853	CRINWWF3	IMPUTATION FLAG	N	2	2557	2558
854	CRTECNF3	IMPUTATION FLAG	N	2	2559	2560
855	CRTECPF3	IMPUTATION FLAG	N	2	2561	2562
856	CRTUITF3	IMPUTATION FLAG	N	2	2563	2564
857	CRMATLF3	IMPUTATION FLAG	N	2	2565	2566
858	CRINCBF3	IMPUTATION FLAG	N	2	2567	2568
859	CRWORF3	IMPUTATION FLAG	N	2	2569	2570
860	CREMPRF3	IMPUTATION FLAG	N	2	2571	2572
861	CREMPSF3	IMPUTATION FLAG	N	2	2573	2574
862	CRWRKPF3	IMPUTATION FLAG	N	2	2575	2576
863	CRWRKHF3	IMPUTATION FLAG	N	2	2577	2578
864	CREMPAF3	IMPUTATION FLAG	N	2	2579	2580
865	CREMPTF3	IMPUTATION FLAG	N	2	2581	2582
866	CREMPMF3	IMPUTATION FLAG	N	2	2583	2584
867	CRVOCDIF	IMPUTATION FLAG	N	2	2585	2586
868	VOREAF1	IMPUTATION FLAG	N	2	2587	2588
869	VOSTRMF1	IMPUTATION FLAG	N	2	2589	2590
870	VOSTRYF1	IMPUTATION FLAG	N	2	2591	2592
871	VOCOMMF1	IMPUTATION FLAG	N	2	2593	2594
872	VOCOMYF1	IMPUTATION FLAG	N	2	2595	2596
873	VOPTFF1	IMPUTATION FLAG	N	2	2597	2598
874	VOENRNF1	IMPUTATION FLAG	N	2	2599	2600
875	VOENRUF1	IMPUTATION FLAG	N	2	2601	2602
876	VOCRSNF1	IMPUTATION FLAG	N	2	2603	2604
877	VOCRDHF1	IMPUTATION FLAG	N	2	2605	2606
878	VOINCMF1	IMPUTATION FLAG	N	2	2607	2608
879	VOINCNF1	IMPUTATION FLAG	N	2	2609	2610
880	VOINWWF1	IMPUTATION FLAG	N	2	2611	2612
881	VOTECNF1	IMPUTATION FLAG	N	2	2613	2614
882	VOTECPF1	IMPUTATION FLAG	N	2	2615	2616
883	VOTUITF1	IMPUTATION FLAG	N	2	2617	2618
884	VOMATLF1	IMPUTATION FLAG	N	2	2619	2620
885	VOWORF1	IMPUTATION FLAG	N	2	2621	2622
886	VOEMPRF1	IMPUTATION FLAG	N	2	2623	2624
887	VOEMPSF1	IMPUTATION FLAG	N	2	2625	2626
888	VOWRKPF1	IMPUTATION FLAG	N	2	2627	2628
889	VOWRKHF1	IMPUTATION FLAG	N	2	2629	2630
890	VOEMPAF1	IMPUTATION FLAG	N	2	2631	2632
891	VOEMPTF1	IMPUTATION FLAG	N	2	2633	2634
892	VOEMPMF1	IMPUTATION FLAG	N	2	2635	2636
893	VOSTRYF2	IMPUTATION FLAG	N	2	2637	2638
894	VOCOMMF2	IMPUTATION FLAG	N	2	2639	2640
895	VOCOMYF2	IMPUTATION FLAG	N	2	2641	2642
896	VOENRNF2	IMPUTATION FLAG	N	2	2643	2644
897	VOENRUF2	IMPUTATION FLAG	N	2	2645	2646
898	VOCRDHF2	IMPUTATION FLAG	N	2	2647	2648
899	VOINWWF2	IMPUTATION FLAG	N	2	2649	2650

C-18

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
900	APPRENTF	IMPUTATION FLAG	N	2	2651	2652
901	APUNIOF	IMPUTATION FLAG	N	2	2653	2654
902	APSTAGOF	IMPUTATION FLAG	N	2	2655	2656
903	APFEDGOF	IMPUTATION FLAG	N	2	2657	2658
904	APOTHEF	IMPUTATION FLAG	N	2	2659	2660
905	APSTRTMF	IMPUTATION FLAG	N	2	2661	2662
906	APSTRTYF	IMPUTATION FLAG	N	2	2663	2664
907	APCOMPMF	IMPUTATION FLAG	N	2	2665	2666
908	APCOMPYF	IMPUTATION FLAG	N	2	2667	2668
909	APCLSHF	IMPUTATION FLAG	N	2	2669	2670
910	APCOLCF	IMPUTATION FLAG	N	2	2671	2672
911	APTUITOF	IMPUTATION FLAG	N	2	2673	2674
912	APMATLF	IMPUTATION FLAG	N	2	2675	2676
913	FCACTF	IMPUTATION FLAG	N	2	2677	2678
914	FCACTOTF	IMPUTATION FLAG	N	2	2679	2680
915	FCOTF	IMPUTATION FLAG	N	2	2681	2682
916	WRCRF1	IMPUTATION FLAG	N	2	2683	2684
917	WRCLSHF1	IMPUTATION FLAG	N	2	2685	2686
918	WRCURF1	IMPUTATION FLAG	N	2	2687	2688
919	WRRSSKF1	IMPUTATION FLAG	N	2	2689	2690
920	WRNWSKF1	IMPUTATION FLAG	N	2	2691	2692
921	WRRSRAF1	IMPUTATION FLAG	N	2	2693	2694
922	WRRSNEF1	IMPUTATION FLAG	N	2	2695	2696
923	WRRSCEF1	IMPUTATION FLAG	N	2	2697	2698
924	WRRSREF1	IMPUTATION FLAG	N	2	2699	2700
925	WRRSOTF1	IMPUTATION FLAG	N	2	2701	2702
926	WREXAF1	IMPUTATION FLAG	N	2	2703	2704
927	WRCERMF1	IMPUTATION FLAG	N	2	2705	2706
928	WRPRTYF1	IMPUTATION FLAG	N	2	2707	2708
929	WRPROVF1	IMPUTATION FLAG	N	2	2709	2710
930	WRCREF1	IMPUTATION FLAG	N	2	2711	2712
931	WRCEF1	IMPUTATION FLAG	N	2	2713	2714
932	WRINTF1	IMPUTATION FLAG	N	2	2715	2716
933	WRINCMF1	IMPUTATION FLAG	N	2	2717	2718
934	WRINCNF1	IMPUTATION FLAG	N	2	2719	2720
935	WRINWWF1	IMPUTATION FLAG	N	2	2721	2722
936	WRINOTF1	IMPUTATION FLAG	N	2	2723	2724
937	WRTECHF1	IMPUTATION FLAG	N	2	2725	2726
938	WRJOBSF1	IMPUTATION FLAG	N	2	2727	2728
939	WRTUITF1	IMPUTATION FLAG	N	2	2729	2730
940	WRMATLF1	IMPUTATION FLAG	N	2	2731	2732
941	WRINCBF1	IMPUTATION FLAG	N	2	2733	2734
942	WRWORF1	IMPUTATION FLAG	N	2	2735	2736
943	WREMPRF1	IMPUTATION FLAG	N	2	2737	2738
944	WREMPSF1	IMPUTATION FLAG	N	2	2739	2740
945	WRWRKPF1	IMPUTATION FLAG	N	2	2741	2742
946	WRWRKHF1	IMPUTATION FLAG	N	2	2743	2744
947	WREMPAF1	IMPUTATION FLAG	N	2	2745	2746
948	WREMPTF1	IMPUTATION FLAG	N	2	2747	2748
949	WREMPMF1	IMPUTATION FLAG	N	2	2749	2750

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
950	WRCRF2	IMPUTATION FLAG	N	2	2751	2752
951	WRCLSHF2	IMPUTATION FLAG	N	2	2753	2754
952	WRCURF2	IMPUTATION FLAG	N	2	2755	2756
953	WRRSSKF2	IMPUTATION FLAG	N	2	2757	2758
954	WRNWSKF2	IMPUTATION FLAG	N	2	2759	2760
955	WRRSRAF2	IMPUTATION FLAG	N	2	2761	2762
956	WRRSNEF2	IMPUTATION FLAG	N	2	2763	2764
957	WRRSCEF2	IMPUTATION FLAG	N	2	2765	2766
958	WRRSREF2	IMPUTATION FLAG	N	2	2767	2768
959	WRRSOTF2	IMPUTATION FLAG	N	2	2769	2770
960	WREXAF2	IMPUTATION FLAG	N	2	2771	2772
961	WRCERMF2	IMPUTATION FLAG	N	2	2773	2774
962	WRPRTYF2	IMPUTATION FLAG	N	2	2775	2776
963	WRPROVF2	IMPUTATION FLAG	N	2	2777	2778
964	WRCREF2	IMPUTATION FLAG	N	2	2779	2780
965	WRCEF2	IMPUTATION FLAG	N	2	2781	2782
966	WRINTF2	IMPUTATION FLAG	N	2	2783	2784
967	WRINCMF2	IMPUTATION FLAG	N	2	2785	2786
968	WRINCNF2	IMPUTATION FLAG	N	2	2787	2788
969	WRINWWF2	IMPUTATION FLAG	N	2	2789	2790
970	WRINOTF2	IMPUTATION FLAG	N	2	2791	2792
971	WRTECHF2	IMPUTATION FLAG	N	2	2793	2794
972	WRJOBSF2	IMPUTATION FLAG	N	2	2795	2796
973	WRTUITF2	IMPUTATION FLAG	N	2	2797	2798
974	WRMATLF2	IMPUTATION FLAG	N	2	2799	2800
975	WRINCBF2	IMPUTATION FLAG	N	2	2801	2802
976	WRWORF2	IMPUTATION FLAG	N	2	2803	2804
977	WREMPRF2	IMPUTATION FLAG	N	2	2805	2806
978	WREMPSF2	IMPUTATION FLAG	N	2	2807	2808
979	WRWRKPF2	IMPUTATION FLAG	N	2	2809	2810
980	WRWRKHF2	IMPUTATION FLAG	N	2	2811	2812
981	WREMPAF2	IMPUTATION FLAG	N	2	2813	2814
982	WREMPTF2	IMPUTATION FLAG	N	2	2815	2816
983	WREMPMF2	IMPUTATION FLAG	N	2	2817	2818
984	WRCLSHF3	IMPUTATION FLAG	N	2	2819	2820
985	WRCURF3	IMPUTATION FLAG	N	2	2821	2822
986	WRRSSKF3	IMPUTATION FLAG	N	2	2823	2824
987	WRNWSKF3	IMPUTATION FLAG	N	2	2825	2826
988	WRRSRAF3	IMPUTATION FLAG	N	2	2827	2828
989	WRRSNEF3	IMPUTATION FLAG	N	2	2829	2830
990	WRRSCEF3	IMPUTATION FLAG	N	2	2831	2832
991	WRRSREF3	IMPUTATION FLAG	N	2	2833	2834
992	WRRSOTF3	IMPUTATION FLAG	N	2	2835	2836
993	WREXAF3	IMPUTATION FLAG	N	2	2837	2838
994	WRCERMF3	IMPUTATION FLAG	N	2	2839	2840
995	WRPRTYF3	IMPUTATION FLAG	N	2	2841	2842
996	WRPROVF3	IMPUTATION FLAG	N	2	2843	2844
997	WRCREF3	IMPUTATION FLAG	N	2	2845	2846
998	WRCEF3	IMPUTATION FLAG	N	2	2847	2848
999	WRINTF3	IMPUTATION FLAG	N	2	2849	2850

C-20

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
1000	WRINCMF3	IMPUTATIO N FLAG	N	2	2851	2852
1001	WRINCNF3	IMPUTATION FLAG	N	2	2853	2854
1002	WRINWWF3	IMPUTATION FLAG	N	2	2855	2856
1003	WRTECHF3	IMPUTATION FLAG	N	2	2857	2858
1004	WRJOBSF3	IMPUTATION FLAG	N	2	2859	2860
1005	WRTUITF3	IMPUTATION FLAG	N	2	2861	2862
1006	WRMATLF3	IMPUTATION FLAG	N	2	2863	2864
1007	WRWORF3	IMPUTATION FLAG	N	2	2865	2866
1008	WREMPRF3	IMPUTATION FLAG	N	2	2867	2868
1009	WREMPSF3	IMPUTATION FLAG	N	2	2869	2870
1010	WRWRKPF3	IMPUTATION FLAG	N	2	2871	2872
1011	WRWRKHF3	IMPUTATION FLAG	N	2	2873	2874
1012	WREMPAF3	IMPUTATION FLAG	N	2	2875	2876
1013	WREMPTF3	IMPUTATION FLAG	N	2	2877	2878
1014	WREMPMF3	IMPUTATION FLAG	N	2	2879	2880
1015	WRCLSHF4	IMPUTATION FLAG	N	2	2881	2882
1016	WRCURF4	IMPUTATION FLAG	N	2	2883	2884
1017	WRRSSKF4	IMPUTATION FLAG	N	2	2885	2886
1018	WRNWSKF4	IMPUTATION FLAG	N	2	2887	2888
1019	WRRSRAF4	IMPUTATION FLAG	N	2	2889	2890
1020	WRRSNEF4	IMPUTATION FLAG	N	2	2891	2892
1021	WRRSCEF4	IMPUTATION FLAG	N	2	2893	2894
1022	WRRSREF4	IMPUTATION FLAG	N	2	2895	2896
1023	WRRSOTF4	IMPUTATION FLAG	N	2	2897	2898
1024	WREXAF4	IMPUTATION FLAG	N	2	2899	2900
1025	WRCERMF4	IMPUTATION FLAG	N	2	2901	2902
1026	WRPRTYF4	IMPUTATION FLAG	N	2	2903	2904
1027	WRPROVF4	IMPUTATION FLAG	N	2	2905	2906
1028	WRCREF4	IMPUTATION FLAG	N	2	2907	2908
1029	WRCEF4	IMPUTATION FLAG	N	2	2909	2910
1030	WRINTF4	IMPUTATION FLAG	N	2	2911	2912
1031	WRINCMF4	IMPUTATION FLAG	N	2	2913	2914
1032	WRINCNF4	IMPUTATION FLAG	N	2	2915	2916
1033	WRINWWF4	IMPUTATION FLAG	N	2	2917	2918
1034	WRTECHF4	IMPUTATION FLAG	N	2	2919	2920
1035	WRJOBSF4	IMPUTATION FLAG	N	2	2921	2922
1036	WRTUITF4	IMPUTATION FLAG	N	2	2923	2924
1037	WRMATLF4	IMPUTATION FLAG	N	2	2925	2926
1038	WRWORF4	IMPUTATION FLAG	N	2	2927	2928
1039	WREMPRF4	IMPUTATION FLAG	N	2	2929	2930
1040	WRWRKPF4	IMPUTATION FLAG	N	2	2931	2932
1041	WRWRKHF4	IMPUTATION FLAG	N	2	2933	2934
1042	WREMPAF4	IMPUTATION FLAG	N	2	2935	2936
1043	WREMPTF4	IMPUTATION FLAG	N	2	2937	2938
1044	WREMPMF4	IMPUTATION FLAG	N	2	2939	2940
1045	WROREF	IMPUTATION FLAG	N	2	2941	2942
1046	WROCOLF	IMPUTATION FLAG	N	2	2943	2944
1047	WROPAF	IMPUTATION FLAG	N	2	2945	2946
1048	WROCERF	IMPUTATION FLAG	N	2	2947	2948
1049	WROTECF	IMPUTATION FLAG	N	2	2949	2950

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
1050	SACRF1	IMPUTATION FLAG	N	2	2951	2952
1051	SACLSHF1	IMPUTATION FLAG	N	2	2953	2954
1052	SACURF1	IMPUTATION FLAG	N	2	2955	2956
1053	SAPRTYF1	IMPUTATION FLAG	N	2	2957	2958
1054	SAPROVF1	IMPUTATION FLAG	N	2	2959	2960
1055	SACREF1	IMPUTATION FLAG	N	2	2961	2962
1056	SACEF1	IMPUTATION FLAG	N	2	2963	2964
1057	SAINTF1	IMPUTATION FLAG	N	2	2965	2966
1058	SAINCMF1	IMPUTATION FLAG	N	2	2967	2968
1059	SAINCNF1	IMPUTATION FLAG	N	2	2969	2970
1060	SAINWWF1	IMPUTATION FLAG	N	2	2971	2972
1061	SAINOTF1	IMPUTATION FLAG	N	2	2973	2974
1062	SATECHF1	IMPUTATION FLAG	N	2	2975	2976
1063	SATUITF1	IMPUTATION FLAG	N	2	2977	2978
1064	SAMATLF1	IMPUTATION FLAG	N	2	2979	2980
1065	SAINCBF1	IMPUTATION FLAG	N	2	2981	2982
1066	SAWORF1	IMPUTATION FLAG	N	2	2983	2984
1067	SAWRKPF1	IMPUTATION FLAG	N	2	2985	2986
1068	SAWRKHF1	IMPUTATION FLAG	N	2	2987	2988
1069	SAEMPAF1	IMPUTATION FLAG	N	2	2989	2990
1070	SAEMPTF1	IMPUTATION FLAG	N	2	2991	2992
1071	SAEMPMF1	IMPUTATION FLAG	N	2	2993	2994
1072	SACLSHF2	IMPUTATION FLAG	N	2	2995	2996
1073	SACURF2	IMPUTATION FLAG	N	2	2997	2998
1074	SAPRTYF2	IMPUTATION FLAG	N	2	2999	3000
1075	SACREF2	IMPUTATION FLAG	N	2	3001	3002
1076	SACEF2	IMPUTATION FLAG	N	2	3003	3004
1077	SAINTF2	IMPUTATION FLAG	N	2	3005	3006
1078	SAINCMF2	IMPUTATION FLAG	N	2	3007	3008
1079	SAINCNF2	IMPUTATION FLAG	N	2	3009	3010
1080	SAINWWF2	IMPUTATION FLAG	N	2	3011	3012
1081	SATECHF2	IMPUTATION FLAG	N	2	3013	3014
1082	SATUITF2	IMPUTATION FLAG	N	2	3015	3016
1083	SAMATLF2	IMPUTATION FLAG	N	2	3017	3018
1084	SAINCBF2	IMPUTATION FLAG	N	2	3019	3020
1085	SAWRKHF2	IMPUTATION FLAG	N	2	3021	3022
1086	SAEMPAF2	IMPUTATION FLAG	N	2	3023	3024
1087	SAEMPTF2	IMPUTATION FLAG	N	2	3025	3026
1088	SAEMPMF2	IMPUTATION FLAG	N	2	3027	3028
1089	SAOREF	IMPUTATION FLAG	N	2	3029	3030
1090	SAOCOLF	IMPUTATION FLAG	N	2	3031	3032
1091	SAOPAF	IMPUTATION FLAG	N	2	3033	3034
1092	SAOTIMF	IMPUTATION FLAG	N	2	3035	3036
1093	ILMENTOF	IMPUTATION FLAG	N	2	3037	3038
1094	ILSELFF	IMPUTATION FLAG	N	2	3039	3040
1095	ILCOMF	IMPUTATION FLAG	N	2	3041	3042
1096	ILBBAF	IMPUTATION FLAG	N	2	3043	3044
1097	ILCONFF	IMPUTATION FLAG	N	2	3045	3046
1098	ILOMAF	IMPUTATION FLAG	N	2	3047	3048
1099	ILOTF	IMPUTATION FLAG	N	2	3049	3050

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
1100	ILCERF	IMPUTATION FLAG	N	2	3051	3052
1101	ILEXAF	IMPUTATION FLAG	N	2	3053	3054
1102	ILCERMF	IMPUTATION FLAG	N	2	3055	3056
1103	ADOBMF	IMPUTATION FLAG	N	2	3057	3058
1104	ADOBYF	IMPUTATION FLAG	N	2	3059	3060
1105	ARACF	IMPUTATION FLAG	N	2	3061	3062
1106	AOTHRACF	IMPUTATION FLAG	N	2	3063	3064
1107	AHISPANF	IMPUTATION FLAG	N	2	3065	3066
1108	AMARSTAF	IMPUTATION FLAG	N	2	3067	3068
1109	ALIVWITF	IMPUTATION FLAG	N	2	3069	3070
1110	ADISABF	IMPUTATION FLAG	N	2	3071	3072
1111	ABORNUF	IMPUTATION FLAG	N	2	3073	3074
1112	AMOVEAGF	IMPUTATION FLAG	N	2	3075	3076
1113	USGRADF	IMPUTATION FLAG	N	2	3077	3078
1114	ASTUENF	IMPUTATION FLAG	N	2	3079	3080
1115	JOBEVEF	IMPUTATION FLAG	N	2	3081	3082
1116	IBWORKMF	IMPUTATION FLAG	N	2	3083	3084
1117	AUNEMF	IMPUTATION FLAG	N	2	3085	3086
1118	JOBACTF	IMPUTATION FLAG	N	2	3087	3088
1119	PAYHRF	IMPUTATION FLAG	N	2	3089	3090
1120	FSIF	IMPUTATION FLAG	N	2	3091	3092
1121	FSOF	IMPUTATION FLAG	N	2	3093	3094
1122	CUREMF	IMPUTATION FLAG	N	2	3095	3096
1123	NUMPEEF	IMPUTATION FLAG	N	2	3097	3098
1124	EARNAMF	IMPUTATION FLAG	N	2	3099	3100
1125	EARNUNF	IMPUTATION FLAG	N	2	3101	3102
1126	SUPERF	IMPUTATION FLAG	N	2	3103	3104
1127	CERTJOF	IMPUTATION FLAG	N	2	3105	3106
1128	CERTPRFF	IMPUTATION FLAG	N	2	3107	3108
1129	CONTREF	IMPUTATION FLAG	N	2	3109	3110
1130	LABUNIOF	IMPUTATION FLAG	N	2	3111	3112
1131	UNIONCOF	IMPUTATION FLAG	N	2	3113	3114
1132	COMPHOMF	IMPUTATION FLAG	N	2	3115	3116
1133	COMPWORF	IMPUTATION FLAG	N	2	3117	3118
1134	WEBHOMF	IMPUTATION FLAG	N	2	3119	3120
1135	WEBWORF	IMPUTATION FLAG	N	2	3121	3122
1136	GILIFF	IMPUTATION FLAG	N	2	3123	3124
1137	GIHOPF	IMPUTATION FLAG	N	2	3125	3126
1138	GILIFUF	IMPUTATION FLAG	N	2	3127	3128
1139	GIHOPUF	IMPUTATION FLAG	N	2	3129	3130
1140	HOWNHOMF	IMPUTATION FLAG	N	2	3131	3132
1141	HOTHNUF	IMPUTATION FLAG	N	2	3133	3134
1142	HNUMUSF	IMPUTATION FLAG	N	2	3135	3136
1143	HWIF	IMPUTATION FLAG	N	2	3137	3138
1144	HFOODSF	IMPUTATION FLAG	N	2	3139	3140
1145	HMEDIF	IMPUTATION FLAG	N	2	3141	3142
1146	HCHIF	IMPUTATION FLAG	N	2	3143	3144
1147	HINCMRNF	IMPUTATION FLAG	N	2	3145	3146
1148	HINCM50F	IMPUTATION FLAG	N	2	3147	3148
1149	HINCOMF	IMPUTATION FLAG	N	2	3149	3150

ORDER	VARIABLE NAME	VARIABLE LABEL	FORMAT	LENGTH	START COLUMN	END COLUMN
1150	HINCMEXF	IMPUTATION FLAG	N	2	3151	3152
1151	EARNFLAG	EARNINGS FLAG	N	2	3153	3154

APPENDIX D

SAS CODE FOR DERIVED VARIABLES

This page is intentionally blank.

/*AEPARANY*/

```
IF ESLANG = 1 | ((BSIMPROV = 1 | BSGED = 1 | BSHSEQUV = 1) &
   NOT (IBDIPLYR = 1 & IBHSREQ = 1)) | (CRDEGREE = 1) | (CRPOSTDG = 1) |
   (CRVOCDIP = 1) | APPRENTI = 1 | WRACTY = 1 | SAACTY = 1 THEN AEPARANY = 1;
        ELSE AEPARANY = 0;
```

/*AEPARTIC*/

```
IF ESLANG = 1 | ((BSIMPROV = 1 | BSGED = 1 | BSHSEQUV = 1) &
        NOT (IBDIPLYR = 1 & IBHSREQ = 1)) | (((CRDEGREE = 1) | (CRPOSTDG = 1)) &
        ((2 <= CRPTFT1 <= 3) OR (2 <= CRPTFT2 <= 3) OR (2 <= CRPTFT3 <= 3))) | ((CRVOCDIP = 1) &
        ((2 <= VOPTFT1 <= 3) OR (2 <= VOPTFT2 <= 3))) | APPRENTI = 1 | WRACTY = 1 | SAACTY = 1
        THEN AEPARTIC = 1;
        ELSE AEPARTIC = 0;
```

/*ANYSUPP*/

```
IF AEPARANY = 0 THEN ANYSUPP = -1;
        ELSE IF (ESSUPP = 1 | BSSUPP = 1 | COLSUPP= 1 | VOCSUPP = 1 | WRSUPP = 1 | SASUPP =  1) THEN ANYSUPP
        = 1;
        ELSE ANYSUPP = 0;
```

/*BSPARTIC*/

```
IF ((BSIMPROV = 1 | BSGED = 1 | BSHSEQUV = 1) & NOT (IBDIPLYR = 1 & IBHSREQ = 1)) | ESLANG = 1 THEN
        BSPARTIC = 1;
        ELSE BSPARTIC = 0;
```

/*BSSUPP*/

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

/*COLSUPP */

```
IF (CRDEGREE = 2 AND CRPOSTDG IN (-1, 2)) THEN COLSUPP = -1;
        ELSE IF (CRPROVE1 = 1 | CRWRKHR1 = 1 | CRWRKPL1 = 1 | CREMPAI1 = 1 | CREMPTU1 = 1 | CREMPMA1 = 1) OR
        (CRPROVE2 = 1 | CRWRKHR2 = 1 | CRWRKPL2 = 1 | CREMPAI2 = 1 | CREMPTU2 = 1 | CREMPMA2 = 1) OR
        (CRPROVE3 = 1 | CRWRKHR3 = 1 | CRWRKPL3 = 1 | CREMPAI3 = 1 | CREMPTU3 = 1 | CREMPMA3 = 1)
        THEN COLSUPP = 1;
        ELSE COLSUPP = 0;
```

/*CRDIPART*/

```
IF (CRDEGREE = 1 | CRPOSTDG = 1 | CRVOCDIP = 1) THEN CRDIPART = 1;
        ELSE CRDIPART= 0;
```

/*CRNEW*/

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

/*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;
```

/*RACEETHN*/

```
IF AHISPANI = 1 THEN RACEETHN = 3;
        ELSE IF ARACE = 2 THEN RACEETHN = 2;
        ELSE IF ARACE = 1 THEN RACEETHN = 1;
        ELSE IF (ARACE IN (3, 4, 91)) THEN RACEETHN = 4;
```

/*RACEETH2*/

```
IF AHISPANI = 1 THEN RACEETH2 = 3;
        ELSE IF ARACE = 4 THEN RACEETH2 = 4;
        ELSE IF ARACE = 2 THEN RACEETH2 = 2;
        ELSE IF ARACE = 1 THEN RACEETH2 = 1;
        ELSE IF ARACE IN (3, 91) THEN RACEETH2 = 5;
```

/*SAACTY*/

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

/*SACOST*/

```
IF SATUITO2 NE -1 THEN SACOST1 = SATUITO1 + SATUITO2;
        ELSE IF SATUITO1 NE -1 THEN SACOST1 = SATUITO1 ;
        ELSE SACOST1 = 0;

IF SAMATLS2 NE -1 THEN SACOST2 = SAMATLS1 + SAMATLS2;
        ELSE IF SAMATLS1 NE -1 THEN SACOST2 = SAMATLS1 ;
        ELSE SACOST2 = 0;

IF SAACTY = 2 THEN SACOST = -1;
        ELSE IF SAACTY = 1 THEN SACOST = (SACOST1 + SACOST2) * SAWGT;
```

/*SASUPP*/

```
IF  SAACTY = 2 THEN SASUPP = -1;
        ELSE IF (SAPROVE1  = 1 | SAWRKPL1 = 1 | SAWRKHR1 = 1 | SAEMPAI1 = 1 | SAEMPTU1 = 1 |  SAEMPMA1 = 1) OR
        (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;


/*TECHINST*/

IF (CRDEGREE = 2 & CRPOSTDG IN (-1,2) & CRVOCDIP = 2 & WRACTY = 2 & SAACTY = 2) THEN TECHINST = -1;
        ELSE IF   (CRINTV1  = 1 | CRINCOM1 = 1 | CRINCON1 = 1 | CRINWWW1  = 1) OR
                  (CRINTV2  = 1 | CRINCOM2 = 1 | CRINCON2 = 1 | CRINWWW2  = 1) OR
                  (CRINTV3  = 1 | CRINCOM3 = 1 | CRINCON3 = 1 | CRINWWW3  = 1) OR
                  (VOINTV1  = 1 | VOINCOM1 = 1 | VOINCON1 = 1 | VOINWWW1  = 1) OR
                  (VOINTV2  = 1 | VOINCOM2 = 1 | VOINCON2 = 1 | VOINWWW2  = 1) OR
                  (WRINTV1  = 1 | WRINCOM1 = 1 | WRINCON1 = 1 | WRINWWW1  = 1) OR
                  (WRINTV2  = 1 | WRINCOM2 = 1 | WRINCON2 = 1 | WRINWWW2  = 1) OR
                  (WRINTV3  = 1 | WRINCOM3 = 1 | WRINCON3 = 1 | WRINWWW3  = 1) OR
                  (WRINTV4  = 1 | WRINCOM4 = 1 | WRINCON4 = 1 | WRINWWW4  = 1) OR
                  (SAINTV1  = 1 | SAINCOM1 = 1 | SAINCON1 = 1 | SAINWWW1  = 1) OR
                  (SAINTV2  = 1 | SAINCOM2 = 1 | SAINCON2 = 1 | SAINWWW2  = 1) OR
                  (WROTECH = 1 | SAOTECH = 1) THEN TECHINST = 1;
        ELSE TECHINST = 0;


/*VOCSUPP*/

IF CRVOCDIP = 2 THEN VOCSUPP = -1;
        ELSE IF (VOPROVE1  = 1 | VOWRKPL1 = 1 | VOWRKHR1 = 1 | VOEMPAI1 = 1 | VOEMPTU1 = 1 | VOEMPMA1 = 1)
        OR (VOPROVE2  = 1 | VOWRKPL2 = 1 | VOWRKHR2 = 1 | VOEMPAI2 = 1 | VOEMPTU2 = 1 | VOEMPMA2 = 1) THEN
        VOCSUPP = 1;
        ELSE VOCSUPP= 0;


/*VONEW*/

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;


/*WRCOST*/

IF WRTUITO4 NE -1 THEN WRCOST1 = WRTUITO1 + WRTUITO2 + WRTUITO3 + WRTUITO4;
        ELSE IF WRTUITO3 NE -1 THEN WRCOST1 = WRTUITO1 + WRTUITO2 + WRTUITO3 ;
        ELSE IF WRTUITO2 NE -1 THEN WRCOST1 = WRTUITO1 + WRTUITO2 ;
        ELSE IF WRTUITO1 NE -1 THEN WRCOST1 = WRTUITO1  ;
        ELSE WRCOST1 = 0;

IF WRMATLS4 NE -1 THEN WRCOST2 = WRMATLS1 + WRMATLS2 + WRMATLS3 + WRMATLS4;
        ELSE IF WRMATLS3 NE -1 THEN WRCOST2 = WRMATLS1 + WRMATLS2 + WRMATLS3 ;
        ELSE IF WRMATLS2 NE -1 THEN WRCOST2 = WRMATLS1 + WRMATLS2 ;
        ELSE IF WRMATLS1 NE -1 THEN WRCOST2 = WRMATLS1 ;
        ELSE WRCOST2 = 0;

IF WRACTY = 2 THEN WRCOST = -1;
        ELSE IF WRACTY = 1 THEN WRCOST = (WRCOST1 + WRCOST2) * WRWGT;

DROP WRCOST1 WRCOST2;
```

/*WRSUPP*/

```
IF WRACTY = 2 THEN WRSUPP = -1;
        ELSE IF (WRPROVE1  = 1 | WRWRKHR1 = 1 | WRWRKPL1 = 1 | WREMPAI1 = 1 | WREMPTU1 = 1 | WREMPMA1 = 1)
        OR (WRPROVE2  = 1 | WRWRKHR2 = 1 | WRWRKPL2 = 1 | WREMPAI2 = 1 | WREMPTU2 = 1 | WREMPMA2 = 1) OR
        (WRPROVE3  = 1 | WRWRKHR3 = 1 | WRWRKPL3 = 1 | WREMPAI3 = 1 | WREMPTU3 = 1 | WREMPMA3 = 1) OR
        (WRPROVE4  = 1 | WRWRKHR4 = 1 | WRWRKPL4 = 1 | WREMPAI4 = 1 | WREMPTU4 = 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;
```

APPENDIX E

AELL DATA FILE CODEBOOK

This page is intentionally blank.

APPENDIX F

DIRECTIONS AND CODE FOR LINKING DATA FILES

This page is intentionally blank.

Linking the NHES:2001 Data Files

It is possible to link information from the three NHES:2001 files. The ECPP and ASPA files can be concatenated to enable analysts to obtain estimates for the entire population of children from birth through eighth grade, and the AELL file can be merged with data from the ECPP and/or ASPA files to provide information obtained in households whose members include both a subject of the AELL interview and a child (or children) for whom an ECPP and/or ASPA interview was completed. Note that **file concatenation** and **file merging** are two separate linking processes; the two processes are different in terms of both implementation and interpretation. **Analysts are urged to consult their SAS or SPSS instruction manuals for additional information on the implications of and code useful for linking data files.**

Linking is accomplished through file identifiers. In the NHES:2001, there are three types of identifiers. They are the **household** identification numbers (**BASEID**), interview **subject** identification numbers (**ENUMID**), and **interview** or case identification numbers (**BASMID**). In addition, two-digit **person numbers** are provided on the ECPP and ASPA data files for the respondent to the extended interview (RESPNUM) and the mother (MOMNUM) and father (DADNUM), if any.

- **BASEID** is the **household** identification number. This eight-digit identification number is the same for every data record within a household. It is provided on the data files to permit data users to form linkages between interviews conducted in the same household.

- **ENUMID** is the **interview subject** identification number and is composed of 10 digits. The first eight digits are the same as the household identifier, the BASEID. The additional two digits in the ENUMID identify the subject of the interview and were determined by the enumeration order of persons in the household. For example, if the second child enumerated was sampled to be the subject of an ECPP interview, the ENUMID will end in 02.

- **BASMID** is the unique **interview** or case identification number and is composed of 12 digits. Each ECPP interview, ASPA interview, or AELL interview has a unique interview ID. The first 8 digits of BASMID are the same as the BASEID for the household to which the subject of the interview belongs. The first 10 digits of BASMID are the same as the ENUMID of the subject of the interview, that is, the BASEID concatenated with the enumeration number of the subject of the interview. The last 2 digits of the BASMID are the sequential interview identifier. In the NHES:2001, only one interview was conducted about each subject, so the last two digits of the BASMID are always 01. BASMID is the variable specified as the case identification number when creating a WesVar analysis file from the ECPP, ASPA, or AELL data files (see volume I, chapter 3 of this manual for a discussion of variance estimation and WesVar).

- In the ECPP and ASPA data files, four two-digit **person numbers** are also provided – MOMNUM for the child's mother (if any), DADNUM for the child's father (if any), RESPNUM, for the respondent to the ECPP or ASPA interview, and CHILDNUM for the subject child. If the mother or the father was the respondent to the ECPP or ASPA interview, MOMNUM (or DADNUM) will have the same value as RESPNUM. In the

AELL data file, the person number for the sampled adult is the last two digits of the ENUMID.

As an illustration, assume that in a household, three persons were enumerated as follows: the father first, the mother second, and the child third. The father is sampled for an AELL interview, the child is sampled for an ECPP interview, and the mother is selected as the most knowledgeable respondent about the child's care and education. Two case records are generated for the completed interviews, one in the AELL file with the father as the subject of the interview and one in the ECPP data file with the child as the subject. The BASEID for both cases is 12345678. The ENUMID in the AELL file (for the father) is 1234567801. The ENUMID in the ECPP file (for the child) is 1234567803. The BASMID in the AELL file (for the father's interview) is 123456780101, and the BASMID on the ECPP file (for the interview about the child) is 123456780301. Also, person numbers are provided on the ECPP file. The child's person number (CHILDNUM) is 03, the father's person number (DADNUM) is 01, and the mother's person number (MOMNUM) is 02. In addition, RESPNUM is 02, because the mother responded to the ECPP interview about the child.

In developing the public-use data files, care was taken to include on all of the data files those person-level variables that were most likely to be needed by analysts. For example, the educational attainment of the child's parents is included on the ECPP and ASPA data files, since this parent characteristic is likely to be of interest to many analysts. In addition, since household characteristics (such as whether the home is owned or rented and household income) are likely to be used in analyses, these variables are contained on all of the NHES:2001 data files. It is not necessary to copy them from one file to another. However, there may be circumstances in which an analyst would like to copy data items about a household member from one file to another.

Before linking files, data users should consider the following tips regarding the length of time required to run a program and use of disk space:

- The data files are provided in ID order -- all of the following examples present code for sorting data files prior to linking (merging). Sorting the files can take up considerable time and disk space. If the files are already in the order required by the analyst, sorting is unnecessary.

- Keep only the variables required for your analysis -- specifying only the variables needed for the analysis will significantly improve the speed of the linking and the created data file will use less disk space. The use of a KEEP option, demonstrated in some of the following examples, can be used for this purpose.

File concatenation using SAS and SPSS. Both SAS and SPSS allow analysts to concatenate files and generate standard errors in WesVar. Full sample weights and replicate weights are provided on each of the three NHES:2001 data files. These weights have unique names on the three files. For instance, the full sample weight variable on the ECPP file is FEWT. On the ASPA file, the name of the full sample weight is FSWT; and on the AELL file, it is FAWT. These names are different to help analysts use them appropriately. However, when two files (e.g., the ECPP and ASPA data files) are to be concatenated, **it is necessary to create a single weight variable for analysis of the concatenated file.** This could be accomplished, for example, by renaming the weight variables on both files to FWT, FWT1,

FWT2, etc. prior to concatenation. The sample shows the code for renaming the full sample weight and each of the 80 replicate weights on both files.

        File concatenation for analysts using Taylor Series Estimation and STATA. Programs such as STATA that use Taylor Series linearization to estimate standard errors do not use replicate weights. Rather, variables indicating the PSU and stratum to are to be used for variance estimation must be specified.. These variables also have unique names on each of the NHES:2001 data files. In the ECPP file, they are EPSU and ESTRATUM; in the ASPA file, SPSU and SSTRATUM; and in the AELL file, APSU and ASTRATUM. Unlike the weights, the names of these variables should not be changed to common names. The PSU variables created for variance estimation are file-specific. Simply renaming these variables prior to concatenation would result in variance estimates (or standard errors) that reflect some intra-PSU correlations that do not exist and fail to reflect other intra-PSU correlations that do exist. For this reason, Taylor series linearization should not be used to compute standard errors for concatenated files; instead, replication (in particular, the JK1 method) should be used for this purpose. As a result, STATA code for concatenating files is not provided in this manual.

        Sample code for concatenating the ECPP and ASPA files with SAS or SPSS. Concatenating the ECPP and ASPA files is possible using SAS or SPSS. The common identifier (key) is the BASMID, or interview-level identifier, available on both files. Sample SAS code to bring together these two files follows:

```
DATA TEMP;
SET ecpp_filename (RENAME = (FEWT = FWT FEWT1-FEWT80 = FWT1-FWT80))
    aspa_filename (RENAME = (FSWT = FWT FSWT1-FSWT80 = FWT1-FWT80));

RUN;
```

Sample SPSS for Windows code is:

```
GET FILE = ecpp_filename
   /RENAME = (FEWT FEWT1 to FEWT80 = FWT FWT1 to FWT80).
SAVE OUTFILE = tempecpp.

GET FILE = aspa_filename
   /RENAME = (FSWT FSWT1 to FSWT80= FWT FWT1 to FWT80).
SAVE OUTFILE = tempaspa.

ADD FILES FILE = tempecpp /FILE = tempaspa.
SAVE OUTFILE = concat.
```

        The file that is created using either SAS or SPSS contains a record for each ECPP interview and a record for each ASPA interview, 16,332 records in all. Each record contains the appropriate weights (now called FWT and FWT1–FWT80).

        File merging with SAS or SPSS. Merging data from the AELL and ECPP or ASPA files may also be of interest to analysts willing to limit the AELL population. The ENUMID on the AELL data file can be used with MOMNUM, DADNUM, or RESPNUM to identify whether the subject of the AELL interview was also a parent and/or the respondent to an ECPP or ASPA interview. In this case, BASEID and the 2-digit person identifier contained in MOMNUM, DADNUM, or RESPNUM must be concatenated to create a new variable. This variable may be used with ENUMID from the AELL data file to merge the records. Analysts should be aware that some variables on the AELL file have the same

names as some variables on the ECPP and ASPA files and therefore may be over-written in a merge. The following examples demonstrate merging ECPP interview data to the appropriate AELL records. Analysts wishing to merge data from the ASPA file to data from the AELL file need only to substitute the names of the file s.

Sample SAS code to bring together AELL and ECPP files follows:

```
DATA ECPP;
SET ecpp_filename;
NENUMID = BASEID * 100 + RESPNUM;
RUN;

PROC SORT DATA=aell_filename OUT=AELL;
BY ENUMID;
RUN;

PROC SORT DATA=ECPP;
BY NENUMID;
RUN;

DATA BOTH;
MERGE ECPP (IN=ONECPP) AELL (IN=ONAELL RENAME=(ENUMID=NENUMID));
BY NENUMID;
IF ONECPP AND ONAELL;
RUN;
```

Sample SPSS for Windows code is:

```
GET FILE='ecpp file' /KEEP=BASEID RESPNUM.
COMPUTE NENUMID = BASEID * 100 + RESPNUM.
COMPUTE ONECPP=1.
SORT CASES BY NENUMID.
SAVE OUTFILE = 'temp'.

GET FILE='aell file' /KEEP=ENUMID.
COMPUTE NENUMID = ENUMID.
COMPUTE ONAELL=1.
SORT CASES BY NENUMID.
SAVE OUTFILE = 'temp2'.

MATCH FILES FILE='temp' /TABLE='temp2' /BY NENUMID /MAP.
SELECT IF (ONECPP=1 AND ONAELL=1).
SAVE OUTFILE = 'merged file'.
```

The file that is created contains a record for each household in which the subject of the AELL interview was a mother or father of a child subject of an ECPP (or ASPA) interview and/or the respondent to that interview. The weights to be used in the analysis, after the necessary adjustments (described below), are the full-sample and replicate AELL interview weights FAWT and FAWT1-80. The PSU and stratum variables (APSU and ASTRATUM) may be used to obtain Taylor Series variance estimates, but

the analyst should consult the software documentation to determine whether any modifications are required (e.g., renumbering to obtain sequential values for the PSU variable).

Analysts using files merged in this manner should be aware of the limitations and implications for analysis. Because interviews about children were not attempted or completed in every household with a completed AELL interview and an eligible child, the adults on the merged file are not representative of all adults in households with children from birth through eighth grade. A separate weighting adjustment is necessary to bring weighted totals up to population levels and to adjust for differences among adults in the probabilities of having ECPP and/or ASPA interviews sampled and completed in their households.

Again, analysts are urged to consult their SAS or SPSS instruction manuals for additional information and code useful for linking data files.

This page is intentionally blank.

APPENDIX G

INDUSTRY AND OCCUPATION CODING MANUAL

This page is intentionally blank.

INDUSTRY AND OCCUPATION CODING

1. General Approach

Industries and occupations reported in the Adult Education and Lifelong Learning Survey of the 2001 National Household Education Surveys Program (AELL-NHES:2001) were coded according to the rules of the *Standard Industrial Classification Manual* (1987) and *Standard Occupational Classification Manual* (1980). Rather than using highly detailed categories for industry (SIC) and occupation (SOC), the AELL-NHES:2001 used aggregated categories, the same categories used in the NHES:1995 and 1999. This coding manual provides general approaches to coding both industry and occupation. The 2-digit SIC and SOC codes associated with each of the NHES categories are provided in Sections 2 and 3, respectively. Finally, section 4 provides a crosswalk of industry and occupation categories between the NHES:2001 (1999, 1995) and the NHES:1991 because a slightly d ifferent coding scheme was used in the NHES:1991.

In general, the AELL-NHES:2001 **industry** categories are at the highest level of aggregation used in the *Standard Industrial Classification Manual* (1987), called *Divisions.* In a few cases, categories below the Division level that are of interest are broken out separately. These are at the level of *Major Groups.* For example, within Division I, health services and educational services categories are broken out.

The NHES:2001 categories for **industry** are:

01.	Agriculture, Forestry and Fishing	Division A
02.	Mining	Division B
03.	Construction	Division C
04.	Manufacturing	Division D
05.	Transportation, Communication, Electric, Gas and Sanitary Services	Division E
06.	Wholesale Trade	Division F
07.	Retail Trade	Division G
08.	Finance, Insurance, and Real Estate	Division H
09.	Services	Division I, except Major Groups 80 and 82
10.	Health Services	Division I, Major Group 80
11.	Educational Services	Division I, Major Group 82
12.	Public Administration	Division J
13.	Nonclassifiable Establishments	Division K

The **occupation** codes do not have Division levels like the industry codes (SIC); rather, there are various numerical groups, the most general of which have 2 digits. Some NHES:2001 occupation categories represent several 2-digit SOC classifications of occupations.

The NHES:2001 categories for **occupation** are:

01. Executive, Administrative, and Managerial
Occupations .... SOC codes 11, 12, 13, and 14
02. Engineers, Surveyors, and Architects .... SOC code 16
03. Natural Scientists and Mathematicians... SOC codes 17 and 18
04. Social Scientists, Social Workers, Religious
Workers, and Lawyers .... SOC codes 19, 20, and 21
05. Teachers: College, University, and other
Postsecondary Institution; Counselors,
Librarians, Archivists .... SOC codes 22, 24, and 25
06. Teachers, Except Postsecondary Institution...................................... SOC code 23
07. Health Diagnosing and Treating Practitioners .... SOC codes 26, 27, and 28
08. Registered Nurses, Pharmacists, Dieticians,
Therapists, and Physician's Assistants .... SOC codes 29 and 30
09. Writers, Artists, Entertainers, and Athletes .... SOC codes 32, 33, and 34
10. Health Technologists and Technicians .... SOC code 36
11. Technologists and Technicians, except Health................................. SOC codes 37, 38, and 39
12. Marketing and Sales Occupations .... SOC codes 40, 41, 42, 43, and 44
13. Administrative Support Occupations, including
Clerical .... SOC codes 45, 46, and 47
14. Service Occupations.. SOC codes 50, 51, and 52
15. Agricultural, Forestry, and Fishing
Occupations .... SOC codes 55, 56, 57, and 58
16. Mechanics and Repairers.. SOC codes 60 and 61
17. Construction and Extractive Occupations .... SOC codes 63, 64, and 65
18. Precision Production Occupations.. SOC codes 67, 68, and 69
19. Production Working Occupations .... SOC codes 71, 73, 74, 75, 76, 77, and 78
20. Transportation and Material Moving
Occupations .... SOC codes 81, 82, and 83
21. Handlers, Equipment Cleaners, Helpers, and
Laborers .... SOC codes 85, 86, and 87
22. Miscellaneous Occupations... SOC code 99

When coding **industry** and **occupation** codes in the NHES:2001, five variables were used. These variables include:

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

For the most part, two variables were 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 was sufficient to code the type of industry (e.g., retail store). The AELL-NHES:2001 restricted-use data file [1] contains verbatim strings of the variables 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 AELL public use data file contains the industry codes under the variable name FSIC.

---

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

For coding occupation, coders relied primarily on the respondent's occupation and duties. The specific duties given by the respondent often helped to classify the occupation. The respondent's highest education was available to use when the occupation could not be coded with the job title and duties alone. The AELL-NHES:2001 restricted-use data file[1] contains verbatim strings of the variables used for coding occupation. The variables containing the verbatim strings are PROFESS for the respondent's occupation and DUTIES for the respondent's main duties. The AELL public use data file contains the occupation codes under the variable name FSOC.

The SIC and SOC coding categories used in the NHES:2001 are the same as the categories used in the NHES:1995 and 1999. However, the SIC and SOC coding categories used in the NHES:1991 were slightly different from the NHES:2001, 1999 and 1995. A crosswalk is provided in section 4.

2. Industry (SIC) Coding

This section discusses the aggregated categories that were used for coding *industry* in the NHES:2001. Under each NHES category, there is a listing of the 2-digit SIC code categories that are included. For example, NHES industry code 01, Agriculture, Forestry, & Fishing, includes all SIC industry codes beginning with 01, 02, 07, 08, and 09. The AELL-NHES:2001 public data file contains the NHES industry codes; the variable name is FSIC.

---

01 Agriculture, Forestry, and Fishing

This category includes all SIC codes associated with agriculture, forestry, and those associated with fishing, hunting, and trapping.

- 01 Agriculture production-crops
- 02 Agriculture production livestock and animal specialties
- 07 Agriculture services
- 08 Forestry
- 09 Fishing, hunting, and trapping

---

02 Mining

This category includes SIC industry classifications for metal mining, coal mining, oil and gas extraction, and mining of nonmetallic minerals.

- 10 Metal mining
- 12 Coal mining
- 13 Oil and gas extraction
- 14 Mining and quarrying of nonmetallic minerals, except fuels

---

03 Construction

This NHES category includes all SIC categories associated with residential and nonresidential building construction; heavy construction such as highways, bridges, and tunnels; and special construction trade contractors such as in plumbing and heating, or electrical wiring.

- 15 Building construction-general contractors and operative builders
- 16 Heavy construction other than building construction-contractors
- 17 Construction-special trade contractors

---

04 Manufacturing

This is a very broad category that includes the manufacture (making) of most kinds of products. The list below shows the 2-digit SIC codes that are included here. It is a comprehensive list including food, clothing, furniture, wood products, paper products, printing and publishing, chemical and petroleum industries (not including oil and gas extraction), rubber, glass, concrete, stone, and metal products, electronics and other equipment, transportation equipment, and measuring instruments like cameras, optical products, or medical products.

- 20 Food and kindred products
- 21 Tobacco products
- 22 Textile mill products
- 23 Apparel and other finished products made from fabrics and similar materials
- 24 Lumber and wood products, except furniture
- 25 Furniture and fixtures
- 26 Paper and allied products
- 27 Printing, publishing, and allied industries
- 28 Chemicals and allied products
- 29 Petroleum refining and related industries
- 30 Rubber and miscellaneous plastics products
- 31 Leather and leather products
- 32 Stone, clay, glass, and concrete products
- 33 Primary metal industries
- 34 Fabricated metal products, except machinery and transportation equipment
- 35 Industrial and commercial machinery and computer equipment
- 36 Electronic and other electrical equipment and components, except computer equipment
- 37 Transportation equipment
- 38 Measuring, analyzing, and controlling instruments; photographic, medical and optical goods; watches and clocks
- 39 Miscellaneous manufacturing industries

05 Transportation and Public Utilities

This categories includes a variety of transportation fields including railroads; local transportation such as busses, commuter coaches, streetcars, and taxis; and air transportation. In addition, it includes public utilities such as postal service, pipelines, electric, and gas; and communications, including telephones, cable, radio and television.

- 40 Railroad transportation
- 41 Local and suburban transit and interurban highway passenger transportation
- 42 Motor freight transportation and warehousing
- 43 United States Postal Service
- 44 Water transportation
- 45 Transportation by air
- 46 Pipelines, except natural gas
- 47 Transportation services
- 48 Communications
- 49 Electric, gas, and sanitary 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.

    50   Wholesale trade-durable goods
    51   Wholesale trade-nondurable goods

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 categories below show the wide range of retail trade establishments included in this NHES category.

    52   Building materials, hardware, garden supply, and mobile home dealers
    53   General merchandise stores
    54   Food stores
    55   Automotive dealers and gasoline service stations
    56   Apparel and accessory stores
    57   Home furniture, furnishings, and equipment stores
    58   Eating and drinking places
    59   Miscellaneous retail

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 business.

    60   Depository institutions
    61   Nondepository credit institutions
    62   Security and commodity brokers, dealers, exchanges, and services
    63   Insurance carriers
    64   Insurance agents, brokers, and service
    65   Real estate
    67   Holding and other investment offices

09 Services

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.

    70   Hotels, rooming houses, camps, and other lodging places
    72   Personal services
    73   Business services
    75   Automotive repair, services, and parking
    76   Miscellaneous repair services
    78   Motion pictures
    79   Amusement and recreation services
    81   Legal services
    83   Social services
    84   Museums, art galleries, and botanical and zoological gardens
    86   Membership organizations
    87   Engineering, accounting, research, management, and related services
    88   Private households
    89   Miscellaneous services

****
*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.

    80   Health services

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, libraries, and other schools and educational services.

    82   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, not in 12, Public Administration.

    91   Executive, legislative, and general government, except finance
    92   Justice, public order, and safety
    93   Public finance, taxation, and monetary policy
    94   Administration of human resource programs
    95   Administration of environmental quality and housing programs
    96   Administration of economic programs

13 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 were used for coding *occupation* in the NHES:2001. Under each NHES occupation category, there is a listing of the 2digit SOC categories that are included. For example, NHES occupation code 01, Executive, Administrative, and Managerial Occupations includes SOC industry codes beginning with 11, 12/13, and 14. The AELL-NHES:2001 public data file contains the NHES occupation 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, customer-house brokers, and location managers.

 11 Officials and administrators, public administration
 12/13 Officials and administrators, other
 14 Management related occupations

****
NOTE: Supervisors generally supervise and coordinate activities of workers engaged in one or more occupations and they 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.

 16 Engineers, surveyors, and architects

---

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, medicine). In addition, this category includes those in computer science, mathematics (including statistics), and operations research.

  17 Computer, mathematical, and operations research occupations
  18 Natural 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.

  19 Social scientists and urban planners
  20 Social, recreation, and religious workers
  21 Lawyers and judges

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, vocational and educational counselors, librarians, and archivists are included here.

  22 Teachers; college, university, and other postsecondary institution
  24 Vocational & educational counselor
  25 Librarians, archivists, and curators

06 Teachers, except Postsecondary Institution

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

  23 Teachers, except postsecondary institution

****
NOTE: While early childhood <u>teachers</u> 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 optometrists, podiatrists, chiropractors, hypnotherapists, and acupuncturists.

26   Physicians and dentists
27   Veterinarians
28   Other 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, Dieticians, 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   Registered nurses
30   Pharmacists, dietitians, therapists, & physician's assistants

****

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.

32   Writers, artists, performers, and related workers
33   Editors, reporters, public relations specialists, and announcers
34   Athletes and related 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), and other health technologists are included here.

    36   Health technologists and technicians

****

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.

    37   Engineering and related technologists and technicians
    38   Science technologists and technicians
    39   Technicians; except health, engineering, and science

12 Marketing and Sales Occupations

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

    40   Supervisors; marketing and sales occupations
    41   Insurance, securities, real estate, and business service sales occupations
    42   Sales occupations, commodities except retail
    43   Sales occupations, retail
    44   Sales related occupations

13 Administrative Support Occupations, including Clerical

Occupations involving 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.

    45   Supervisors; administrative support occupations, including clerical
    46-47 Administrative support occupations, including clerical

14 Service Occupations

The category includes occupations providing personal and protective services to individuals, and current maintenance and cleaning for building and residences. Some examples include food service, health service (e.g, aides or assistants), cleaning services other than household, and personal services.

    50   Private household occupations
    51   Protective service occupations
    52   Service occupations, except private household and protective

****
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. "Other agricultural and related occupations" include occupations concerned with the production and propagation of animals, animals products, plants and products (crops and ornamental).

    55   Farm operators and managers
    56   Other agricultural and related occupations
    57   Forestry and logging occupations
    58   Fishers, hunters, and trappers

****
NOTE: Landscape gardeners are included in this category.
****

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.

    60   Supervisors; mechanics and repairers
    61   Mechanics and repairers

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.

    63   Supervisors; construction and extractive occupations
    64   Construction trades
    65   Extractive occupations

18 Precision Production Occupations

Precision production includes occupations concerned with performing production 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.

    67   Supervisors; precision production occupations
    68   Precision production occupations
    69   Plant and system operators

19 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.

    71   Supervisors; production occupations
    73-74 Machine Setup operators
    75-76 Machine operators and tenders
    77   Fabricators, assemblers, and hand working occupations
    78   Production inspectors, testers, samplers, and weighers

20 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.

    81   Supervisors; transportation and material moving occupations
    82   Transportation occupations
    83   Material moving occupations, except transportation

21 Handlers, Equipment Cleaners, Helpers, and Laborers

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. Examples include construction laborers, freight, stock, and material movers, garage and service station related occupations, parking lot attendants, and vehicles washers and equipment cleaners.

    85   Supervisors; handlers, equipment cleaners, helpers, and laborers
    86   Helpers
    87   Handlers, equipment cleaners and laborers

22 Miscellaneous Occupations

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

    99   Miscellaneous occupations

4. Crosswalk of Industry and Occupation Categories between NHES:2001 (1999, 1995) and NHES:1991

This section provides information on a crosswalk of industry and occupation categories between the NHES:2001 (1999, 1995) and the NHES:1991. Tables 1 and 2 are keyed to the NHES:2001 (1999, 1995) industry and occupation categories. The NHES:1991 industry and occupation categories are grouped according to the NHES:2001 (1999, 1995) categories to which they correspond.

Table 1. -- Crosswalk of Industry Categories between NHES:2001 (1999, 1995) and NHES:1991

      NHES:2001 (1999, 1995) Industry Codes   NHES:1991 Industry Codes
----

01	Agriculture, Forestry and Fishing	A	Agriculture, Forestry and Fishing
02	Mining	B	Mining
03	Construction	C	Construction
04	Manufacturing	D	Manufacturing
		D35	Industrial Machinery and Equipment
		D36	Electronic and Other Electric Equipment
		D37	Transportation Equipment
05	Transportation, Communication, Gas and Sanitary, Electric Services	E	Transportation and Public Utilities
		E41	Local and Interurban Passenger Transit
		E42	Trucking and Warehousing
		E43	U.S. Postal Service
		E48	Communication
		E49	Electric, Gas, and Sanitary Services
06	Wholesale Trade	F	Wholesale Trade
07	Retail Trade	G	Retail Trade
08	Finance, Insurance, and Real Estate	H	Finance, Insurance, and Real Estate
09	Services	I	Services
		I737	Computer and Data Processing
		I81	Legal Services
		I87	Engineering and Management
10	Health Services	I80	Health Services

Table 1. -- Crosswalk of Industry Categories between NHES:2001 (1999, 1995) and NHES:1991 (continued)

| NHES:2001 (1999, 1995) Industry Codes | NHES:1991 Industry Codes |
----

11 Educational Services	I821 Elementary and Secondary Education
	I822 Colleges and University
	I824 Vocational School
12 Public Administration	J Public Administration
	J914 Federal Government
	J915 State and Local Government
	J971 National Security
13 Nonclassifiable Establishments	K Nonclassifiable Establishments

Table 2. -- Crosswalk of Occupation Categories between NHES:2001 (1999, 1995) and NHES:1991

| NHES:2001 (1999, 1995) Occupation Codes | NHES:1991 Occupation Codes |

---

01 Executive, Administrative, and
    Managerial Occupations

A   Executive, Administrative, and
    Managerial Occupations

02 Engineers, Surveyors, and Architects

B   Engineers, Surveyors, and Architects

03 Natural Scientists and Mathematicians

C   Natural Scientists and Mathematicians
C171 Computer Scientists

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

D19 Social Scientists, and Urban Planners
D20 Social, Recreational, and Religious Workers
D21 Lawyers and Judges

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

E22 Teachers: College, University, and
    Postsecondary Institution
E24 Vocational and Educational Counselors
E25 Librarians, Archivists, and Curators

06 Teachers, Except Postsecondary
    Institution

E23 Teachers, except Postsecondary Institution

07 Health Diagnosing and Treating
    Practitioners

F26 Physicians and Dentists
F27 Veterinarians
F28 Other Health Diagnosing and Treating
    Practitioners

08 Registered Nurses, Pharmacists,
    Dieticians, Therapists, and
Physician's Assistants

F29 Registered Nurses
F30 Pharmacists, Dietitians, Therapists, and
    Physician's Assistants

09 Writers, Artists, Entertainers,
    and Athletes

H   Writers, Artists, Entertainers,
    and Athletes

10 Health Technologists and Technicians

I   Health Technologists and Technicians

11 Technologists and Technicians,
    except Health

J37 Engineering/Technologists and Technicians
J38 Science Technologists and Technicians
J39 Technicians; except Health, Engineering and
    Science

12 Marketing and Sales Occupations

K   Marketing and Sales Occupations

Table 2. -- Crosswalk of Occupation Categories between NHES:2001 (1999, 1995) and NHES:1991 (Continued)

           NHES:2001 (1999, 1995) Occupation Codes   NHES:1991 Occupation Codes
----

13 Administrative Support Occupations,   L   Administrative Support Occupations,
        including Clerical   including Clerical

14 Service Occupations   M   Service Occupations

15 Agricultural, Forestry, and Fishing   N   Agricultural, Forestry, and Fishing
        Occupations   Occupations

16 Mechanics and Repairers   O   Mechanics and Repairers
                                                     O611 Vehicle, Mobile Equipment, Mechanics and
                                                           Repairers
                                                     O615 Electric, Electronic Equipment Repairers

17 Construction and Extractive   P   Construction and Extractive
        Occupations   Occupations

18 Precision Production Occupations   Q   Precision Production Occupations

19 Production Working Occupations   R   Production Working Occupations

20 Transportation and Material Moving   S   Transportation and Material Moving
        Occupations   Occupations
                                                     S821 Motor Vehicle Operators

21 Handlers, Equipment Cleaners,   T   Handlers, Equipment Cleaners,
        Helpers, and Laborers   Helpers, and Laborers

22 Miscellaneous Occupations   Z   Unemployed, Retired, Disabled,
                                                               Unclassifiable Occupation

    NOT AVAILABLE   U   Military Occupations

G-19

References

Standard Industrial Classification Manual. (1987). Washington, D.C.: Executive Office of the President, Office of management and Budget.

Standard Occupation Classification Manual. (1980). Washington, D.C.: U.S. Department of Commerce, Office of Federal Statistical Policy and Standard.

APPENDIX H

MAJOR FIELD OF STUDY CODING MANUAL

This page is intentionally blank.

Table of Contents

Page

This page is intentionally blank.

CODING MAJOR FIELDS OF STUDY

I. BACKGROUND

The Adult Education and Lifelong Learning survey of the 2001 National Household Education Surveys Program (AELL-NHES:2001) collected 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 were used for the NHES:2001.

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 AELL-NHES:2001 public data file contains the MFOS codes; the variable names are CRCIPF1, CRCIPF2, CRCIPF3, VOCIPF1, and VOCIPF2.

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 were not collected in the NHES:2001.

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, 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.

---

[2]Morgan, 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.

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 <u>exactly</u> match strings in the Alphabetic Index of All CIP Codes. If the substantive area of study <u>clearly</u> 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 F-16) and identify possible placement using <u>substantive areas</u> 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 <u>entry</u>, generally a clerical activity, but not data <u>processing</u>, 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 work-place, 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 <u>planning</u> (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).

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
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, Ge neral
02	Agriculture/Agricultural Sciences, Other
02	Agronomy and Crop Science
28	Air Force R.O.T.C./Air Science
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

Code	Titles
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
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

Code	Titles
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
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

Code	Titles
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
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

Code	Titles
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
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)

Code	Titles
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
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
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

Code	Titles
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
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

Code	Titles
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
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

Code	Titles
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
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

Code	Titles
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
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

Code	Titles
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
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
14	Metallurgical Engineering
15	Metallurgical Tech./Technician
40	Metallurgy
26	Microbiology/Bacteriology

Code	Titles
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
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.)

Code	Titles
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
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

Code	Titles
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
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

Code	Titles
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
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

Code	Titles
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
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

Code	Titles
36	Theater
39	Theological and Ministerial Studies, Other
39	Theological Studies and Religious Vocations, Other
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
15	Water Quality and Wastewater Treatment Tech./Technician
14	Water Resources Engineering
49	Water Transportation Workers, Other
48	Welder/Welding Technologist

Code	Titles
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
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

Code	CIP Category	Examples of MFOS
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 us citizen Community involvement
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

Code	CIP Category	Examples of MFOS
46	Construction Trades	Plumbers Pipefitters Masons Carpenters
47	Mechanics & Repairers	Locksmith/gunsmith Watch/jewelry repair Refrigerator repairmen
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

This page is intentionally blank.