

# HEALTH AND RETIREMENT STUDY

Life History Mail Survey (LHMS) 2017 Fall

Version 2, June 2023

Data Description and Usage

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## **1. Introduction**

The Life History Mail Survey 2017 Fall (LHMS 2017 Fall) contains questions about residential, education, employment and health history, and other important childhood and family events.

The LHMS is part of the Health and Retirement Study (HRS), which is funded under a cooperative agreement between the National Institute on Aging (NIA) and the Survey Research Center at the University of Michigan. The HRS is designed to study labor force, health, and family transitions of the U.S. population aged 51 and older, and the impact of those transitions on economic resources, claims on structured programs such as Social Security, Medicare, and Medicaid, and informal assistance and transfers to and from family members.

The National Institute on Aging (NIA) provided funding (R01 AG051142) for the LHMS 2017 Fall, which was conducted by the Survey Research Center (SRC), at the Institute for Social Research (ISR), at the University of Michigan.

By receiving the dataset, you agree to use it for research and statistical purposes only and make no effort to identify respondents. In addition, you agree to send us a copy of publications you produce based on the data. See Registration and Downloading the Data (at the end of this document) for additional details.

The questions in the LHMS are based on several similar studies around the world, including: the English Longitudinal Study of Aging (ELSA, England), the Survey of Health, Ageing and Retirement in Europe (SHARELIFE), and the China Health and Retirement Longitudinal Study (CHARLS).

## **2. LHMS Sample Design**

In 2015, all but a subsample of Spanish-speaking HRS respondents were assigned to receive one of two mail surveys: Consumption and Activities Mail Survey (CAMS) or Life History Mail Survey (LHMS). CAMS is a longitudinal sample that receives CAMS (and usually only CAMS) in every odd-numbered year. The sample selection for CAMS is household based and covers about 40% of HRS households. That left about 60% of households for the 2015 LHMS.

HRS had not planned to administer the LHMS until 2017, but an opportunity arose to administer a preliminary version of the LHMS in 2015. The 2015 LHMS questionnaire included only part of the content and is referred to as Part 1. In addition, the 2015 LHMS questionnaire was only administered to English-speaking respondents.

In order to incorporate the CAMS sample into the LHMS but not interrupt the fall CAMS cycle, HRS administered the LHMS to respondents in the CAMS sample in spring 2017. The sample included all individuals who were in the CAMS sample in 2015 (regardless of their response outcome and including both English and Spanish speakers) plus any new spouses/partners that they reported in the 2016 core interview. They received the full version of the LHMS (Parts 1 and 2) as a single questionnaire. One complexity is that, because 2016 was a new cohort recruitment year, interviewing for some panel and many new cohort cases continued well into 2017. As a result,

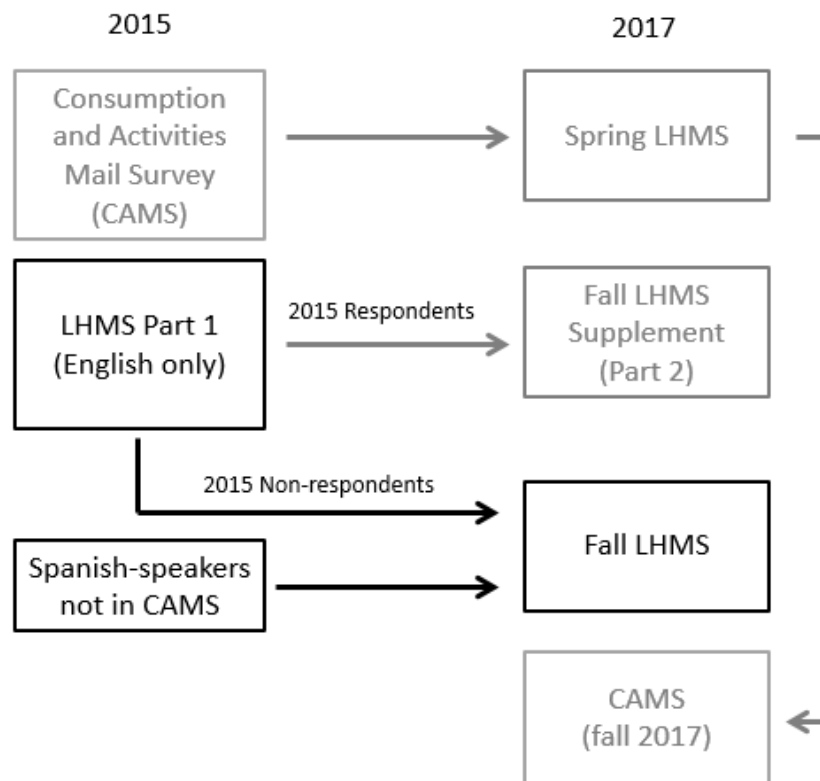
CAMS sample members who had not completed their 2016 core interview by early March 2017 were excluded from the 2017 LHMS. The CAMS sample then received the CAMS survey as scheduled in fall 2017.

Sample members who responded to the 2015 LHMS were sent Part 2 of the LHMS in fall 2017 (Fall-Supplement), whereas those who were in the 2015 LHMS sample but did not respond were sent the full version of the 2017 LHMS (Fall). As with CAMS, new spouses/partners of 2015 LHMS sample members were also included in the 2017 Fall LHMS sample. Finally, Spanish-speaking respondents who were excluded from the 2015 LHMS (plus any new spouses/partners) received the full LHMS in Fall 2017.

When the three subsamples from 2017 are combined, the sample essentially covers all HRS participants who were in the sample in 2016 and were still living in 2017. The only exceptions are the 2016 new cohort (LBBs) and a small number of CAMS sample members who had not completed their 2016 core interview by March 2017. (Both of these excluded groups received the LHMS in 2019.)

Table 1 below depicts the 2015 and 2017 LHMS sample design with emphasis on LHMS 2017 Fall

### Life History Mail Survey Sample Design: 2015 and 2017



The field period for the LHMS 2017 Fall was December 2017 through June 2018. Questionnaires were mailed to a subsample of HRS respondents (n= 5,180). The data file contains 549 variables and data for 1,445 respondents. The response rate is 28% percent.

### 3. About the LHMS 2017 Fall Data

#### 3a. Updates in this release

New variables were added for the LH41 series.

Existing variables that were updated in this release include: LH22\_xG, LH57A\_2B\_17, LH57A\_2C\_17, LH57A\_3B\_17, LH57A\_3C\_17

#### 3b. Public and Restricted Versions

To protect the confidentiality of the information that respondents provide, a number of variables have been masked or are simply not included in the final release public file. Some of these variables are available to analysts as restricted data. The names of variables that were masked for confidentiality end in the capital letter “M”.

The variables in the LHMS 2017 Fall Restricted file are identical to those in the LHMS 2017 Fall Public file except for the following variables that include detailed respondent-level information for industry and occupation.

#### 2017 LHMS Fall

Variable Name	Description
LH41_1E	FIRST OR ONLY TYPE BUSINESS - 1
LH41_1EL	TYPE BUSINESS, LAST JOB - 1
LH41_1F	FIRST OR ONLY JOB TITLE – 1
LH41_1FL	LAST JOB TITLE – 1
LH41_2E	FIRST OR ONLY TYPE BUSINESS - 2
LH41_2EL	TYPE BUSINESS, LAST JOB - 2
LH41_2F	FIRST OR ONLY JOB TITLE – 2
LH41_2FL	LAST JOB TITLE – 2
LH41_3E	FIRST OR ONLY TYPE BUSINESS - 3
LH41_3EL	TYPE BUSINESS, LAST JOB - 3
LH41_3F	FIRST OR ONLY JOB TITLE – 3
LH41_3FL	LAST JOB TITLE – 3
LH41_4E	FIRST OR ONLY TYPE BUSINESS - 4
LH41_4EL	TYPE BUSINESS, LAST JOB - 4
LH41_4F	FIRST OR ONLY JOB TITLE – 4
LH41_4FL	LAST JOB TITLE – 4
LH41_5E	FIRST OR ONLY TYPE BUSINESS - 5
LH41_5EL	TYPE BUSINESS, LAST JOB - 5

LH41_5F	FIRST OR ONLY JOB TITLE – 5
LH41_5FL	LAST JOB TITLE – 5
LH41_6E	FIRST OR ONLY TYPE BUSINESS - 6
LH41_6EL	TYPE BUSINESS, LAST JOB - 6
LH41_6F	FIRST OR ONLY JOB TITLE – 6
LH41_6FL	LAST JOB TITLE – 6
LH41_7E	FIRST OR ONLY TYPE BUSINESS - 7
LH41_7EL	TYPE BUSINESS, LAST JOB - 7
LH41_7F	FIRST OR ONLY JOB TITLE – 7
LH41_7FL	LAST JOB TITLE – 7
LH41_8E	FIRST OR ONLY TYPE BUSINESS - 8
LH41_8EL	TYPE BUSINESS, LAST JOB - 8
LH41_8F	FIRST OR ONLY JOB TITLE – 8
LH41_8FL	LAST JOB TITLE – 8
LH41_9E	FIRST OR ONLY TYPE BUSINESS - 9
LH41_9EL	TYPE BUSINESS, LAST JOB - 9
LH41_9F	FIRST OR ONLY JOB TITLE – 9
LH41_9FL	LAST JOB TITLE – 9
LH41_10E	FIRST OR ONLY TYPE BUSINESS - 10
LH41_10EL	TYPE BUSINESS, LAST JOB – 10
LH41_10F	FIRST OR ONLY JOB TITLE – 10
LH41_10FL	LAST JOB TITLE – 10
LH45	(MOST IMPORTANT) JOB TITLE
LH46	(MOST IMPORTANT) TYPE OF EMPLOYER OR BUSINESS

### 3c. Variable Names and Labels

Variable names begin with the letters LH to designate the Life History Mail Survey, followed by \_17 for the wave in which the data were collected.

LH1\_17    LH1. LIVED OUTSIDE U.S.

As shown in the example, the variable label contains the question number found in the LHMS 2017 Fall questionnaire.

### 3d. Data Quality

Due to the skip patterns in this questionnaire, all missing answers are treated the same in the dataset and coded as simply “Answer not given/Missing.” This is true whether the respondent was “expected” to answer the question or not, based on earlier responses.

While cleaning the data, when extreme, unlikely or conflicting values were encountered, electronic images of the questionnaires were checked directly to determine if errors were

introduced during the data entry/scanning process. This includes instances where a start year is greater than an end year, or a start age is greater than an end age. If the respondent reported the extreme or conflicting value, the value appears unchanged in the data.

### 3d1. LH22 Series, Primary through High School Education – Start Grade, Start Age, End Age

For these two questions, respondents were instructed to write the start grade, end grade, start age and end age for each school they attended from Kindergarten through high school.

In the LH22 series, a number of respondents provided information for post high school education or training (rather than writing those in the LH35 series). In these cases, if the “School Name” field in LH22 clearly indicated a post-high school institution, the response was moved to LH35; otherwise it was left in LH22.

As described earlier in this section, electronic images were checked in all instances of extreme or conflicting values to confirm that the data accurately reflects the respondent’s answers.

### 3d2. State Coding Scheme

LH5 Residential History  
LH22 Primary through High School Education  
LH35 Post High School Education  
LH44 Employment History

These four series asked respondents to provide the state for their residence, education and employment history. The state variable in these series is coded as follows: beginning with LH5, the first state mentioned is coded as 1, the second state is coded as 2, and so on for each unique state mentioned. If the first state mentioned is repeated on a later line in LH5, it is coded as 1, if the second state mentioned is repeated on a later line it is coded as 2, etc. Mentions of foreign countries are coded as 96.

For LH22, LH35 and LH44 the same scheme is maintained. For example, a 1 in the state variables in the education and employment series represents the same state as the 1 in the LH5 residential series.

### 3d3. Occupation and Industry

For LH41, respondents were asked to describe places worked for one year or more after finishing full-time education. If a respondent changed jobs (or job titles) but stayed with the same employer, they were asked to list the first and last title held with that employer on the same line. The first (or only) job is provided in the variable LH41\_xFM\_19 (FIRST OR ONLY JOB TITLE); the corresponding employer/business is in variable LH41\_xEM\_19 (TYPE OF EMPLOYER OR BUSINESS, FIRST JOB). The last (where applicable) job is provided in the variable LH41\_xFLM\_19 (LAST JOB TITLE); the corresponding last employer/business is in variable LH41\_xELM\_19 (TYPE OF EMPLOYER OR BUSINESS, LAST JOB).

### 3e. Open End Questions

Responses were reviewed for six open end questions:

LH35f\_17, major field of study in post high school education

LH35g\_17, degree earned in post high school education

LH35h\_17, certificate earned in post high school education

LH54\_17, major surgeries

LH57a\_17, periods of ill health or disability

LH60\_17, most important accomplishments

Responses to the LH35 series, post high school training or education, were coded based on the Classification of Instructional Programs (CIP) categories, provided by the National Center for Educational Statistics (<https://nces.ed.gov>). The codes for LH35FM\_17, major field of study, were then grouped into larger categories to protect respondent confidentiality, as shown below:

LHMS code	NCES CIP Code	NCES Description
1	52	BUSINESS, MANAGEMENT, MARKETING, AND RELATED SUPPORT SERVICES
2	9	COMMUNICATION, JOURNALISM
3	13	EDUCATION
4	51	HEALTH PROFESSIONS, RESIDENCY PROGRAMS, AND RELATED PROGRAMS
4	60	RESIDENCY PROGRAMS
5	16	FOREIGN LANGUAGES, LITERATURES, AND LINGUISTICS
5	23	ENGLISH LANGUAGE AND LITERATURE/LETTERS
5	24	LIBERAL ARTS AND SCIENCES, GENERAL STUDIES AND HUMANITIES
5	38	PHILOSOPHY AND RELIGIOUS STUDIES
5	39	THEOLOGY AND RELIGIOUS VOCATIONS
5	50	VISUAL AND PERFORMING ARTS
5	54	HISTORY
6	22	LEGAL PROFESSIONS AND STUDIES
6	28	MILITARY SCIENCE, LEADERSHIP, OPERATIONAL ART
6	29	MILITARY TECHNOLOGIES AND APPLIED SCIENCES
6	43	HOMELAND SECURITY, LAW ENFORCEMENT, FIREFIGHTING AND RELATED PROTECTIVE SERVICES
7	1	AGRICULTURE, AGRICULTURE OPERATIONS, AND RELATED SCIENCES



<b>LHMS code</b>	<b>NCES CIP Code</b>	<b>NCES Description</b>
7	3	NATURAL RESOURCES AND CONSERVATION
8	4	ARCHITECTURE AND RELATED SERVICES
8	14	ENGINEERING
8	15	ENGINEERING TECHNOLOGIES AND ENGINEERING-RELATED FIELDS
8	26	BIOLOGICAL AND BIOMEDICAL SCIENCES
8	27	MATHEMATICS AND STATISTICS
8	40	PHYSICAL SCIENCES
9	5	AREA, ETHNIC, CULTURAL, GENDER, AND GROUP STUDIES
9	19	FAMILY AND CONSUMER SCIENCES/HUMAN SCIENCES
9	42	PSYCHOLOGY
9	44	PUBLIC ADMINISTRATION AND SOCIAL SERVICE PROFESSIONS
9	45	SOCIAL SCIENCES
10	10	COMMUNICATIONS TECHNOLOGIES/TECHNICIANS AND SUPPORT SERVICES
10	11	COMPUTER AND INFORMATION SCIENCES AND SUPPORT SERVICES
10	25	LIBRARY SCIENCE
11	12	PERSONAL AND CULINARY SERVICES
11	31	PARKS, RECREATION, LEISURE, AND FITNESS STUDIES
11	36	LEISURE AND RECREATIONAL ACTIVITIES
12	46	CONSTRUCTION TRADES
12	47	MECHANIC AND REPAIR TECHNOLOGIES/TECHNICIANS
12	48	PRECISION PRODUCTION
12	49	TRANSPORTATION AND MATERIALS MOVING
12	53	HIGH SCHOOL/SECONDARY DIPLOMAS AND CERTIFICATES
13	96	OTHER

Responses to the employment series beginning at LH41 were coded based on the same US Census codes used to code J166M and J168M (Section J) in the HRS core interview. These codes were then grouped into larger categories to protect respondent confidentiality, also using the same masking code used in the HRS core study.

Responses to the health questions (LH54 and LH57), and to LH60, major accomplishments, were coded based on an analysis of frequencies found in the responses.

### 3f. “Other: Specify” Questions

Responses were reviewed for all questions with an “Other: Specify” option, and were either coded into existing code frames or new code frames were created. For the questions below, the following new code frames were created:

**LH14\_17**, Who lived with you when you started your first full-time job?

- 11 Children, unspecified
- 12 In the military

**LH16\_17**, What type of residence did you live in when you started first full-time job?

- 4 Military housing/barracks
- 5 Rooming house, boarding house/YMCA/dormitory

**LH18\_17**, Who lived with you when you were 40?

- 11 Children, unspecified

**LH33b\_17**, In what sports did you participate (in junior/middle and high school)?

- 12 Softball
- 13 Wrestling
- 14 Cheerleading, drill team

**LH41d\_17**, What did you do after leaving this job?

- 6 Retired, took buy out package
- 7 Pursued further education
- 8 Started own business/became self-employed
- 9 Moved/relocated
- 10 Joined military
- 11 Still work at this job

**LH49a\_17**, Why did you leave or stop working for this employer?

- 11 The company closed, went out of business, or relocated
- 12 Started own business/became self-employed
- 13 Did not like it; problems with the owners; problems with coworkers; hours were cut
- 14 Moved to a different job, reason unspecified
- 15 Divested ownership in the business/sold the business

#### **4. File Structure**

The HRS LHMS 2017 Fall Final Release data are at the respondent level. The data file contains one record for each respondent or proxy (n= 1,445) who filled out and returned a 2017 LHMS Fall questionnaire. The variable LH61\_17 WHO ANSWERED SURVEY QUESTIONS provides information about who answered the questions in the 2017 LHMS.

The data file is called LHMS17FALL, translated as: Life History Mail Survey 2017 Fall.

The primary Identification variables (IDs) are:

HHID HOUSEHOLD IDENTIFIER  
PN PERSON NUMBER

Records in the data files are sorted in order by the identifying variables from the HRS core study, HHID (household ID) and PN (person number). The variable PN refers to the respondent to whom the questionnaire was mailed. Identification variables in the HRS LHMS 2017 Fall Final Release are stored in character format. For further information about HRS identification variables and merging data, see the [Data Description for the HRS 2002 Core](#).

## 5. Distribution Files

The following extensions are used for the six different types of distribution files:

.DA for data files,  
.SAS for SAS program statements and .sas7bdat for SAS “ready-to-use” files,  
.SPS for SPSS program statements and .sav for SPSS “ready-to-use” files,  
.DO for Stata DO statements and .dta for Stata “ready-to-use” files,  
.DCT for Stata dictionary statements, and  
.TXT for codebook files.

For example,

LHMS17FALL.DA contains ASCII data  
LHMS17FALL.SAS contains corresponding SAS program statements,  
LHMS17FALL.SAS7BDAT contains SAS data in “ready-to-use” format,  
LHMS17FALL.SPS contains corresponding SPSS program statements,  
LHMS17FALL.SAV contains SPSS data in “ready-to-use” format,  
LHMS17FALL.DO contains corresponding Stata DO statements,  
LHMS17FALL.DTA contains Stata data in “ready-to-use” format,  
LHMS17FALL.DCT contains corresponding Stata dictionary statements, and  
LHMS17FALL.TXT contains the ASCII codebook

The HRS LHMS 2017 Fall Final Release data are provided as SAS (.sas7bdat), SPSS (.sav) and Stata (.dta) “ready-to-use” files and in ASCII format with fixed-length records. Use the associated SAS, SPSS or Stata program statements to read the data into the analysis package of your choice or use the available “ready-to-use” files. In addition, you may also download the codebook file (LHMS17FALL.TXT) and the data description (this document).

## 6. Program Statements

### 6a. Using the SAS Program Statements

To create a SAS system file for a particular dataset, two file types must be present for that dataset -- .SAS program statement files and .DA data files.

To create a SAS system file, load the \*.SAS file into the SAS Program Editor.

If the \*.SAS file is located in "c:\lhms2017fall\sas" and the data file is located in "c:\lhms17fall\data", you can run the file as is. A SAS system file (\*.SD2 or \*.SAS7BDAT) will be saved to directory "c:\lhms2017fall\sas".

If the files are not located in the specified directories, you will need to edit the \*.SAS file to reflect the proper path names prior to running the file.

## 6b. Using the SPSS Program Statements

To create an SPSS system file for a particular dataset, two file types must be present for that dataset -- .SPS program statement files and .DA data files.

To create an SPSS system file, open the \*.SPS file in SPSS as an SPSS Syntax File.

If the \*.SPS file is located in "c:\lhms2017fall\spss" and the data file is located in "c:\lhms2017fall\data", you can run the file as is. An SPSS system file (\*.SAV) will be saved to directory "c:\lhms2017fall\spss".

If the files are not located in the specified directories, you will need to edit the \*.SPS file to reflect the proper path names prior to running the file.

## 6c. Using the Stata Program Statements

To use Stata with a particular dataset, the following three file types must be present for that dataset -- .DCT files, .DO files, and .DA data files.

Files with the suffix .DA contain the raw data for Stata to read. Files with the suffix .DCT are Stata dictionaries used by Stata to describe the data. Files with the suffix .DO are short Stata programs ("do files") which you may use to read in the data. Load the .DO file into Stata and then submit it.

If the \*.DO and \*.DCT files are located in "c:\lhms2017fall\stata" and the data file is located in "c:\lhms2017fall\data", you can run the .DO file as is.

If the files are not located in these directories, you must edit the \*.DO and \*.DCT files to reflect the proper path names before you run the files.

Note that the variable names provided in the .DCT files are uppercase. If you prefer lower case variable names, you may wish to convert the .DCT files to lower case prior to use. You may do this by reading the .DCT file into a text or word processing program and changing the case. For instance in Microsoft Word, Edit, Select All, Format, Change Case, lowercase.

## 7. Linking Respondents across Time

Respondent records in the LHMS 2017 Fall Final Release can be linked to respondent records from 2016 and prior waves by HHID and PN. The core sub-household identifiers can be used to link household data with the cross-sectional respondent level data.

## 8. Registration and Downloading the Data

### 8a. Registration

HRS data are available for free to researchers and analysts at the HRS Web site. In order to obtain public release data, you must first register at our Web site. Once you have completed the registration process, your username and password will be sent to you via e-mail. Your username and password are required to download data files.

Registered users receive user support, information related to errors in the data, future releases, workshops, and publication lists. The information you provide will not be used for any commercial use, and will not be redistributed to third parties.

### 8b. Conditions of Use

By registering, you agree to the Conditions of Use governing access to the Health and Retirement Study's public release data. You must agree to

- not attempt to identify respondents
- not transfer data to third parties except as specified
- not share your username and password
- include specified citations in work based on HRS data
- provide information to us about publications based on HRS data
- report apparent errors in the HRS data or documentation files
- notify us of changes in your contact information

For more information concerning privacy issues and conditions of use, please read "Conditions of Use for Public Data Files" and "Privacy and Security Notice" at the Public File Download Area of the HRS Web site.

### 8c. Publications Based on Data

As part of the data registration process, you agree to include specified citations and to inform HRS of any papers, publications, or presentations based on HRS data. Please send a copy of any publications you produce based on HRS data, with a bibliographical reference, if appropriate, to the address below.

Health and Retirement Study  
Attn: Papers and Publications  
The Institute for Social Research  
P.O. Box 1248  
Ann Arbor, MI (USA) 48106-1248

Alternately, you may contact us by e-mail at [hqsquestions@umich.edu](mailto:hqsquestions@umich.edu) with "Attn: Papers and Publications" in the subject line.

## 9. If You Need to Know More

This document is intended to serve as a brief overview and to provide guidelines to using the LHMS 2017 Fall Final Release. Additional information about the HRS can be obtained from the HRS Web site. If you have questions or concerns that are not adequately covered here or on our Web site, please contact us. We will do our best to provide answers.

### 9a. HRS Internet Site

Health and Retirement Study public release data and additional information about the study are available on the Internet. To access the data and other relevant information, point your Web browser to the HRS Web site.

<http://hrsonline.isr.umich.edu/>

### 9b. Contact Information

If you need to contact us, you may do so by one of the methods listed below.

Internet: Help Desk at our Web site

E-mail: [hrsquestions@umich.edu](mailto:hrsquestions@umich.edu)

Postal service:

Health and Retirement Study  
The Institute for Social Research  
The University of Michigan  
P.O. Box 1248  
Ann Arbor, MI 48106-1248

FAX: (734) 647-1186

## 10. Appendix: Occupation and Industry Coding



**Health and Retirement Study  
Occupation and Industry Coding**

***(Health and Retirement Study Documentation Report DR-021)***

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Health and Retirement Study Staff

March 2016

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## I. Brief Overview of HRS/AHEAD Occupation and Industry Codes

The Health and Retirement Study (HRS) and Asset and Health Dynamics Among the Oldest Old (AHEAD) studies were created as separate but related surveys. In its original conceptualization, the HRS survey was designed to follow age-eligible individuals and their spouses or partners as they made the transition from active worker into retirement; the AHEAD survey was designed to examine the dynamic interactions between health, family, and economic variables, in the post-retirement period at the end of life. Both studies obtained detailed information in a number of domains: demographics, health status, housing, family structure, employment of respondent, work history and current employment, disability, retirement plans, net worth, income, and health and life insurance.

The HRS collected data in 1992, 1994, and 1996. AHEAD collected data in 1993 and 1995. In 1998, 2000, and 2002, the HRS, AHEAD and two new sub-samples, War Baby (WB) and Children of the Depression Age (CODA), were interviewed. In 2004, 2006, and 2008 HRS, AHEAD, WB, CODA, and another new sub-sample, Early Baby Boomer (EBB), were interviewed. In 2010 the Mid Baby Boom (MBB) cohort was added to the previous sub-samples. All sub-samples were interviewed in 2012 and 2014.

Over the years, multiple code frames have been used to classify occupation and industry (see Table 1).

1. For AHEAD data collections in 1993 and 1995, occupation was coded using the SRC 2-Digit Occupation Code (adapted from the 1980 U. S. Census Occupation Code) which was masked for public release.<sup>1</sup> Unmasked codes for 1993 (but not 1995) are available as restricted data. Industry information was not sought in either wave.
2. For HRS data collections in 1992, 1994, 1996, 1998, 2000 and 2004, occupation was coded using the 3-digit 1980 U. S. Census Occupation Code and then masked for public release. Industry was coded using the 3-digit 1980 U. S. Census Industry Code and was also masked for public release. . Unmasked versions of these sets are included as part of the restricted data product that accompanies this document.
3. For the 2004 wave, occupation and industry were initially coded using the 1980 U. S. Census Occupation Code and the 3-digit 1980 U. S. Census Industry Code. This information was masked and released in conjunction with the Core release. Subsequently 2004 occupation and industry were recoded using the 2000 Census Occupational Classification System and the 2002 Census Industrial Classification System. This version was masked and was released as a separate product.<sup>2</sup> Unmasked versions industry and occupation data using both coding sets are included as part of the restricted data product that accompanies this document.
4. For the 2006 and 2008 interviewing periods, occupation was coded using the 3-digit 2000 U.S. Census Occupation Code; industry was coded using the 3-digit 2002 U. S. Census Industry Code; both codes were masked for public release. Unmasked versions of these sets are included as part of the restricted data product that accompanies this document.

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<sup>1</sup> Since the AHEAD and HRS masked occupation codeframes were not the same, in 1998 (the first year that the AHEAD and HRS samples were merged for data collection) occupation for the AHEAD sample was masked using both the AHEAD and HRS masking schemes.

<sup>2</sup> [HRS 2004 Core Industry Occupation Supplement \(Final V1.0\)](#)

5. For the 2010 wave, occupation and industry were initially coded using the 3-digit 2000 U.S. Census Occupation Code and the 3-digit 2002 U. S. Census Industry Code. This information was masked and released in conjunction with the Core release. Subsequently 2010 occupation and industry were recoded using the 4-digit 2010 Census Occupational Classification System and the 4-digit 2007 Census Industrial Classification System. This version was masked and released as a separate product.<sup>3</sup> . Unmasked versions of these sets are included as part of the restricted data product that accompanies this document.
  
6. For the HRS 2012 and 2014, respondent occupation information was coded using the 2010 Census Occupational Classification System. Industry information reported by HRS respondents was coded using the 2007 Census Industrial Classification System. . Unmasked versions of these sets are included as part of the restricted data product that accompanies this document..

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<sup>3</sup> [HRS 2010 Core Industry Occupation Supplement \(Final V1.0\)](#)

**Table 1: Current Status of HRS/AHEAD Occupation and Industry Codes**

Wave	Content	Masked Codes (Public Release)	Original Codes	Unmasked Codes Available (Restricted Release)
1993 AHEAD (Wave 1) [B] 1995 AHEAD (Wave 2) [D]	Occupation	AHEAD 2-digit Occupation	SRC 2-digit Occupation	Yes (1993 only)
	Industry	N.A.	Not asked	N.A.
1992 HRS (Wave 1) [A]	Occupation	HRS 2-digit Occupation	1980 Census 3-digit Occupation	Yes
	Industry	HRS 2-digit Industry	1980 Census 3-digit Industry	Yes
1994 HRS (Wave 2) [C]	Occupation	HRS 2-digit Occupation	1980 Census 3-digit Occupation	Yes
	Industry	HRS 2-digit Industry	1980 Census 3-digit Industry	Yes
1996 HRS (Wave 2) [E]	Occupation	HRS 2-digit Occupation	1980 Census 3-digit Occupation	Yes
	Industry	HRS 2-digit Industry	1980 Census 3-digit Industry	Yes
1998 HRS [F]	Occupation	HRS 2-digit Occupation AHEAD 2-digit Occupation	1980 Census 3-digit Occupation	Yes
	Industry	HRS 2-digit Industry	1980 Census 3-digit Industry	Yes
2000 HRS [G] 2002 HRS [H]	Occupation	HRS 2-digit Occupation	1980 Census 3-digit Occupation	Yes
	Industry	HRS 2-digit Industry	1980 Census 3-digit Industry	Yes
2004 HRS [J] (1980 codes)	Occupation	HRS 2-digit Occupation	1980 Census 3-digit Occupation	Yes
	Industry	HRS 2-digit Industry	1980 Census 3-digit Industry	Yes
2004 HRS [J] (2000 Codes)	Occupation	HRS 2-digit Occupation	2000 Census 3-digit Occupation	Yes
	Industry	HRS 2-digit Industry	2002 Census 3-digit Industry	Yes
2006 HRS [K] 2008 HRS [L]	Occupation	HRS 2006 2-digit Occupation	2000 Census 3-digit Occupation	Yes
	Industry	HRS 2006 2-digit Industry	2002 Census 3-digit Industry	Yes
2010 HRS [M] (2000 Codes)	Occupation	HRS 2006 2-digit Occupation	2000 Census 3-digit Occupation	Yes
	Industry	HRS 2006 2-digit Industry	2002 Census 3-digit Industry	Yes
2010 HRS [M] (2010 Codes)	Occupation	HRS 2010 2-digit Occupation	2010 Census Occupational Classification	Yes
	Industry	HRS 2010 2-digit Industry	2007 Census Industrial Classification	Yes

<b>Wave</b>	<b>Content</b>	<b>Masked Codes (Public Release)</b>	<b>Original Codes</b>	<b>Unmasked Codes Available (Restricted Release)</b>
2012 HRS [N]	Occupation	HRS 2010 2-digit Occupation	2010 Census Occupational Classification	Yes
	Industry	HRS 2010 2-digit Industry	2007 Census Industrial Classification	Yes
2014 HRS [O]	Occupation	HRS 2010 2-digit Occupation	2010 Census Occupational Classification	Yes
	Industry	HRS 2010 2-digit Industry	2007 Census Industrial Classification	Yes

## II. Masked Codes

### ***A. AHEAD Masked Occupation (1993, 1995, and 1998)***

This code frame was used for the 1993, 1995 and 1998 public data releases. The numbers in parenthesis are the 1980 U. S. Census Occupation Codes that mapped into the AHEAD code category.

1. Professional, technical workers (023-024, 026-027, 034-036,038-235)
2. Managers, officials and proprietors (003-019, 025, 028-033,037)
3. Clerical & kindred workers (303-389)
4. Sales workers (243-285)
5. Craftsmen, foremen & kindred workers (413-414, 416-425, 485, 494, 503-699, 803, 843, 863)
6. Operatives & kindred workers (703-799, 804-834, 844-859)
7. Laborers and farm foremen (477-484, 486-489, 495-499, 864-889)
8. Service workers (403-407, 415, 426-469)
9. Farmers and farm managers (473-476)

### ***B. HRS Masked Occupation (1992, 1994, 1996, 1998, 2000, 2002, and 2004 v1)***

This code frame was used for the 1992, 1994, 1996, and 1998 through 2004 public data releases. The numbers in parenthesis are the 1980 U. S. Census Occupation Codes that mapped into the HRS code category.

01. Managerial specialty operation (003-037)
02. Professional specialty operation and technical support (043-235)
03. Sales (243-285)
04. Clerical, administrative support (303-389)
05. Service: private household, cleaning and building services (403-407)
06. Service: protection (413-427)
07. Service: food preparation (433-444)
08. Health services (445-447)
09. Personal services (448-469)
10. Farming, forestry, fishing (473-499)
11. Mechanics and repair (503-549)
12. Construction trade and extractors (553-617)
13. Precision production (633-699)
14. Operators: machine (703-799)
15. Operators: transport, etc. (803-859)
16. Operators: handlers, etc. (863-889)
17. Member of Armed Forces (900)

### ***C. HRS Masked Industry (1992, 1994, 1996, 1998, 2000, 2002, and 2004 v1)***

This code frame was used for the 1992, 1994, 1996, and 1998 through 2004 public data releases. The numbers in parenthesis below are the 1980 U. S. Census Industry Codes that mapped into the HRS code category.

01. Agriculture, Forestry, Fishing (010-031)
02. Mining and Construction (040-060)

- 03. Manufacturing: Non-durable (100-222)
- 04. Manufacturing: Durable (230-392)
- 05. Transportation (400-472)
- 06. Wholesale (500-571)
- 07. Retail (580-691)
- 08. Finance, Insurance, and Real Estate (700-712)
- 09. Business and Repair Services (721-760)
- 10. Personal Services (761-791)
- 11. Entertainment and Recreation (800-802)
- 12. Professional and Related Services (812-892)
- 13. Public Administration (900-932)

***D. HRS Masked Occupation (2004 v2, 2006, 2008 and 2010 v1)***

This code frame was used for the 2004 v2 supplement, 2006, 2008 and 2010 Version 1 public data releases. The numbers in parenthesis are the 2000 U. S. Census Occupation Codes that mapped into the HRS code category.

- 01. Management Occupations (000-044)
- 02. Business Operations Specialists (050-073)
- 03. Financial Specialists (080-095)
- 04. Computer and Mathematical Occupations (100-124)
- 05. Architecture and Engineering Occupations (130-156)
- 06. Life, Physical, and Social Science Occupations (160-196)
- 07. Community and Social Services Occupations (200-206)
- 08. Legal Occupations (210-215)
- 09. Education, Training, and Library Occupations (220-255)
- 10. Arts, Design, Entertainment, Sports, and Media Occupations (260-296)
- 11. Healthcare Practitioners and Technical Occupations (300-354)
- 12. Healthcare Support Occupations (360-365)
- 13. Protective Service Occupations (370-395)
- 14. Food Preparation and Serving Occupations (400-416)
- 15. Building and Grounds Cleaning and Maintenance Occupations (420-425)
- 16. Personal Care and Service Occupations (430-465)
- 17. Sales Occupations (470-496)
- 18. Office and Administrative Support Occupations (500-593)
- 19. Farming, Fishing, and Forestry Occupations (600-613)
- 20. Construction Trades (620-676)
- 21. Extraction Workers (680-694)
- 22. Installation, Maintenance, and Repair Workers (700-762)
- 23. Production Occupations (770-896)
- 24. Transportation and Material Moving Occupations (900-975)
- 25. Military Specific Occupations (980-985)

***E. HRS Masked Industry (2004 v2, 2006, 2008 and 2010 v1)***

This code frame was used for the 2004 Version 2 supplement, 2006, 2008 and 2010 Version 1 public data releases. The numbers in parenthesis are the 2002 U. S. Census Industrial Classification codes that mapped into the HRS code category.



01. Agriculture, Forestry, Fishing, and Hunting (017-029)
02. Mining (037-049)
03. Utilities (057-069)
04. Construction (077)
05. Manufacturing (continued) (107-399)
06. Wholesale Trade (407-459)
07. Retail Trade (467-579)
08. Transportation and Warehousing (607-639)
09. Information (647-679)
10. Finance and Insurance (687-699)
11. Real Estate and Rental and Leasing (707-719)
12. Professional, Scientific, and Technical Services (727-749)
13. Management, Administrative and Support, and Waste (757-779)
14. Educational Services (786-789)
15. Health Care and Social Assistance (797-847)
16. Arts, Entertainment, and Recreation (856-859)
17. Accommodations and Food Services (866-869)
18. Other Services (Except Public Administration) (877-929)
19. Public Administration and Active Duty Military (937-987)

#### ***F. HRS Masked Occupation (2010 v2, 2012, 2014)***

The following code frame was used for the Version 2 of the 2010 masked/public data release,<sup>4</sup> the 2012 masked/public release and the 2014 masked/public release. The numbers in parenthesis are the U. S. Census Bureau 2010 Occupational Classification<sup>5</sup> values that map into the HRS masked code categories.

1. Management Occupations (0010 - 0430)
2. Business and Financial Operations Occupations (0500 - 0950)
3. Computer and mathematical occupations (1000 - 1240)
4. Architecture and Engineering Occupations (1300 - 1560)
5. Life, Physical, and Social Science Occupations (1600 - 1960)
6. Community and Social Service Occupations (2000 - 2060)
7. Legal Occupations (2100 - 2160)
8. Education, Training, and Library Occupations (2200 - 2550)
9. Arts, Design, Entertainment, Sports, and Media Occupations (2600 - 2960)
10. Healthcare Practitioners and Technical Occupations (3000 - 3540)
11. Healthcare Support Occupations (3600 - 3650)
12. Protective Service Occupations (3700 - 3950)
13. Food Preparation and Serving Related Occupations (4000 - 4160)
14. Building and Grounds Cleaning and Maintenance Occupations (4200 - 4250)
15. Personal Care and Service Occupations (4300 - 4650)
16. Sales and Related Occupations (4700 - 4960)
17. Office and Administrative Support Occupations (5000 - 5940)
18. Farming, Fishing, and Forestry Occupations (6000 - 6130)
19. Construction and Extraction Occupations (6200 - 6940)
20. Installation, Maintenance, and Repair Occupations (7000 - 7630)
21. Production Occupations (7700 - 8960)
22. Transportation and Material Moving Occupations (9000 - 9750)
23. Military Specific Occupations (9800 - 9830)

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<sup>4</sup> In the initial release of the 2010 HRS Core files, items pertaining to industry and occupation were coded using the Census 2000 Classified Index of Industries or the Census 2002 Classified Index of Occupations. In a supplemental file release, these same items were recoded using the 2007 Census Industrial Classification or the 2010 Census Occupational Classification.

<sup>5</sup> “The 2010 Census occupational classification was introduced with data for January 2011 and replaced an earlier version that was based on the 2000 SOC. As a result of the classification change, occupational data beginning with January 2011 are not strictly comparable with earlier years. Although the names of the broad- and intermediate-level occupational groups in the 2010 Census occupational classification remained the same, some detailed occupations were re-classified between the broader groups, affecting comparability over time.

“At the detailed occupation level, there are numerous differences between the 2010 Census occupational classification and the earlier classification. With the introduction of the 2010 classification, 50 new detailed occupations were introduced, 20 detailed occupations were discontinued, and the scope of 18 detailed occupations was redefined (although the titles did not change), creating breaks in series comparability.” Source: <http://www.bls.gov/cps/cpsoccind.htm>

### ***G. HRS Masked Industry (2010 v2, 2012, 2014)***

The following code frame was used for the Version 2 of the 2010 masked/public data release,<sup>6</sup> the 2012 masked/public release and the 2014 masked/public release. The numbers in parenthesis are the 2007 U. S. Census Industrial Classification<sup>7</sup> codes that mapped into the HRS public code categories.

1. Agriculture, Forestry, Fishing, and Hunting (0170 - 0290)
2. Mining (0370 - 0490)
3. Utilities (0570 - 0690)
4. Construction (0770)
5. Manufacturing (continued) (1070 - 3990)
6. Wholesale Trade (4070 - 4590)
7. Retail Trade (4670 - 5790)
8. Transportation and Warehousing (6070 - 6390)
9. Information (6470 - 6790)
10. Finance and Insurance (6870 - 6990)
11. Real Estate and Rental and Leasing (7070 - 7190)
12. Professional, Scientific, and Technical Services (7270 - 7490)
13. Management, Administrative and Support, and Waste (7570 - 7790)
14. Educational Services (7860 - 7890)
15. Health Care and Social Assistance (7970 - 8470)
16. Arts, Entertainment, and Recreation (8560 - 8590)
17. Accommodations and Food Services (8660 - 8690)
18. Other Services (Except Public Administration) (8770 - 9290)
19. Public Administration and Active Duty Military (9370 - 9870)

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<sup>6</sup> In the initial release of the 2010 HRS Core files, items pertaining to industry and occupation were coded using the Census 2000 Classified Index of Industries or the Census 2002 Classified Index of Occupations. In a supplemental file release, these same items were recoded using the 2007 Census Industrial Classification or the 2010 Census Occupational Classification.

<sup>7</sup> “The 2007 Census industry classification was introduced with data for January 2009 and replaced an earlier version based on the 2002 NAICS. The differences between the 2007 and 2002 industry classifications were relatively minor and did not involve re-classification of industries between the broader industry sectors. Most of the changes affected the detailed industries and intermediate groups in the Information sector.” Source: <http://www.bls.gov/cps/cpsoccind.htm>

### III. Programs for Creating Masked Codes from Unmasked Codes

#### A. AHEAD Masked Occupation

Two programs were used to create AHEAD masked codes from unmasked codes. The first was based on the SRC 2-digit occupation code. The second was based on the 1980 Census 3-digit occupation code.

##### 1. AHEAD Masked Occupation from the SRC 2-Digit Occupation Code

In the SAS code below `&vin` is the unmasked occupation variable and `&vout` is the masked occupation variable. This code was used for 1993 and 1995.

```
if &vin eq . then &vout=.;
else if 10 <= &vin <= 19 then &vout=1;
else if &vin in(20 31) then &vout=2;
else if 40 <= &vin <= 41 then &vout=3;
else if &vin eq 45 then &vout=4;
else if 50 <= &vin <= 52 then &vout=5;
else if 61 <= &vin <= 62 then &vout=6;
else if 70 <= &vin <= 71 then &vout=7;
else if &vin in(73 75) then &vout=8;
else if 80 = &vin then &vout=9;
else if 98 = &vin then &vout=98;
else &vout=99;
```

##### 2. AHEAD Masked Occupation from the 1980 Census 3-Digit Occupation Code

In the SAS code below `&vin` is the unmasked occupation variable and `&vout` is the masked occupation variable. This code was used for 1998 only.

```
if &vin eq . then &vout=.;
else if 023 <= &vin <= 024 then &vout=1;
else if 026 <= &vin <= 027 then &vout=1;
else if 034 <= &vin <= 036 then &vout=1;
else if 038 <= &vin <= 235 then &vout=1;
else if 003 <= &vin <= 019 then &vout=2;
else if 025 = &vin then &vout=2;
else if 028 <= &vin <= 033 then &vout=2;
else if 037 = &vin then &vout=2;
else if 303 <= &vin <= 389 then &vout=3;
else if 243 <= &vin <= 285 then &vout=4;
else if 413 <= &vin <= 414 then &vout=5;
else if 416 <= &vin <= 425 then &vout=5;
else if 485 = &vin then &vout=5;
else if 494 = &vin then &vout=5;
else if 503 <= &vin <= 699 then &vout=5;
else if 803 = &vin then &vout=5;
else if 843 = &vin then &vout=5;
else if 863 = &vin then &vout=5;
else if 703 <= &vin <= 799 then &vout=6;
else if 804 <= &vin <= 834 then &vout=6;
else if 844 <= &vin <= 859 then &vout=6;
else if 477 <= &vin <= 484 then &vout=7;
else if 486 <= &vin <= 489 then &vout=7;
else if 495 <= &vin <= 499 then &vout=7;
else if 864 <= &vin <= 889 then &vout=7;
```

```

else if 403 <= &vin <= 407 then &vout=8;
else if 415 = &vin then &vout=8;
else if 426 <= &vin <= 469 then &vout=8;
else if 473 <= &vin <= 476 then &vout=9;
else if 998 = &vin then &vout=98;
else if 999 = &vin then &vout=99;
else &vout=98;

```

### ***B. HRS Masked Occupation from the 1980 Census 3-Digit Occupation Code***

In the SAS code below &vin is the unmasked occupation variable and &vout is the masked occupation variable. This code was used for 1992, 1994, 1996, and 1998 through 2004.

```

if &vin eq . then &vout=.;
else if 003 <= &vin <= 037 then &vout=1;
else if 043 <= &vin <= 235 then &vout=2;
else if 243 <= &vin <= 285 then &vout=3;
else if 303 <= &vin <= 389 then &vout=4;
else if 403 <= &vin <= 407 then &vout=5;
else if 413 <= &vin <= 427 then &vout=6;
else if 433 <= &vin <= 444 then &vout=7;
else if 445 <= &vin <= 447 then &vout=8;
else if 448 <= &vin <= 469 then &vout=9;
else if 473 <= &vin <= 499 then &vout=10;
else if 503 <= &vin <= 549 then &vout=11;
else if 553 <= &vin <= 617 then &vout=12;
else if 633 <= &vin <= 699 then &vout=13;
else if 703 <= &vin <= 799 then &vout=14;
else if 803 <= &vin <= 859 then &vout=15;
else if 863 <= &vin <= 889 then &vout=16;
else if 900 <= &vin <= 900 then &vout=17;
else if 998 = &vin then &vout=98;
else if 999 = &vin then &vout=99;
else &vout=98;

```

### ***C. HRS Masked Industry from the 1980 Census 3-Digit Industry Code***

In the SAS code below &vin is the unmasked industry variable and &vout is the masked industry variable. This code was used for 1992, 1994, 1996, and 1998 through 2004.

```

if &vin eq . then &vout=.;
else if 010 <= &vin <= 031 then &vout=1;
else if 040 <= &vin <= 060 then &vout=2;
else if 100 <= &vin <= 222 then &vout=3;
else if 230 <= &vin <= 392 then &vout=4;
else if 400 <= &vin <= 472 then &vout=5;
else if 500 <= &vin <= 571 then &vout=6;
else if 580 <= &vin <= 691 then &vout=7;
else if 700 <= &vin <= 712 then &vout=8;
else if 721 <= &vin <= 760 then &vout=9;
else if 761 <= &vin <= 791 then &vout=10;
else if 800 <= &vin <= 802 then &vout=11;
else if 812 <= &vin <= 892 then &vout=12;
else if 900 <= &vin <= 932 then &vout=13;
else if 998 = &vin then &vout=98;
else if 999 = &vin then &vout=99;

```

```
else &vout=98;
```

#### ***D. HRS Masked Occupation from the 2000 Census 3-Digit Occupation Code***

In the SAS code below &vin is the unmasked occupation variable and &vout is the masked occupation variable. This code can be used for 2004 v2, 2006, 2008 and 2010 v1.

```
if &vin eq 0 then &vout=.;
else if &vin lt 45 then &vout=1;
else if &vin ge 50 and &vin le 73 then &vout=2;
else if &vin ge 80 and &vin le 95 then &vout=3;
else if &vin ge 100 and &vin le 124 then &vout=4;
else if &vin ge 130 and &vin le 156 then &vout=5;
else if &vin ge 160 and &vin le 196 then &vout=6;
else if &vin ge 200 and &vin le 206 then &vout=7;
else if &vin ge 210 and &vin le 215 then &vout=8;
else if &vin ge 220 and &vin le 255 then &vout=9;
else if &vin ge 260 and &vin le 296 then &vout=10;
else if &vin ge 300 and &vin le 354 then &vout=11;
else if &vin ge 360 and &vin le 365 then &vout=12;
else if &vin ge 370 and &vin le 395 then &vout=13;
else if &vin ge 400 and &vin le 416 then &vout=14;
else if &vin ge 420 and &vin le 425 then &vout=15;
else if &vin ge 430 and &vin le 465 then &vout=16;
else if &vin ge 470 and &vin le 496 then &vout=17;
else if &vin ge 500 and &vin le 593 then &vout=18;
else if &vin ge 600 and &vin le 613 then &vout=19;
else if &vin ge 620 and &vin le 676 then &vout=20;
else if &vin ge 680 and &vin le 694 then &vout=21;
else if &vin ge 700 and &vin le 762 then &vout=22;
else if &vin ge 770 and &vin le 896 then &vout=23;
else if &vin ge 900 and &vin le 975 then &vout=24;
else if &vin ge 980 and &vin le 985 then &vout=25;
else if &vin eq 999 then &vout = 99;
```

#### ***E. HRS Masked Industry from the 2002 Census 3-Digit Industry Code***

In the SAS code below &vin is the unmasked industry variable and &vout is the masked industry variable. This code can be used for 2004 v2, 2006, 2008 and 2010 v1.

```
if &vin eq 0 then &vout = .;
else if &vin ge 017 and &vin le 029 then &vout = 1;
else if &vin ge 037 and &vin le 049 then &vout = 2;
else if &vin ge 057 and &vin le 069 then &vout = 3;
else if &vin eq 077 then &vout = 4;
else if &vin ge 107 and &vin le 399 then &vout = 5;
else if &vin ge 407 and &vin le 459 then &vout = 6;
else if &vin ge 467 and &vin le 579 then &vout = 7;
else if &vin ge 607 and &vin le 639 then &vout = 8;
else if &vin ge 647 and &vin le 679 then &vout = 9;
else if &vin ge 687 and &vin le 699 then &vout = 10;
else if &vin ge 707 and &vin le 719 then &vout = 11;
else if &vin ge 727 and &vin le 749 then &vout = 12;
else if &vin ge 757 and &vin le 779 then &vout = 13;
else if &vin ge 786 and &vin le 789 then &vout = 14;
```

```

else if &vin ge 797 and &vin le 847 then &vout = 15;
else if &vin ge 856 and &vin le 859 then &vout = 16;
else if &vin ge 866 and &vin le 869 then &vout = 17;
else if &vin ge 877 and &vin le 929 then &vout = 18;
else if &vin ge 937 and &vin le 987 then &vout = 19;

```

#### ***F. HRS Masked Occupation from 2010 Census 4-Digit Occupational Classification***

In the SAS code below &vin is the unmasked industry variable and &vout is the masked industry variable. This code can be used for 2010 v2, 2012 and 2014.

```

if &vin eq 0 then &vout=.;
else if &vin ge 0010 and &vin le 0430 then &vout=1;
else if &vin ge 0500 and &vin le 0950 then &vout=2;
else if &vin ge 1000 and &vin le 1240 then &vout=3;
else if &vin ge 1300 and &vin le 1560 then &vout=4;
else if &vin ge 1600 and &vin le 1960 then &vout=5;
else if &vin ge 2000 and &vin le 2060 then &vout=6;
else if &vin ge 2100 and &vin le 2160 then &vout=7;
else if &vin ge 2200 and &vin le 2550 then &vout=8;
else if &vin ge 2600 and &vin le 2960 then &vout=9;
else if &vin ge 3000 and &vin le 3540 then &vout=10;
else if &vin ge 3600 and &vin le 3650 then &vout=11;
else if &vin ge 3700 and &vin le 3950 then &vout=12;
else if &vin ge 4000 and &vin le 4160 then &vout=13;
else if &vin ge 4200 and &vin le 4250 then &vout=14;
else if &vin ge 4300 and &vin le 4650 then &vout=15;
else if &vin ge 4700 and &vin le 4960 then &vout=16;
else if &vin ge 5000 and &vin le 5940 then &vout=17;
else if &vin ge 6000 and &vin le 6130 then &vout=18;
else if &vin ge 6200 and &vin le 6940 then &vout=19;
else if &vin ge 7000 and &vin le 7630 then &vout=20;
else if &vin ge 7700 and &vin le 8960 then &vout=21;
else if &vin ge 9000 and &vin le 9750 then &vout=22;
else if &vin ge 9800 and &vin le 9830 then &vout=23;
else if &vin eq 9999 then &vout = 99;

```

#### ***G. HRS Masked Industry from the 2007 Census 4-Digit Industrial Classification***

In the SAS code below &vin is the unmasked industry variable and &vout is the masked industry variable. This code can be used for 2010 v2, 2012 and 2014.

```

if &vin eq 0 then &vout = .;
else if &vin ge 170 and &vin le 290 then &vout = 1;
else if &vin ge 370 and &vin le 490 then &vout = 2;
else if &vin ge 570 and &vin le 690 then &vout = 3;
else if &vin ge 770 and &vin le 770 then &vout = 4;
else if &vin ge 1070 and &vin le 3990 then &vout = 5;
else if &vin ge 4070 and &vin le 4590 then &vout = 6;
else if &vin ge 4670 and &vin le 5790 then &vout = 7;
else if &vin ge 6070 and &vin le 6390 then &vout = 8;
else if &vin ge 6470 and &vin le 6790 then &vout = 9;
else if &vin ge 6870 and &vin le 6990 then &vout = 10;

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else if &vin ge 7070 and &vin le 7190 then &vout = 11;  
else if &vin ge 7270 and &vin le 7490 then &vout = 12;  
else if &vin ge 7570 and &vin le 7790 then &vout = 13;  
else if &vin ge 7860 and &vin le 7890 then &vout = 14;  
else if &vin ge 7970 and &vin le 8470 then &vout = 15;  
else if &vin ge 8560 and &vin le 8590 then &vout = 16;  
else if &vin ge 8660 and &vin le 8690 then &vout = 17;  
else if &vin ge 8770 and &vin le 9290 then &vout = 18;  
else if &vin ge 9370 and &vin le 9870 then &vout = 19;  
else if &vin ge 9999 and &vin le 9999 then &vout = 99;
```



## IV. Unmasked Codes

### A. AHEAD Unmasked Occupation (SRC 2-Digit Occupation Code)

In 1993 and 1995, occupation information for respondents belonging to the AHEAD cohort was coded using the SRC 2-Digit Occupation codes, which were adapted from 1980 U.S. Census Occupation Code.

#### PROFESSIONAL, TECHNICAL AND KINDRED WORKERS

10. Physicians--medical, psychiatric and osteopathic; dentists
11. Other Medical and Paramedical (exc. health technicians--see chiropractors, optometrists, pharmacists, veterinarians, dieticians, registered nurses, etc.
12. Accountants; Auditors
13. Teachers, except College
14. Teachers, College; Social Scientists; Librarians
15. Architects; Chemists; Engineers; Physical and Biological Scientists
16. Technicians: Computer programmers and analysts, health, engineering, science and other technicians, designers, radio and television announcers, etc.
17. Public Advisors: Personnel and labor relations workers, clergy and other religious workers, social and recreation workers, editors and reporters, public relations persons, etc.
18. Judges; Lawyers
19. Other professional, technical and kindred workers

#### MANAGERS, OFFICIALS AND PROPRIETORS (EXCEPT FARM)

20. Not self-employed; employee of own corporation
31. Self-employed--unincorporated businesses

#### CLERICAL AND KINDRED WORKERS

40. Secretaries, stenographers, typists
41. Other Clerical Workers: bank tellers, bookkeepers, cashiers, estimators & investigators, mail carriers, payroll & postal clerks, shipping & receiving clerks, stock clerks, etc.

#### SALES WORKERS

45. Demonstrators, hucksters and peddlers, insurance and real estate agents and brokers, sales representatives & sales clerks, etc.

#### CRAFTSMEN, FOREMEN AND KINDRED WORKERS

50. Foremen, n.e.c., except craft
51. Craftsmen, craft foremen and supervisors
52. Government protective service workers: firemen, guards, policemen, etc.

#### OPERATIVES AND KINDRED WORKERS

61. Transport equipment operatives: bus drivers, conductors, deliverymen and routemen, fork lift and tow motor operators, taxicab drivers, truck drivers, etc.
62. Operatives, except transport

#### LABORERS AND FARM FOREMEN

70. Unskilled laborers--non-farm
71. Farm laborers and foremen

#### SERVICE WORKERS

73. Private household workers
75. Other service workers: maids, cleaners, janitors, bartenders, cooks, waiters, nursing aides, practical nurses, barbers, babysitters (exc. 73), beauticians, etc.

FARMERS AND FARM MANAGERS

80. Farmers (owners and tenants) and farm managers

MISCELLANEOUS GROUPS

55. Members of Armed Forces

99. Occupation DK, NA

***B. HRS Unmasked Occupation (1980 Census Occupational Classification System)***

In 1992, 1994, and 1996, occupation for respondents belonging to the HRS cohort was coded using the 3-digit 1980 Census Occupational Classification codes.<sup>8</sup> For surveys conducted in 1998, 2000, 2002, and 2004 v1, these codes were used for all respondents.

MANAGERIAL AND PROFESSIONAL SPECIALTY OCCUPATIONS

Executive, Administrative, and Managerial Occupations

- 003 Legislators
- 004 Chief executives and general administrators, public administration
- 005 Administrators and officials, public administration
- 006 Administrators, protective service
- 007 Financial managers
- 008 Personnel and labor relations managers
- 009 Purchasing managers
- 013 Managers, marketing, advertising, and public relations
- 014 Administrators, education and related fields
- 015 Managers, medicine and health
- 016 Managers, properties and real estate
- 017 Postmasters and mail superintendents
- 018 Funeral directors
- 019 Managers and administrators, n.e.c.

Management Related Occupations:

- 023 Accountants and auditors
- 024 Underwriters
- 025 Other financial officers
- 026 Management analysts
- 027 Personnel, training, and labor relations specialists
- 028 Purchasing agents and buyers, farm products
- 029 Buyers, wholesale and retail trade, except farm products
- 033 Purchasing agents and buyers, n.e.c.
- 034 Business and promotion agents
- 035 Construction inspectors
- 036 Inspection and compliance officers, except construction
- 037 Management related occupations, n.e.c.

Professional Specialty Occupations:

Engineers, Architects, and Surveyors:

- 043 Architects

Engineers:

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<sup>8</sup> Note: The abbreviation "pt" means "part" and "n.e.c." means "not elsewhere classified."

- 044 Aerospace
- 045 Metallurgical and materials
- 046 Mining
- 047 Petroleum
- 048 Chemical
- 049 Nuclear
- 053 Civil
- 054 Agricultural
- 055 Electrical and electronic
- 056 Industrial
- 057 Mechanical
- 058 Marine and naval architects
- 059 Engineers, n.e.c.
- 063 Surveyors and mapping scientists

Mathematical and Computer Scientists:

- 064 Computer systems analysts and scientists
- 065 Operations and systems researchers and analysts
- 066 Actuaries
- 067 Statisticians
- 068 Mathematical scientists, n.e.c.

Natural Scientists:

- 069 Physicists and astronomers
- 073 Chemists, except biochemists
- 074 Atmospheric and space scientists
- 075 Geologists and geodesists
- 076 Physical scientists, n.e.c.
- 077 Agricultural and food scientists
- 078 Biological and life scientists
- 079 Forestry and conservation scientists
- 083 Medical scientists

Health Diagnosing Occupations:

- 084 Physicians
- 085 Dentists
- 086 Veterinarians
- 087 Optometrists
- 088 Podiatrists
- 089 Health diagnosing practitioners, n.e.c.

Health Assessment and Treating Occupations:

- 095 Registered nurses
- 096 Pharmacists
- 097 Dietitians

Therapists:

- 098 Inhalation therapists
- 099 Occupational therapists
- 103 Physical therapists
- 104 Speech therapists
- 105 Therapists, n.e.c.
- 106 Physicians' assistants

Teachers, Postsecondary:

- 113 Earth, environmental, and marine science teachers
- 114 Biological science teachers
- 115 Chemistry teachers
- 116 Physics teachers
- 117 Natural science teachers, n.e.c.
- 118 Psychology teachers
- 119 Economics teachers
- 123 History teachers
- 124 Political science teachers
- 125 Sociology teachers
- 126 Social science teachers, n.e.c.
- 127 Engineering teachers
- 128 Mathematical science teachers
- 129 Computer science teachers
- 133 Medical science teachers
- 134 Health specialties teachers
- 135 Business, commerce, and marketing teachers
- 136 Agriculture and forestry teachers
- 137 Art, drama, and music teachers
- 138 Physical education teachers
- 139 Education teachers
- 143 English teachers
- 144 Foreign language teachers
- 145 Law teachers
- 146 Social work teachers
- 147 Theology teachers
- 148 Trade and industrial teachers
- 149 Home economics teachers
- 153 Teachers, postsecondary, n.e.c.
- 154 Postsecondary teachers, subject n.s.

Teachers, Except Postsecondary:

- 155 Teachers, pre-kindergarten and kindergarten
- 156 Teachers, elementary school
- 157 Teachers, secondary school
- 158 Teachers, special education
- 159 Teachers, n.e.c.
- 163 Counselors, educational and vocational

Librarians, Archivists, and Curators:

- 164 Librarians
- 165 Archivists and curators

Social Scientists and Urban Planners:

- 166 Economists
- 167 Psychologists
- 168 Sociologists
- 169 Social scientists, n.e.c.
- 173 Urban planners

Social, Recreation, and Religious Workers:

- 174 Social workers
- 175 Recreation workers
- 176 Clergy
- 177 Religious workers, n.e.c.

Lawyers and Judges:

- 178 Lawyers
- 179 Judges

Writers, Artists, Entertainers, and Athletes:

- 183 Authors
- 184 Technical writers
- 185 Designers
- 186 Musicians and composers
- 187 Actors and directors
- 188 Painters, sculptors, craft-artists, and artist printmakers
- 189 Photographers
- 193 Dancers
- 194 Artists, performers, and related workers, n.e.c.
- 195 Editors and reporters
- 197 Public relations specialists
- 198 Announcers
- 199 Athletes

TECHNICAL, SALES, AND ADMINISTRATIVE SUPPORT PATIONS

Technicians and Related Support Occupations

Health Technologists and Technicians:

- 203 Clinical laboratory technologists and technicians
- 204 Dental hygienists
- 205 Health record technologists and technicians
- 206 Radiologic technicians
- 207 Licensed practical nurses
- 208 Health technologists and technicians, n.e.c.

Technologists and Technicians, Except Health:

Engineering and Related Technologists and Technicians:

- 213 Electrical and electronic technicians
- 214 Industrial engineering technicians
- 215 Mechanical engineering technicians
- 216 Engineering technicians, n.e.c.
- 217 Drafting occupations
- 218 Surveying and mapping technicians

Science Technicians:

- 223 Biological technicians
- 224 Chemical technicians
- 225 Science technicians, n.e.c.

Technicians, Except Health, Engineering and Science:

- 226 Airplane pilots and navigators

- 227 Air traffic controllers
- 228 Broadcast equipment operators
- 229 Computer programmers
- 233 Tool programmers, numerical control
- 234 Legal assistants
- 235 Technicians, n.e.c.

## Sales Occupations

- 243 Supervisors and proprietors, sales occupations

### Sales Representatives, Finance and Business Services:

- 253 Insurance sales occupations
- 254 Real estate sales occupations
- 255 Securities and financial services sales occupations
- 256 Advertising and related sales occupations
- 257 Sales occupations, other business services

### Sales Representatives, Commodities, Except Retail:

- 258 Sales engineers
- 259 Sales representatives, mining, manufacturing, and wholesale

### Sales Workers, Retail and Personal Services:

- 263 Sales workers, motor vehicles and boats
- 264 Sales workers, apparel
- 265 Sales workers, shoes
- 266 Sales workers, furniture and home furnishings
- 267 Sales workers, radio, TV, hi-fi, and appliances
- 268 Sales workers, hardware and building supplies
- 269 Sales workers, parts
- 274 Sales workers, other commodities
- 275 Sales counter clerks
- 276 Cashiers
- 277 Street and door-to-door sales workers
- 278 News vendors

### Sales-Related Occupations:

- 283 Demonstrators, promoters and models, sales
- 284 Auctioneers
- 285 Sales support occupations, n.e.c.

## Administrative Support Occupations, Including Clerical:

### Supervisors, Administrative Support Occupations:

- 303 Supervisors, general office
- 304 Supervisors, computer equipment operators
- 305 Supervisors, financial records processing
- 306 Chief communications operators
- 307 Supervisors, distribution, scheduling, and adjusting clerks

### Computer Equipment Operators:

- 308 Computer operators
- 309 Peripheral equipment operators

Secretaries, Stenographers and Typists:

- 313 Secretaries
- 314 Stenographers
- 315 Typists

Information Clerks:

- 316 Interviewers
- 317 Hotel clerks
- 318 Transportation ticket and reservation agents
- 319 Receptionists
- 323 Information clerks, n.e.c.

Records Processing Occupations, Except Financial:

- 325 Classified-ad clerks
- 326 Correspondence clerks
- 327 Order clerks
- 328 Personnel clerks, except payroll and timekeeping
- 329 Library clerks
- 335 File clerks
- 336 Records clerks

Financial Records Processing Occupations:

- 337 Bookkeeping, accounting, and auditing clerks
- 338 Payroll and timekeeping clerks
- 339 Billing clerks
- 343 Cost and rate clerks
- 344 Billing, posting, and calculating machine operators

Duplicating, Mail, and Other Office Machine Operators:

- 345 Duplicating machine operators
- 346 Mail preparing and paper handling machine operators
- 347 Office machine operators, n.e.c.

Communications Equipment Operators:

- 348 Telephone operators
- 349 Telegraphers
- 353 Communications equipment operators, n.e.c.

Mail and Message Distributing Occupations:

- 354 Postal clerks, except mail carriers
- 355 Mail carriers, postal service
- 356 Mail clerks, except postal service
- 357 Messengers

Material Recording, Scheduling, and Distributing Clerks:

- 359 Dispatchers
- 363 Production coordinators
- 364 Traffic, shipping, and receiving clerks
- 365 Stock and inventory clerks
- 366 Meter readers
- 368 Weighers, measurers, and checkers
- 369 Samplers

- 373 Expeditors
- 374 Material recording, scheduling, and distributing clerks, n.e.c.

Adjusters and Investigators:

- 375 Insurance adjusters, examiners, and investigators
- 376 Investigators and adjusters, except insurance
- 377 Eligibility clerks, social welfare
- 378 Bill and account collectors

Miscellaneous Administrative Support Occupations:

- 379 General office clerks
- 383 Bank tellers
- 384 Proofreaders
- 385 Data-entry keyers
- 386 Statistical clerks
- 387 Teachers' aides
- 389 Administrative support occupations, n.e.c.

SERVICE OCCUPATIONS

Private Households Occupations

- 403 Launderers and Ironers
- 404 Cooks, private household
- 405 Housekeepers and butlers
- 406 Child care workers, private household
- 407 Private household cleaners and servants

Protective Service Occupations

Supervisors, Protective Service Occupations:

- 413 Supervisors, firefighting and fire prevention occupations
- 414 Supervisors, police and detectives
- 415 Supervisors, guards

Firefighting and Fire Prevention Occupations:

- 416 Fire inspection and fire prevention occupations
- 417 Firefighting occupations

Police and Detectives:

- 418 Police and detectives, public service
- 423 Sheriffs, bailiffs, and other law enforcement officers
- 424 Correctional institution officers

Guards:

- 425 Crossing guards
- 426 Guards and police, except public service
- 427 Protective service occupations, n.e.c.

Service Occupations, Except Protective and Household:

Food Preparation and Service Occupations:

- 433 Supervisors, food preparation and service occupations



- 434 Bartenders
- 435 Waiters and waitresses
- 436 Cooks, except short order
- 437 Short-order cooks
- 438 Food counter, fountain, and related occupations
- 439 Kitchen workers, food preparation
- 443 Waiters'/waitresses' assistants
- 444 Miscellaneous food preparation occupations

Health Service Occupations:

- 445 Dental assistants
- 446 Health aides, except nursing
- 447 Nursing aides, orderlies, and attendants

Cleaning and Building Service Occupations, except Household:

- 448 Supervisors, cleaning and building service workers
- 449 Maids and housemen
- 453 Janitors and cleaners
- 454 Elevator operators
- 455 Pest control occupations

Personal Service Occupations:

- 456 Supervisors, personal service occupations
- 457 Barbers
- 458 Hairdressers and cosmetologists
- 459 Attendants, amusement and recreation facilities
- 463 Guides
- 464 Ushers
- 465 Public transportation attendants
- 466 Baggage porters and bellhops
- 467 Welfare service aides
- 468 Child care workers, except private household
- 469 Personal service occupations, n.e.c.

FARMING, FORESTRY, AND FISHING OCCUPATIONS

Farm Operators and Managers:

- 473 Farmers, except horticultural
- 474 Horticultural specialty farmers
- 475 Managers, farms, except horticultural
- 476 Managers, horticultural specialty farms

Other Agricultural and Related Occupations:

Farm Occupations, Except Managerial:

- 477 Supervisors, farm workers
- 479 Farm workers
- 483 Marine life cultivation workers
- 484 Nursery workers

Related Agricultural Occupations:

- 485 Supervisors, related agricultural occupations
- 486 Groundskeepers and gardeners, except farm

- 487 Animal caretakers, except farm
- 488 Graders and sorters, agricultural products
- 489 Inspectors, agricultural products

Forestry and Logging Occupations:

- 494 Supervisors, forestry and logging workers
- 495 Forestry workers, except logging
- 496 Timber cutting and logging occupations

Fishers, Hunters, and Trappers:

- 497 Captains and other officers, fishing vessels
- 498 Fishers
- 499 Hunters and trappers

PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS

Mechanics and Repairers

- 503 Supervisors, mechanics and repairers

Mechanics and Repairers, Except Supervisors:

Vehicle and Mobile Equipment Mechanics and Repairers:

- 505 Automobile mechanics, except apprentices
- 506 Automobile mechanic apprentices
- 507 Bus, truck, and stationary engine mechanics
- 508 Aircraft engine mechanics
- 509 Small engine repairers
- 514 Automobile body and related repairers
- 515 Aircraft mechanics, except engine
- 516 Heavy equipment mechanics
- 517 Farm equipment mechanics
- 518 Industrial machinery repairers
- 519 Machinery maintenance occupations

Electrical and Electronic Equipment Repairers:

- 523 Electronic repairers, communications and industrial equipment
- 525 Data processing equipment repairers
- 526 Household appliance and power tool repairers
- 527 Telephone line installers and repairers
- 529 Telephone installers and repairers
- 533 Miscellaneous electrical and electronic equipment repairers
- 534 Heating, air conditioning, and refrigeration mechanics

Miscellaneous Mechanics and Repairers:

- 535 Camera, watch, and musical instrument repairers
- 536 Locksmiths and safe repairers
- 538 Office machine repairers
- 539 Mechanical controls and valve repairers
- 543 Elevator installers and repairers
- 544 Millwrights
- 547 Mechanics and repairers, n.e.c.
- 549 Mechanics and repairers, n.s.

## Construction Trades

### Supervisors, Construction Occupations:

- 553 Supervisors, brickmasons, stonemasons, and tile setters
- 554 Supervisors, carpenters and related workers
- 555 Supervisors, electricians and power transmission installers
- 556 Supervisors, painters, paperhangers, and plasterers
- 557 Supervisors, plumbers, pipefitters, and steamfitters
- 558 Supervisors, n.e.c.

### Construction Trades, Except Supervisors:

- 563 Brickmasons and stonemasons, except apprentices
- 564 Brickmason and stonemason apprentices
- 565 Tile setters, hard and soft
- 566 Carpet installers
- 567 Carpenters, except apprentices
- 569 Carpenter apprentices
- 573 Drywall installers
- 575 Electricians, except apprentices
- 576 Electrician apprentices
- 577 Electrical power installers and repairers
- 579 Painters, construction and maintenance
- 583 Paperhangers
- 584 Plasterers
- 585 Plumbers, pipefitters, and steamfitters, except apprentices
- 587 Plumber, pipefitter, and steamfitter apprentices
- 588 Concrete and terrazzo finishers
- 589 Glaziers
- 593 Insulation workers
- 594 Paving, surfacing, and tamping equipment operators
- 595 Roofers
- 596 Sheetmetal duct installers
- 597 Structural metal workers
- 598 Drillers, earth
- 599 Construction trades, n.e.c.

## Extractive Occupations

- 613 Supervisors, extractive occupations
- 614 Drillers, oil well
- 615 Explosives workers
- 616 Mining machine operators
- 617 Mining occupations, n.e.c.

## Precision Production Occupations

- 633 Supervisors production occupations

### Precision Metal Working Occupations:

- 634 Tool and die makers, except apprentices
- 635 Tool and die maker apprentices
- 636 Precision assemblers, metal
- 637 Machinists, except apprentices

- 639 Machinist apprentices
- 643 Boilermakers
- 644 Precision grinders, fitters, and tool sharpeners
- 645 Patternmakers and model makers, metal
- 646 Lay-out workers
- 647 Precious stones and metals workers
- 649 Engravers, metal
- 653 Sheet metal workers, except apprentices
- 654 Sheet metal worker apprentices
- 655 Miscellaneous precision metal workers

Precision Woodworking Occupations:

- 656 Patternmakers and model makers, wood
- 657 Cabinet makers and bench carpenters
- 658 Furniture and wood finishers
- 659 Miscellaneous precision woodworkers

Precision Textile, Apparel, and Furnishings Machine Workers:

- 666 Dressmakers
- 667 Tailors
- 668 Upholsterers
- 669 Shoe repairers
- 673 Apparel and fabric patternmakers
- 674 Misc. precision apparel and fabric workers

Precision Workers, Assorted Materials:

- 675 Hand molders and shapers, except jewelers
- 676 Patternmakers, lay-out workers, and cutters
- 677 Optical goods workers
- 678 Dental laboratory and medical appliance technicians
- 679 Bookbinders
- 683 Electrical and electronic equipment assemblers
- 684 Miscellaneous precision workers, n.e.c.

Precision Food Production Occupations:

- 686 Butchers and meat cutters
- 687 Bakers
- 688 Food batchmakers

Precision Inspectors, Testers, and Related Workers:

- 689 Inspectors, testers, and graders
- 693 Adjusters and calibrators

Plant and System Operators:

- 694 Water and sewage treatment plant operators
- 695 Power plant operators
- 696 Stationary engineers
- 699 Miscellaneous plant and system operators

OPERATORS, FABRICATORS, AND LABORERS

Machine Operators, Assemblers and Inspectors

Machine Operators and Tenders, except Precision:

Metalworking and Plastic Working Machine Operators:

- 703 Lathe and turning machine set-up operators
- 704 Lathe and turning machine operators
- 705 Milling and planing machine operators
- 706 Punching and stamping press machine operators
- 707 Rolling machine operators
- 708 Drilling and boring machine operators
- 709 Grinding, abrading, buffing, and polishing machine operators
- 713 Forging machine operators
- 714 Numerical control machine operators
- 715 Miscellaneous metal, plastic, stone, and glass working machine operators
- 717 Fabricating machine operators, n.e.c.

Metal and Plastic Processing Machine Operators:

- 719 Molding and casting machine operators
- 723 Metal plating machine operators
- 724 Heat treating equipment operators
- 725 Miscellaneous metal and plastic processing machine operators

Woodworking Machine Operators:

- 726 Wood lathe, routing, and planing machine operators
- 727 Sawing machine operators
- 728 Shaping and joining machine operators
- 729 Nailing and tacking machine operators
- 733 Misc. woodworking machine operators

Printing Machine Operators:

- 734 Printing machine operators
- 735 Photoengravers and lithographers
- 736 Typesetters and compositors
- 737 Miscellaneous printing machine operators

Textile, Apparel, and Furnishings Machine Operators:

- 738 Winding and twisting machine operators
- 739 Knitting, looping, taping, and weaving machine operators
- 743 Textile cutting machine operators
- 744 Textile sewing machine operators
- 745 Shoe machine operators
- 747 Pressing machine operators
- 748 Laundering and dry cleaning machine operators
- 749 Miscellaneous textile machine operators

Machine Operators, Assorted Materials:

- 753 Cementing and gluing machine operators
- 754 Packaging and filling machine operators
- 755 Extruding and forming machine operators
- 756 Mixing and blending machine operators
- 757 Separating, filtering, and clarifying machine operators
- 758 Compressing and compacting machine operators
- 759 Painting and paint spraying machine operators

- 763 Roasting and baking machine operators, food
- 764 Washing, cleaning, and pickling machine operators
- 765 Folding machine operators
- 766 Furnace, kiln, and oven operators, except food
- 768 Crushing and grinding machine operators
- 769 Slicing and cutting machine operators
- 773 Motion picture projectionists
- 774 Photographic process machine operators

Miscellaneous and Not Specified Machine Operators:

- 777 Miscellaneous machine operators
- 779 Machine operators, n.s.

Fabricators, Assemblers, and Hand Working Occupations:

- 783 Welders and cutters
- 784 Solderers and blazers
- 785 Assemblers
- 786 Hand cutting and trimming occupations
- 787 Hand molding, casting, and forming occupations
- 789 Hand painting, coating, and decorating occupations
- 793 Hand engraving and printing occupations
- 794 Hand grinding and polishing occupations
- 795 Miscellaneous hand working occupations

Production Inspectors, Testers, Samplers, and Weighers:

- 796 Production inspectors, checkers, and examiners
- 797 Production testers
- 798 Production samplers and weighers
- 799 Graders and sorters, except agricultural

Transportation and Material Moving Occupations

Motor Vehicle Operators:

- 803 Supervisors, motor vehicle operators
- 804 Truck drivers, heavy
- 805 Truck drivers, light
- 806 Driver-sales workers
- 808 Bus drivers
- 809 Taxicab drivers and chauffeurs
- 813 Parking lot attendants
- 814 Motor transportation occupations, n.e.c.

Transportation Occupations, Except Motor Vehicles:

Rail Transportation Occupations:

- 823 Railroad conductors and yardmasters
- 824 Locomotive operating occupations
- 825 Railroad brake, signal, and switch operators
- 826 Rail vehicle operators, n.e.c.

Water Transportation Occupations:

- 828 Ship captains and mates, except fishing boats
- 829 Sailors and deckhands

- 833 Marine engineers
- 834 Bridge, lock, and lighthouse tenders

Material Moving Equipment Operators:

- 843 Supervisors, material moving equipment operators
- 844 Operating engineers
- 845 Longshore equipment operators
- 848 Hoist and winch operators
- 849 Crane and tower operators
- 853 Excavating and loading machine operators
- 855 Grader, dozer, and scraper operators
- 856 Industrial truck and tractor equipment operators
- 859 Misc. material moving equipment operators

Handlers, Equipment Cleaners, Helpers, and Laborers

- 863 Supervisors, handlers, equipment cleaners, and laborers, n.e.c.
- 864 Helpers, mechanics and repairers

Helpers, Construction and Extractive Occupations:

- 865 Helpers, construction trades
- 866 Helpers, surveyor
- 867 Helpers, extractive occupations
- 869 Construction laborers
- 873 Production helpers

Freight, Stock, and Material Handlers:

- 875 Garbage collectors
- 876 Stevedores
- 877 Stock handlers and baggers
- 878 Machine feeders and offbearers
- 883 Freight, stock, and material handlers, n.e.c.
- 885 Garage and service station related occupations
- 887 Vehicle washers and equipment cleaners
- 888 Hand packers and packagers
- 889 Laborers, except construction

- 900 Members of the Armed Forces
- 999 Not Ascertained occupation
- 998 Don't Know occupation
- 000 N/A (not applicable)

**C. HRS Unmasked Industry (1980 Census Industrial Classification Codes)**

In 1992, 1994, and 1996, industry information for respondents belonging to the HRS cohort was coded using the 3-digit 1980 Census Industrial Classification codes.<sup>9</sup> For surveys conducted in 1998, 2000, 2002, and 2004v1, these codes were used for all cohort members.

AGRICULTURE, FORESTRY, AND FISHERIES

- 010 Agricultural production, crops

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<sup>9</sup> Note: The abbreviation "n.s." means "not specified" and "n.e.c." means "not elsewhere classified."

- 011 Agricultural production, livestock
- 020 Agricultural services, except horticultural
- 021 Horticultural services
- 030 Forestry
- 031 Fishing, hunting, and trapping

#### MINING

- 040 Metal mining
- 041 Coal mining
- 042 Crude petroleum and natural gas extraction
- 050 Nonmetallic mining and quarrying, except fuel

#### CONSTRUCTION

- 060 All construction

#### MANUFACTURING

##### Non-durable goods

##### Food and kindred products:

- 100 Meat products
- 101 Dairy products
- 102 Canned and preserved fruits and vegetables
- 110 Grain mill products
- 111 Bakery products
- 112 Sugar and confectionery products
- 120 Beverage industries
- 121 Miscellaneous food preparations and kindred products
- 122 Food industries, n.s.
- 130 Tobacco manufactures

##### Textile mill products:

- 132 Knitting mills
- 140 Dyeing and finishing textiles, except wool and knit goods
- 141 Floor coverings, except hard surface
- 142 Yarn, thread, and fabric mills
- 150 Miscellaneous textile mill products

##### Apparel and other finished textile products:

- 151 Apparel and accessories, except knit
- 152 Miscellaneous fabricated textile products

##### Paper and allied products:

- 160 Pulp, paper, and paperboard mills
- 161 Miscellaneous paper and pulp products
- 162 Paperboard containers and boxes

##### Printing, publishing, and allied industries:

- 171 Newspaper publishing and printing
- 172 Printing, publishing, and allied industries, except newspapers



Chemicals and allied products:

- 180 Plastics, synthetics, and resins
- 181 Drugs
- 182 Soaps and cosmetics
- 190 Paints, varnishes, and related products
- 191 Agricultural chemicals
- 192 Industrial and miscellaneous chemicals

Petroleum and coal products:

- 200 Petroleum refining
- 201 Miscellaneous petroleum and coal products

Rubber and miscellaneous plastics products:

- 210 Tires and inner tubes
- 211 Other rubber products, and plastics footwear and belting
- 212 Miscellaneous plastics products

Leather and leather products:

- 220 Leather tanning and finishing
- 221 Footwear, except rubber and plastic
- 222 Leather products, except footwear

Durable Goods

Lumber and wood products, except furniture:

- 230 Logging
- 231 Sawmills, planing mills, and millwork
- 232 Wood buildings and mobile homes
- 241 Miscellaneous wood products
- 242 Furniture and fixtures

Stone, clay, glass, and concrete products:

- 250 Glass and glass products
- 251 Cement, concrete, gypsum, and plaster products
- 252 Structural clay products
- 261 Pottery and related products
- 262 Miscellaneous nonmetallic mineral and stone products

Metal industries:

- 270 Blast furnaces, steelworks, rolling and finishing mills
- 271 Iron and steel foundries
- 272 Primary aluminum industries
- 280 Other primary metal industries
- 281 Cutlery, hand tools, and other hardware
- 282 Fabricated structural metal products
- 290 Screw machine products
- 291 Metal forgings and stampings
- 292 Ordnance
- 300 Miscellaneous fabricated metal products
- 301 Metal industries, n.s.

Machinery, except electrical:

- 310 Engines and turbines

- 311 Farm machinery and equipment
- 312 Construction and material handling machines
- 320 Metalworking machinery
- 321 Office and accounting machines
- 322 Electronic computing equipment
- 331 Machinery, except electrical, n.e.c.
- 332 Machinery, n.s.

Electrical machinery, equipment, and supplies:

- 340 Household appliances
- 341 Radio, T.V., and communication equipment
- 342 Electrical machinery, equipment, and supplies, n.e.c.
- 350 Electrical machinery, equipment, and supplies, n.s.

Transportation equipment:

- 351 Motor vehicles and motor vehicle equipment
- 352 Aircraft and parts
- 360 Ship and boat building and repairing
- 361 Railroad locomotives and equipment
- 362 Guided missiles, space vehicles, and parts
- 370 Cycles and miscellaneous transportation equipment

Professional and photographic equipment, and watches:

- 371 Scientific and controlling instruments
- 372 Optical and health services and supplies
- 380 Photographic equipment and supplies
- 381 Watches, clocks, and clockwork-operated devices
- 382 Professional equipment, n.s.
- 390 Toys, amusement, and sporting goods
- 391 Miscellaneous manufacturing industries
- 392 Manufacturing industries, n.s.

## TRANSPORTATION, COMMUNICATIONS, AND OTHER PUBLIC UTILITIES

Transportation:

- 400 Railroads
- 401 Bus service and urban transit
- 402 Taxicab service
- 410 Trucking service
- 411 Warehousing and storage
- 412 U.S. Postal Service
- 420 Water transportation
- 421 Air transportation
- 422 Pipelines, except natural gas
- 432 Services incidental to transportation

Communications:

- 440 Radio and television broadcasting
- 441 Telephone
- 442 Telegraph and miscellaneous communication services

Utilities and sanitary services:

- 460 Electric light and power

- 461 Gas and steam supply systems
- 462 Electric and gas, and other combinations
- 470 Water supply and irrigation
- 471 Sanitary services
- 472 Utilities, n.s.

WHOLESALE TRADE

Durable goods

- 500 Motor vehicles and equipment
- 501 Furniture and home furnishings
- 502 Lumber and construction materials
- 510 Sporting goods, toys, and hobby goods
- 511 Metals and minerals, except petroleum
- 512 Electrical goods
- 521 Hardware, plumbing and heating supplies
- 522 Electrical and hardware products, n.s.
- 530 Machinery, equipment, and supplies
- 531 Scrap and waste materials
- 532 Miscellaneous wholesale, durable goods

Non-durable goods

- 540 Paper and paper products
- 541 Drugs, chemicals, and allied products
- 542 Apparel, fabrics, and notions
- 550 Groceries and related products
- 551 Farm products--raw materials
- 552 Petroleum products
- 560 Alcoholic beverages
- 561 Farm supplies
- 562 Miscellaneous wholesale, non-durable goods
- 571 Wholesale trade, n.s.

RETAIL TRADE

- 580 Lumber and building material retailing
- 581 Hardware stores
- 582 Retail nurseries and garden stores
- 590 Mobile home dealers
- 591 Department stores
- 592 Variety stores
- 600 Miscellaneous general merchandise stores
- 601 Grocery stores
- 602 Dairy products stores
- 610 Retail bakeries
- 611 Food stores, n.e.c.
- 612 Motor vehicle dealers
- 620 Auto and home supply stores
- 621 Gasoline service stations
- 622 Miscellaneous vehicle dealers
- 630 Apparel and accessory stores, except shoe
- 631 Shoe stores
- 632 Furniture and home furnishings stores

- 640 Household appliances, T.V., and radio stores
- 641 Eating and drinking places
- 642 Drug stores
- 650 Liquor stores
- 651 Sporting goods, bicycles, and hobby stores
- 652 Book and stationery stores
- 660 Jewelry stores
- 661 Sewing, needlework, and piece goods stores
- 662 Mail order houses
- 670 Vending machine operators
- 671 Direct selling establishments
- 672 Fuel and ice dealers
- 681 Retail florists
- 682 Miscellaneous retail stores
- 691 Retail trade, n.s.

#### FINANCE, INSURANCE, AND REAL ESTATE

- 700 Banking
- 701 Savings and loan associations
- 702 Credit agencies, n.e.c.
- 710 Security, commodity brokerage, and investment companies
- 711 Insurance
- 712 Real estate, including real estate-insurance-law offices

#### BUSINESS AND REPAIR SERVICES

- 721 Advertising
- 722 Services to dwellings and other buildings
- 730 Commercial research, development, and testing labs
- 731 Personnel supply services
- 732 Business management and consulting services
- 740 Computer and data processing services
- 741 Detective and protective services
- 742 Business services, n.e.c.
- 750 Automotive services, except repair
- 751 Automotive repair shops
- 752 Electrical repair shops
- 760 Miscellaneous repair services

#### PERSONAL SERVICES

- 761 Private households
- 762 Hotels and motels
- 770 Lodging places, except hotels and motels
- 771 Laundry, cleaning, and garment services
- 772 Beauty shops
- 780 Barber shops
- 781 Funeral service and crematories
- 782 Shoe repair shops
- 790 Dressmaking shops
- 791 Miscellaneous personal services

ENTERTAINMENT AND RECREATION SERVICES

- 800 Theaters and motion pictures
- 801 Bowling alleys, billiard and pool parlors
- 802 Miscellaneous entertainment and recreation services

PROFESSIONAL AND RELATED SERVICES

- 812 Offices of physicians
- 820 Offices of dentists
- 821 Offices of chiropractors
- 822 Offices of optometrists
- 830 Offices of health practitioners, n.e.c.
- 831 Hospitals
- 832 Nursing and personal care facilities
- 840 Health services, n.e.c.
- 841 Legal services
- 842 Elementary and secondary schools
- 850 Colleges and universities
- 851 Business, trade, and vocational schools
- 852 Libraries
- 860 Educational services, n.e.c.
- 861 Job training and vocational rehabilitation services
- 862 Child day care services
- 870 Residential care facilities, without nursing
- 871 Social services, n.e.c.
- 872 Museums, art galleries, and zoos
- 880 Religious organizations
- 881 Membership organizations
- 882 Engineering, architectural, and surveying services
- 890 Accounting, auditing, and bookkeeping services
- 891 Noncommercial educational and scientific research
- 892 Miscellaneous professional and related services

PUBLIC ADMINISTRATION

- 900 Executive and legislative offices
- 901 General government, n.e.c.
- 910 Justice, public order, and safety
- 921 Public finance, taxation, and monetary policy
- 922 Administration of human resources programs
- 930 Administration of environmental quality and housing programs
- 931 Administration of economic programs
- 932 National security and international affairs
- 998 Don't Know industry
- 999 Not Ascertained industry

### ***D. HRS 2004 v2, 2006, 2008 and 2010 v1 Unmasked Occupation (2000 Census Occupational Categories)***

In 2004 v2, 2006, 2008 and 2010 v1, HRS study respondent occupation information was coded using the 3-digit 2000 Census Occupational Classification System.<sup>10</sup>

#### **Code Description**

##### **MGR: Management Occupations**

001	Chief Executives
002	General and Operations Managers
003	Legislators
004	Advertising and Promotions Managers
005	Marketing and Sales Managers
006	Public Relations Managers
010	Administrative Services Managers
011	Computer and Information Systems Managers
012	Financial Managers
013	Human Resources Managers
014	Industrial Production Managers
015	Purchasing Managers
016	Transportation, Storage, and Distribution Managers
020	Farm, Ranch, and Other Agricultural Managers
021	Farmers and Ranchers
022	Constructions Managers
023	Education Administrators
030	Engineering Managers
031	Food Service Managers
032	Funeral Directors
033	Gaming Managers
034	Lodging Managers
035	Medical and Health Services Managers
036	Natural Science Managers
040	Postmasters and Mail Superintendents
041	Property, Real Estate, and Community Association Managers
042	Social and Community Service Managers
043	Managers, All Other

##### **BUS: Business Operations Specialists**

050	Agents and Business Managers of Artists, Performers, and Athletes
051	Purchasing Agents and Buyers, Farm Products
052	Wholesale and Retail Buyers, Except Farm Products
053	Purchasing Agents, Except Wholesale, Retail, and Farm Products
054	Claims Adjusters, Appraisers, Examiners, and Investigators
056	Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation
060	Cost Estimators
062	Human Resources, Training, and Labor Relations Specialists
070	Logisticians

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<sup>10</sup>“The census occupational classification system was developed to be consistent with the Standard Occupational Classification (SOC) Manual: 2000. It has 509 separate categories arranged into the 23 major groups of the SOC.” Source: *Overview 2002*, <http://www.census.gov/hhes/www/ioindex/ioindex02/overview02.html>

- 071 Management Analysts
- 072 Meeting and Convention Planners
- 073 Other Business Operations Specialists

**FIN: Financial Specialists**

- 080 Accountants and Auditors
- 081 Appraisers and Assessors of Real Estate
- 082 Budget Analysts
- 083 Credit Analysts
- 084 Financial Analysts
- 085 Personal Financial Advisors
- 086 Insurance Underwriters
- 090 Financial Examiners
- 091 Loan Counselors and Officers
- 093 Tax Examiners, Collectors, and Revenue Agents
- 094 Tax Preparers
- 095 Financial Specialists, All Other

**CMM: Computer and Mathematical Occupations**

- 100 Computer Scientists and Systems Analysts
- 101 Computer Programmers
- 102 Computer Software Engineers
- 104 Computer Support Specialists
- 106 Database Administrators
- 110 Network and Computer Systems Administrators
- 111 Network Systems and Data Communications Analysts
- 120 Actuaries
- 121 Mathematicians
- 122 Operations Research Analysts
- 123 Statisticians
- 124 Miscellaneous Mathematical Scientists and Technicians

**ENG: Architecture and Engineering Occupations**

- 130 Architects, Except Naval
- 131 Surveyors, Cartographers, and Photogrammetrists
- 132 Aerospace Engineers
- 133 Agricultural Engineers
- 134 Biomedical Engineers
- 135 Chemical Engineers
- 136 Civil Engineers
- 140 Computer Hardware Engineers
- 141 Electrical and Electronics Engineers
- 142 Environmental Engineers
- 143 Industrial Engineers, including Health and Safety
- 144 Marine Engineers and Naval Architects
- 145 Materials Engineers
- 146 Mechanical Engineers
- 150 Mining and Geological Engineers, Including Mining Safety Engineers
- 151 Nuclear Engineers
- 152 Petroleum Engineers
- 153 Engineers, All Other
- 154 Drafters
- 155 Engineering Technicians, Except Drafters

156 Surveying and Mapping Technicians

**SCI: Life, Physical, and Social Science Occupations**

160 Agricultural and Food Scientists  
161 Biological Scientists  
164 Conservation Scientists and Foresters  
165 Medical Scientists  
170 Astronomers and Physicists  
171 Atmospheric and Space Scientists  
172 Chemists and Materials Scientists  
174 Environmental Scientists and Geoscientists  
176 Physical Scientists, All Other  
180 Economists  
181 Market and Survey Researchers  
182 Psychologists  
183 Sociologists  
184 Urban and Regional Planners  
186 Miscellaneous Social Scientists and Related Workers  
190 Agricultural and Food Science Technicians  
191 Biological Technicians  
192 Chemical Technicians  
193 Geological and Petroleum Technicians  
194 Nuclear Technicians  
196 Other Life, Physical, and Social Science Technicians

**CMS: Community and Social Services Occupations**

200 Counselors  
201 Social Workers  
202 Miscellaneous Community and Social Service Specialists  
204 Clergy  
205 Directors, Religious Activities and Education  
206 Religious Workers, All Other

**LGL: Legal Occupations**

210 Lawyers  
211 Judges, Magistrates, and Other Judicial Workers  
214 Paralegals and Legal Assistants  
215 Miscellaneous Legal Support Workers

**EDU: Education, Training, and Library Occupations**

220 Postsecondary Teachers  
230 Preschool and Kindergarten Teachers  
231 Elementary and Middle School Teachers  
232 Secondary School Teachers  
233 Special Education Teachers  
234 Other Teachers and Instructors  
240 Archivists, Curators, and Museum Technicians  
243 Librarians  
244 Library Technicians  
254 Teacher Assistants  
255 Other Education, Training, and Library Workers

**ENT: Arts, Design, Entertainment, Sports, and Media Occupations**



260 Artists and Related Workers  
263 Designers  
270 Actors  
271 Producers and Directors  
272 Athletes, Coaches, Umpires, and Related Workers  
274 Dancers and Choreographers  
275 Musicians, Singers, and Related Workers  
276 Entertainers and Performers, Sports and Related Workers, All Other  
280 Announcers  
281 News Analysts, Reporters and Correspondents  
282 Public Relations Specialists  
283 Editors  
284 Technical Writers  
285 Writers and Authors  
286 Miscellaneous Media and Communication Workers  
290 Broadcast and Sound Engineering Technicians and Radio Operators  
291 Photographers  
292 Television, Video, and Motion Picture Camera Operators and Editors  
296 Media and Communication Equipment Workers, All Other

**MED: Healthcare Practitioners and Technical Occupations**

300 Chiropractors  
301 Dentists  
303 Dietitians and Nutritionists  
304 Optometrists  
305 Pharmacists  
306 Physicians and Surgeons  
311 Physician Assistants  
312 Podiatrists  
313 Registered Nurses  
314 Audiologists  
315 Occupational Therapists  
316 Physical Therapists  
320 Radiation Therapists  
321 Recreational Therapists  
322 Respiratory Therapists  
323 Speech-Language Pathologists  
324 Therapists, All Other  
325 Veterinarians  
326 Health Diagnosing and Treating Practitioners, All Other  
330 Clinical Laboratory Technologists and Technicians  
331 Dental Hygienists  
332 Diagnostic Related Technologists and Technicians  
340 Emergency Medical Technicians and Paramedics  
341 Health Diagnosing and Treating Practitioner Support Technicians  
350 Licensed Practical and Licensed Vocational Nurses  
351 Medical Records and Health Information Technicians  
352 Opticians, Dispensing  
353 Miscellaneous Health Technologists and Technicians  
354 Other Healthcare Practitioners and Technical Occupations

**HLS: Healthcare Support Occupations**

360 Nursing, Psychiatric, and Home Health Aides

- 361 Occupational Therapist Assistants and Aides
- 362 Physical Therapist Assistants and Aides
- 363 Massage Therapists
- 364 Dental Assistants
- 365 Medical Assistants and Other Healthcare Support Occupations

**PRT: Protective Service Occupations**

- 370 First-Line Supervisors/Managers of Correctional Officers
- 371 First-Line Supervisors/Managers of Police and Detectives
- 372 First-Line Supervisors/Managers of Fire Fighting and Prevention Workers
- 373 Supervisors, Protective Service Workers, All Other
- 374 Fire Fighters
- 375 Fire Inspectors
- 380 Bailiffs, Correctional Officers, and Jailers
- 382 Detectives and Criminal Investigators
- 383 Fish and Game Wardens
- 384 Parking Enforcement Workers
- 385 Police and Sheriff's Patrol Officers
- 386 Transit and Railroad Police
- 390 Animal Control Workers
- 391 Private Detectives and Investigators
- 392 Security Guards and Gaming Surveillance Officers
- 394 Crossing Guards
- 395 Lifeguards and Other Protective Service Workers

**EAT: Food Preparation and Serving Occupations**

- 400 Chefs and Head Cooks
- 401 First-Line Supervisors/Managers of Food Preparation and Serving Workers
- 402 Cooks
- 403 Food Preparation Workers
- 404 Bartenders
- 405 Combined Food Preparation and Serving Workers, Including Fast Food
- 406 Counter Attendant, Cafeteria, Food Concession, and Coffee Shop
- 411 Waiters and Waitresses
- 412 Food Servers, Nonrestaurant
- 413 Dining Room and Cafeteria Attendants and Bartender Helpers
- 414 Dishwashers
- 415 Host and Hostesses, Restaurant, Lounge, and Coffee Shop
- 416 Food Preparation and Serving Related Workers, All Other

**CLN: Building and Grounds Cleaning and Maintenance Occupations**

- 420 First-Line Supervisors/Managers of Housekeeping and Janitorial Workers
- 421 First-Line Supervisors/Managers of Landscaping, Lawn Service, and Groundskeeping Workers
- 422 Janitors and Building Cleaners
- 423 Maids and Housekeeping Cleaners
- 424 Pest Control Workers
- 425 Grounds Maintenance Workers

**PRS: Personal Care and Service Occupations**

- 430 First-Line Supervisors/Managers of Gaming Workers
- 432 First-Line Supervisors/Managers of Personal Service Workers
- 434 Animal Trainers
- 435 Nonfarm Animal Caretakers

- 440 Gaming Services Workers
- 441 Motion Picture Projectionists
- 442 Ushers, Lobby Attendants, and Ticket Takers
- 443 Miscellaneous Entertainment Attendants and Related Workers
- 446 Funeral Service Workers
- 450 Barbers
- 451 Hairdressers, Hairstylists, and Cosmetologists
- 452 Miscellaneous Personal Appearance Workers
- 453 Baggage Porters, Bellhops, and Concierges
- 454 Tour and Travel Guides
- 455 Transportation Attendants
- 460 Child Care Workers
- 461 Personal and Home Care Aides
- 462 Recreation and Fitness Workers
- 464 Residential Advisors
- 465 Personal Care and Service Workers, All Other

**SAL: Sales Occupations**

- 470 First-Line Supervisors/Managers of Retail Sales Workers
- 471 First-Line Supervisors/Managers of Non-Retail Sales
- 472 Cashiers
- 474 Counter and Rental Clerks
- 475 Parts Salespersons
- 476 Retail Salespersons
- 480 Advertising Sales Agents
- 481 Insurance Sales Agents
- 482 Securities, Commodities, and Financial Services Sales Agents
- 483 Travel Agents
- 484 Sales Representatives, Services, All Other
- 485 Sales Representatives, Wholesale and Manufacturing
- 490 Models, Demonstrators, and Product Promoters
- 492 Real Estate Brokers and Sales Agents
- 493 Sales Engineers
- 494 Telemarketers
- 495 Door-to-Door Sales Workers, News and Street Vendors, and Related Workers
- 496 Sales and Related Workers, All Other

**OFF: Office and Administrative Support Occupations**

- 500 First-Line Supervisors/Managers of Office and Administrative Support Workers
- 501 Switchboard Operators, Including Answering Service
- 502 Telephone Operators
- 503 Communications Equipment Operators, All Other
- 510 Bill and Account Collectors
- 511 Billing and Posting Clerks and Machine Operators
- 512 Bookkeeping, Accounting, and Auditing Clerks
- 513 Gaming Cage Workers
- 514 Payroll and Timekeeping Clerks
- 515 Procurement Clerks
- 516 Tellers
- 520 Brokerage Clerks
- 521 Correspondence Clerks
- 522 Court, Municipal, and License Clerks
- 523 Credit Authorizers, Checkers, and Clerks

524 Customer Service Representatives  
 525 Eligibility Interviewers, Government Programs  
 526 File Clerks  
 530 Hotel, Motel, and Resort Desk Clerks  
 531 Interviewers, Except Eligibility and Loan  
 532 Library Assistants, Clerical  
 533 Loan Interviewers and Clerks  
 534 New Account Clerks  
 535 Order Clerks  
 536 Human Resources Assistants, Except Payroll and Timekeeping  
 540 Receptionists and Information Clerks  
 541 Reservation and Transportation Ticket Agents and Travel Clerks  
 542 Information and Record Clerks, All Other  
 550 Cargo and Freight Agents  
 551 Couriers and Messengers  
 552 Dispatchers  
 553 Meter Readers, Utilities  
 554 Postal Service Clerks  
 555 Postal Service Mail Carriers  
 556 Postal Service Mail Sorters, Processors, and Processing Machine Operators  
 560 Production, Planning, and Expediting Clerks  
 561 Shipping, Receiving, and Traffic Clerks  
 562 Stock Clerks and Order Fillers  
 563 Weighers, Measurers, Checkers, and Samplers, Recordkeeping  
 570 Secretaries and Administrative Assistants  
 580 Computer Operators  
 581 Data Entry Keyers  
 582 Word Processors and Typists  
 583 Desktop Publishers  
 584 Insurance Claims and Policy Processing Clerks  
 585 Mail Clerks and Mail Machine Operators, Except Postal Service  
 586 Office Clerks, General  
 590 Office Machine Operators, Except Computer  
 591 Proofreaders and Copy Markers  
 592 Statistical Assistants  
 593 Office and Administrative Support Workers, All Other

**FFF: Farming, Fishing, and Forestry Occupations**

600 First-Line Supervisors/Managers/Contractors of Farming, Fishing, and Forestry Workers  
 601 Agricultural Inspectors  
 602 Animal Breeders  
 604 Graders and Sorters, Agricultural Products  
 605 Other Agricultural Workers  
 610 Fishers and Related Fishing Workers  
 611 Hunters and Trappers  
 612 Forest and Conservation Workers  
 613 Logging Workers

**CON: Construction Trades**

620 First-Line Supervisors/Managers of Construction Trades and Extraction Workers  
 621 Boilermakers  
 622 Brickmasons, Blockmasons, and Stonemasons  
 623 Carpenters

- 624 Carpet, Floor, and Tile Installers and Finishers
- 625 Cement Masons, Concrete Finishers, and Terrazzo Workers
- 626 Construction Laborers
- 630 Paving, Surfacing, and Tamping Equipment Operators
- 631 Pile-Driver Operators
- 632 Operating Engineers and Other Construction Equipment Operators
- 633 Drywall Installers, Ceiling Tile Installers, and Tapers
- 635 Electricians
- 636 Glaziers
- 640 Insulation Workers
- 642 Painters, Construction and Maintenance
- 643 Paperhangers
- 644 Pipelayers, Plumbers, Pipefitters, and Steamfitters
- 646 Plasterers and Stucco Masons
- 650 Reinforcing Iron and Rebar Workers
- 651 Roofers
- 652 Sheet Metal Workers
- 653 Structural Iron and Steel Workers
- 660 Helpers, Construction Trades
- 666 Construction and Building Inspectors
- 670 Elevator Installers and Repairers
- 671 Fence Erectors
- 672 Hazardous Materials Removal Workers
- 673 Highway Maintenance Workers
- 674 Rail-Track Laying and Maintenance Equipment Operators
- 675 Septic Tank Servicers and Sewer Pipe Cleaners
- 676 Miscellaneous Construction and Related Workers

**EXT: Extraction Workers**

- 680 Derrick, Rotary Drill, and Service Unit Operators, Oil, Gas, and Mining
- 682 Earth Drillers, Except Oil and Gas
- 683 Explosives Workers, Ordnance Handling Experts, and Blasters
- 684 Mining Machine Operators
- 691 Roof Bolters, Mining
- 692 Roustabouts, Oil and Gas
- 693 Helpers--Extraction Workers
- 694 Other Extraction Workers

**RPR: Installation, Maintenance, and Repair Workers**

- 700 First-Line Supervisors/Managers of Mechanics, Installers, and Repairers
- 701 Computer, Automated Teller, and Office Machine Repairers
- 702 Radio and Telecommunications Equipment Installers and Repairers
- 703 Avionics Technicians
- 704 Electric Motor, Power Tool, and Related Repairers
- 705 Electrical and Electronics Installers and Repairers, Transportation Equipment
- 710 Electrical and Electronics Repairers, Industrial and Utility
- 711 Electronic Equipment Installers and Repairers, Motor Vehicles
- 712 Electronic Home Entertainment Equipment Installers and Repairers
- 713 Security and Fire Alarm Systems Installers
- 714 Aircraft Mechanics and Service Technicians
- 715 Automotive Body and Related Repairers
- 716 Automotive Glass Installers and Repairers
- 720 Automotive Service Technicians and Mechanics

721 Bus and Truck Mechanics and Diesel Engine Specialists  
 722 Heavy Vehicle and Mobile Equipment Service Technicians and Mechanics  
 724 Small Engine Mechanics  
 726 Miscellaneous Vehicle and Mobile Equipment Mechanics, Installers, and Repairers  
 730 Control and Valve Installers and Repairers  
 731 Heating, Air Conditioning, and Refrigeration Mechanics and Installers  
 732 Home Appliance Repairers  
 733 Industrial and Refractory Machinery Mechanics  
 734 Maintenance and Repair Workers, General  
 735 Maintenance Workers, Machinery  
 736 Millwrights  
 741 Electrical Power-Line Installers and Repairers  
 742 Telecommunications Line Installers and Repairers  
 743 Precision Instrument and Equipment Repairers  
 751 Coin, Vending, and Amusement Machine Servicers and Repairers  
 752 Commercial Divers  
 754 Locksmiths and Safe Repairers  
 755 Manufactured Building and Mobile Home Installers  
 756 Riggers  
 760 Signal and Track Switch Repairers  
 761 Helpers--Installation, Maintenance, and Repair Workers  
 762 Other Installation, Maintenance, and Repair Workers

**PRD: Production Occupations**

770 First-Line Supervisors/Managers of Production and Operating Workers  
 771 Aircraft Structure, Surfaces, Rigging, and Systems Assemblers  
 772 Electrical, Electronics, and Electromechanical Assemblers  
 773 Engine and Other Machine Assemblers  
 774 Structural Metal Fabricators and Fitters  
 775 Miscellaneous Assemblers and Fabricators  
 780 Bakers  
 781 Butchers and Other Meat, Poultry, and Fish Processing Workers  
 783 Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders  
 784 Food Batchmakers  
 785 Food Cooking Machine Operators and Tenders  
 790 Computer Control Programmers and Operators  
 792 Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic  
 793 Forging Machine Setters, Operators, and Tenders, Metal and Plastic  
 794 Rolling Machine Setters, Operators, and Tenders, metal and Plastic  
 795 Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic  
 796 Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic  
 800 Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic  
 801 Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic  
 802 Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic  
 803 Machinists  
 804 Metal Furnace and Kiln Operators and Tenders  
 806 Model Makers and Patternmakers, Metal and Plastic  
 810 Molders and Molding Machine Setters, Operators, and Tenders, Metal and Plastic  
 812 Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic  
 813 Tool and Die Makers  
 814 Welding, Soldering, and Brazing Workers  
 815 Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic  
 816 Lay-Out Workers, Metal and Plastic

820 Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic  
821 Tool Grinders, Filers, and Sharpeners  
822 Metalworkers and Plastic Workers, All Other  
823 Bookbinders and Bindery Workers  
824 Job Printers  
825 Prepress Technicians and Workers  
826 Printing Machine Operators  
830 Laundry and Dry-Cleaning Workers  
831 Pressers, Textile, Garment, and Related Materials  
832 Sewing Machine Operators  
833 Shoe and Leather Workers and Repairers  
834 Shoe Machine Operators and Tenders  
835 Tailors, Dressmakers, and Sewers  
836 Textile Bleaching and Dyeing Machine Operators and Tenders  
840 Textile Cutting Machine Setters, Operators, and Tenders  
841 Textile Knitting and Weaving Machine Setters, Operators, and Tenders  
842 Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders  
843 Extruding and Forming Machine Setters, Operators, and Tenders, Synthetic and Glass Fibers  
844 Fabric and Apparel Patternmakers  
845 Upholsterers  
846 Textile, Apparel, and Furnishings Workers, All Other  
850 Cabinetmakers and Bench Carpenters  
851 Furniture Finishers  
852 Model Makers and Patternmakers, Wood  
853 Sawing Machine Setters, Operators, and Tenders, Wood  
854 Woodworking Machine Setters, Operators, and Tenders, Except Sawing  
855 Woodworkers, All Other  
860 Power Plant Operators, Distributors, and Dispatchers  
861 Stationary Engineers and Boiler Operators  
862 Water and Liquid Waste Treatment Plant and System Operators  
863 Miscellaneous Plant and System Operators  
864 Chemical Processing Machine Setters, Operators, and Tenders  
865 Crushing, Grinding, Polishing, Mixing, and Blending Workers  
871 Cutting Workers  
872 Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders  
873 Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders  
874 Inspectors, Testers, Sorters, Samplers, and Weighers  
875 Jewelers and Precious Stone and Metal Workers  
876 Medical, Dental, and Ophthalmic Laboratory Technicians  
880 Packaging and Filling Machine Operators and Tenders  
881 Painting Workers  
883 Photographic Process Workers and Processing Machine Operators  
884 Semiconductor Processors  
885 Cementing and Gluing Machine Operators and Tenders  
886 Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders  
890 Cooling and Freezing Equipment Operators and Tenders  
891 Etchers and Engravers  
892 Molders, Shapers, and Casters, Except Metal and Plastic  
893 Paper Goods Machine Setters, Operators, and Tenders  
894 Tire Builders  
895 Helpers--Production Workers  
896 Production Workers, All Other

**TRN: Transportation and Material Moving Occupations**

900	Supervisors, Transportation and Material Moving Workers
903	Aircraft Pilots and Flight Engineers
904	Air Traffic Controllers and Airfield Operations Specialists
911	Ambulance Drivers and Attendants, Except Emergency Medical Technicians
912	Bus Drivers
913	Driver/Sales Workers and Truck Drivers
914	Taxi Drivers and Chauffeurs
915	Motor Vehicle Operators, All Other
920	Locomotive Engineers and Operators
923	Railroad Brake, Signal, and Switch Operators
924	Railroad Conductors and Yardmasters
926	Subway, Streetcar, and Other Rail Transportation Workers
930	Sailors and Marine Oilers
931	Ship and Boat Captains and Operators
933	Ship Engineers
934	Bridge and Lock Tenders
935	Parking Lot Attendants
936	Service Station Attendants
941	Transportation Inspectors
942	Other Transportation Workers
950	Conveyor Operators and Tenders
951	Crane and Tower Operators
952	Dredge, Excavating, and Loading Machine Operators
956	Hoist and Winch Operators
960	Industrial Truck and Tractor Operators
961	Cleaners of Vehicles and Equipment
962	Laborers and Freight, Stock, and Material Movers, Hand
963	Machine Feeders and Off bearers
964	Packers and Packagers, Hand
965	Pumping Station Operators
972	Refuse and Recyclable Material Collectors
973	Shuttle Car Operators
974	Tank Car, Truck, and Ship Loaders
975	Material Moving Workers, All Other

**MIL: Military Specific Occupations**

980	Military Officer Special and Tactical Operations Leaders/Managers
981	First-Line Enlisted Military Supervisors/Managers
982	Military Enlisted Tactical Operations and Air/Weapons Specialists and Crew Members
983	Military, Rank Not Specified (Census only)
999	DK; NA; Don't know; Not ascertained

***E. HRS 2004 v2, 2006, 2008 and 2010 v1 Unmasked Industry (2002 Census Industry Classification System)***

For 2004 v2, 2006, 2008 and 2010 v1, industry information reported by HRS respondents was coded using the 2002 Census Industry Classification System. This coding system was derived from the 2002 North American Industry Classification System (NAICS) and was introduced into the Current Population Survey beginning in 2003.<sup>11</sup>

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<sup>11</sup> "The North American Industry Classification System (NAICS), prepared by the Office of Management and Budget and published in the North American Industry Classification System (NAICS) Manual, is the standard for industrial classification



2002 Census Code	Description	2002 NAICS Code
<b>Agriculture, Forestry, Fishing, and Hunting</b>		
017	Crop production	111
018	Animal production	112
019	Forestry except logging	1131, 1132
027	Logging	1133
028	Fishing, hunting, and trapping	114
029	Support activities for agriculture and forestry	115
<b>Mining</b>		
037	Oil and gas extraction	211
038	Coal mining	2121
039	Metal ore mining	2122
047	Nonmetallic mineral mining and quarrying	2123
048	Not specified type of mining	Part of 21
049	Support activities for mining	213
<b>Utilities</b>		
057	Electric power generation, transmission and distribution	Pt. 2211
058	Natural gas distribution	Pt. 2212
059	Electric and gas, and other combinations	Pts. 2211, 2212
067	Water, steam, air-conditioning, and irrigation systems	22131, 22133
068	Sewage treatment facilities	22132
069	Not specified utilities	Part of 22
<b>Construction</b>		
077	** Construction (Includes the cleaning of buildings and dwellings incidental to construction and immediately after construction)	23
<b>Manufacturing Nondurable Goods manufacturing</b>		
107	Animal food, grain and oilseed milling	3111, 3112
108	Sugar and confectionery products	3113
109	Fruit and vegetable preserving and specialty food manufacturing	3114
117	Dairy product manufacturing	3115
118	Animal slaughtering and processing	3116
119	Retail bakeries	311811
127	Bakeries, except retail	3118 exc. 311811
128	Seafood and other miscellaneous foods, n.e.c.	3117, 3119
129	Not specified food industries	Part of 311
137	Beverage manufacturing	3121
139	Tobacco manufacturing	3122
147	Fiber, yarn, and thread mills	3131

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systems in the U.S. government. The Census 2002 industrial classification system was developed using the structure of the NAICS. The census system consists of 270 categories arranged into 20 sectors. The sectors are exactly the same as those found in the NAICS." Source: *Overview 2002*, <http://www.census.gov/hhes/www/ioindex/ioindex02/overview02.html>

148	Fabric mills, except knitting	3132 exc. 31324
149	Textile and fabric finishing and coating mills	3133
157	Carpet and rug mills	31411
159	Textile product mills, except carpets and rugs	314 exc. 31411
167	Knitting mills	31324, 3151
168	Cut and sew apparel manufacturing	3152
169	Apparel accessories and other apparel manufacturing	3159
177	Footwear manufacturing	3162
179	Leather tanning and products, except footwear manufacturing	3161, 3169
187	Pulp, paper, and paperboard mills	3221
188	Paperboard containers and boxes	32221
189	Miscellaneous paper and pulp products	32222,32223, 32229
199	Printing and related support activities	3231
207	Petroleum refining	32411
209	Miscellaneous petroleum and coal products	32419
217	Resin, synthetic rubber and fibers, and filaments manufacturing	3252
218	Agricultural chemical manufacturing	3253
219	Pharmaceutical and medicine manufacturing	3254
227	Paint, coating, and adhesive manufacturing B46	3255
228	Soap, cleaning compound, and cosmetics manufacturing	3256
229	Industrial and miscellaneous chemicals	3251, 3259
237	Plastics product manufacturing	3261
238	Tire manufacturing	32621
239	Rubber products, except tires, manufacturing	32622, 32629
<b>Durable Goods Manufacturing</b>		
247	Pottery, ceramics, and related products manufacturing	32711
248	Structural clay product manufacturing	32712
249	Glass and glass product manufacturing	3272
257	Cement, concrete, lime, and gypsum product manufacturing	3273, 3274
259	Miscellaneous nonmetallic mineral product manufacturing	3279
267	Iron and steel mills and steel product manufacturing	3311, 3312
268	Aluminum production and processing	3313
269	Nonferrous metal, except aluminum, production and processing	3314
277	Foundries	3315
278	Metal forgings and stampings	3321
279	Cutlery and hand tool manufacturing	3322
287	Structural metals, and tank and shipping container manufacturing	3323, 3324
288	Machine shops; turned product; screw, nut and bolt manufacturing	3327
289	Coating, engraving, heat treating and allied activities	3328
297	Ordnance	332992 to 332995
298	Miscellaneous fabricated metal products manufacturing	3325, 3326, 3329 exc. 332992, 332993, 332994, 332995
299	Not specified metal industries	Part of 331 and 332
307	Agricultural implement manufacturing	33311
308	Construction, mining and oil field machinery manufacturing	33312, 33313
309	Commercial and service industry machinery manufacturing	3333
317	Metalworking machinery manufacturing	3335
318	Engines, turbines, and power transmission equipment manufacturing	3336
319	Machinery manufacturing, n.e.c.	3332, 3334, 3339
329	Not specified machinery manufacturing	Part of 333
336	Computer and peripheral equipment manufacturing	3341

337	Communications, audio, and video equipment manufacturing	3342, 3343
338	Navigational, measuring, electromedical, and control instruments manufacturing	3345
339	Electronic component and product manufacturing, n.e.c.	3344, 3346
347	Household appliance manufacturing	3352
349	Electrical lighting, equipment, and supplies manufacturing, n.e.c.	3351, 3353, 3359
357	Motor vehicles and motor vehicle equipment manufacturing	3361, 3362, 3363
358	Aircraft and parts manufacturing	336411 to 336413
359	Aerospace products and parts manufacturing	336414, 336415, 336419
367	Railroad rolling stock manufacturing	3365
368	Ship and boat building	3366
369	Other transportation equipment manufacturing	3369
377	Sawmills and wood preservation	3211
378	Veneer, plywood, and engineered wood products	3212
379	Prefabricated wood buildings and mobile homes	321991, 321992
387	Miscellaneous wood products	3219 exc. 321991, 321992
389	Furniture and related product manufacturing	337
396	Medical equipment and supplies manufacturing	3391
397	Toys, amusement, and sporting goods manufacturing	33992, 33993
398	Miscellaneous manufacturing, n.e.c.	3399 exc. 33992, 33993
399	Not specified manufacturing industries	Part of 31, 32, 33
<b>Wholesale Trade, Durable Goods Wholesale</b>		
407	** Motor vehicles, parts and supplies, merchant wholesalers	*4231
408	** Furniture and home furnishing, merchant wholesalers	*4232
409	** Lumber and other construction materials, merchant wholesalers	*4233
417	** Professional and commercial equipment and supplies, merchant wholesalers	*4234
418	** Metals and minerals, except petroleum, merchant wholesalers	*4235
419	** Electrical goods, merchant wholesalers	*4236
426	** Hardware, plumbing and heating equipment, and supplies, merchant wholesalers	*4237
427	** Machinery, equipment, and supplies, merchant wholesalers	*4238
428	** Recyclable material, merchant wholesalers	*42393
429	** Miscellaneous durable goods, merchant wholesalers	*4239 exc. 42393
<b>Nondurable Goods Wholesale</b>		
437	** Paper and paper products, merchant wholesalers	*4241
438	** Drugs, sundries, and chemical and allied products, merchant wholesalers	*4242, 4246
439	** Apparel, fabrics, and notions, merchant wholesalers	*4243
447	** Groceries and related products, merchant wholesalers	*4244
448	** Farm product raw materials, merchant wholesalers	*4245
449	** Petroleum and petroleum products, merchant wholesalers	*4247
456	** Alcoholic beverages, merchant wholesalers	*4248
457	** Farm supplies, merchant wholesalers	*42491
458	** Miscellaneous nondurable goods, merchant wholesalers; *** Wholesale electronic markets, agents and brokers (*4585)	*4249 exc. 42491; New industry, *4251
459	** Not specified wholesale trade	Part of 42
<b>Retail Trade</b>		
467	Automobile dealers	4411
468	Other motor vehicle dealers	4412
469	Auto parts, accessories, and tire stores	4413
477	Furniture and home furnishings stores	442

478	Household appliance stores	443111
479	Radio, TV, and computer stores	443112, 44312
487	Building material and supplies dealers	4441 exc. 44413
488	Hardware stores	44413
489	Lawn and garden equipment and supplies stores	4442
497	Grocery stores	4451
498	Specialty food stores	4452
499	Beer, wine, and liquor stores	4453
507	Pharmacies and drug stores	4461
508	Health and personal care, except drug, stores	446 exc. 44611
509	Gasoline stations	447
517	Clothing and accessories, except shoe, stores	448 exc. 44821, 4483
518	Shoe stores	44821
519	Jewelry, luggage, and leather goods stores	4483
527	Sporting goods, camera, and hobby and toy stores	44313, 45111, 45112
528	Sewing, needlework, and piece goods stores	45113
529	Music stores	45114, 45122
537	Book stores and news dealers	45121
538	****Department stores and discount stores	45211
539	Miscellaneous general merchandise stores	4529
547	Retail florists	4531
548	Office supplies and stationery stores	45321
549	Used merchandise stores	4533
557	Gift, novelty, and souvenir shops	45322
558	Miscellaneous retail stores	4539
559	*** Electronic shopping; *** Electronic auctions (*5591 ); ** Mail order houses (*5592 )	New industry, *454111; New industry, *454112; *454113
567	Vending machine operators	4542
568	Fuel dealers	45431
569	Other direct selling establishments	45439
579	Not specified retail trade	Part of 44, 45
<b>Transportation and Warehousing</b>		
607	Air transportation	481
608	Rail transportation	482
609	Water transportation	483
617	Truck transportation	484
618	Bus service and urban transit	4851, 4852, 4854, 4855, 4859
619	Taxi and limousine service	4853
627	Pipeline transportation	486
628	Scenic and sightseeing transportation	487
629	Services incidental to transportation	488
637	Postal Service	491
638	Couriers and messengers	492
639	Warehousing and storage	493
<b>Information</b>		
647	**Newspaper publishers	51111
648	**Publishing, except newspapers and software	5111 exc. 51111
649	Software publishing	5112
657	Motion pictures and video industries	5121

659	Sound recording industries	5122
667	Radio and television broadcasting and cable; *** Internet publishing and broadcasting (*6675 )	5151, 5152, 5175; New industry, *5161
668	Wired telecommunications carriers	*5171
669	Other telecommunications services; *** Internet service providers (*6692 ); **** Data processing, hosting, and related services (*6695 )	*517 exc. 5171, 5175; New industry, *5181; *5182
677	Libraries and archives	*51912
678	Other information services	*5191 exc. 51912

***Finance, Insurance, Real Estate, and Rental and Leasing***

**Finance and Insurance**

687	Banking and related activities	521,52211, 52219
688	Savings institutions, including credit unions	52212, 52213
689	Non-depository credit and related activities	5222, 5223
697	Securities, commodities, funds, trusts, and other financial investments	523, 525
699	Insurance carriers and related activities	524

**Real Estate and Rental and Leasing**

707	Real estate	531
708	Automotive equipment rental and leasing	5321
717	Video tape and disk rental	53223
718	Other consumer goods rental	53221, 53222, 53229, 5323
719	Commercial, industrial, and other intangible assets rental and leasing	5324, 533

***Professional, Scientific, Management, Administrative, and Waste management services***

**Professional, Scientific, and Technical Services**

727	Legal services	5411
728	Accounting, tax preparation, bookkeeping, and payroll services	5412
729	Architectural, engineering, and related services	5413
737	Specialized design services	5414
738	Computer systems design and related services	5415
739	Management, scientific, and technical consulting services	5416
746	Scientific research and development services	5417
747	Advertising and related services	5418
748	Veterinary services	54194
749	Other professional, scientific, and technical services	5419 exc. 54194

***Management, Administrative and Support, and Waste Management Services***

**Management of companies and enterprises**

757	Management of companies and enterprises	551
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**Administrative and support and waste management services**

758	Employment services	5613
759	Business support services	5614
767	Travel arrangements and reservation services	5615
768	Investigation and security services	5616
769	** Services to buildings and dwellings (except cleaning during construction and immediately after construction)	5617 exc. 56173

777	Landscaping services	56173
778	Other administrative and other support services	5611, 5612, 5619
779	Waste management and remediation services	562

***Educational, Health and Social Services***

**Educational Services**

786	Elementary and secondary schools	6111
787	Colleges and universities, including junior colleges	6112, 6113
788	Business, technical, and trade schools and training	6114, 6115
789	Other schools, instruction, and educational services	6116, 6117

**Health Care and Social Assistance**

797	Offices of physicians	6211
798	Offices of dentists	6212
799	Offices of chiropractors	62131
807	Offices of optometrists	62132
808	Offices of other health practitioners	6213 exc. 62131, 62132
809	Outpatient care centers	6214
817	Home health care services	6216
818	Other health care services	6215, 6219
819	Hospitals	622
827	Nursing care facilities	6231
829	Residential care facilities, without nursing	6232, 6233, 6239
837	Individual and family services	6241
838	Community food and housing, and emergency services	6242
839	Vocational rehabilitation services	6243
847	Child day care services	6244

***Arts, Entertainment, Recreation, Accommodation, and Food Services***

**Arts, Entertainment, and Recreation**

856	Independent artists, performing arts, spectator sports, and related industries	711
857	Museums, art galleries, historical sites, and similar institutions	712
858	Bowling centers	71395
859	Other amusement, gambling, and recreation industries	713 exc. 71395

**Accommodation and Food Services**

866	Traveler accommodation	7211
867	Recreational vehicle parks and camps, and rooming and boarding houses	7212, 7213
868	Restaurants and other food services	722 exc. 7224
869	Drinking places, alcoholic beverages	7224

**Other Services (Except Public Administration)**

877	Automotive repair and maintenance	8111 exc. 811192
878	Car washes	811192
879	Electronic and precision equipment repair and maintenance	8112
887	Commercial and industrial machinery and equipment repair and maintenance	8113
888	Personal and household goods repair and maintenance	8114 exc. 81143
889	Footwear and leather goods repair	81143
897	Barber shops	812111
898	Beauty salons	812112
899	Nail salons and other personal care services	812113, 81219

907	Dry cleaning and laundry services	8123
908	Funeral homes, cemeteries, and crematories	8122
909	Other personal services	8129
916	Religious organizations	8131
917	Civic, social, advocacy organizations, and grant-making and giving services	8132, 8133, 8134
918	Labor unions	81393
919	Business, professional, political, and similar organizations	8139 exc. 81393
929	Private households	814
<b>Public Administration</b>		
937	Executive offices and legislative bodies	92111, 92112, 92114, pt. 92115
938	Public finance activities	92113
939	Other general government and support	92119
947	Justice, public order, and safety activities	922, pt. 92115
948	Administration of human resource programs	923
949	Administration of environmental quality and housing programs	924, 925
957	Administration of economic programs and space research	926, 927
959	National security and international affairs	928
<b>Armed Forces</b>		
967	U.S. Army	
986	U.S. Air Force	
969	U.S. Navy	
977	U.S. Marines	
978	U.S. Coast Guard	
979	U.S. Armed Forces, branch not specified	
987	Military Reserves or National Guard	
989	Armed Forces	

**Notes**

- \* Code changed from 2000 (In addition to adding of fourth digit)
- \*\* Industry content changed from 2000, name may have changed
- \*\*\* New industry
- \*\*\*\* Industry name changed, content did not

***F. HRS 2010 v2, 2012 and 2014 Unmasked Occupation Codes (2010 Census Occupational Classification System)***

For HRS 2010 v2, 2012 and 2014, respondent occupation information was coded using the 2010 Census Occupational Classification System.<sup>12</sup> The following table displays the 4-digit Census Codes and cross-references them to 2010 Standard Occupational Classification (SOC) values.

OCCUPATION TITLE	CENSUS CODE(S)	SOC CODE(S)
<b>Management, professional, and related occupations</b>	<b>0010-3540</b>	<b>11-0000 - 29-0000</b>
<b><i>Management, business, and financial operations occupations</i></b>	<b><i>0010-0950</i></b>	<b><i>11-0000 - 13-0000</i></b>
<i>Management occupations</i>	<i>0010-0430</i>	<i>11-0000</i>
Chief executives	0010	11-1011
General and operations managers	0020	11-1021
Legislators	0030	11-1031
Advertising and promotions managers	0040	11-2011
Marketing and sales managers	0050	11-2020
Public relations and fundraising managers	0060	11-2031
Administrative services managers	0100	11-3011
Computer and information systems managers	0110	11-3021
Financial managers	0120	11-3031
Compensation and benefits managers	0135	11-3111
Human resources managers	0136	11-3121
Training and development managers	0137	11-3131
Industrial production managers	0140	11-3051
Purchasing managers	0150	11-3061
Transportation, storage, and distribution managers	0160	11-3071
Farmers, ranchers, and other agricultural managers	0205	11-9013
Construction managers	0220	11-9021
Education administrators	0230	11-9030
Architectural and engineering managers	0300	11-9041
Food service managers	0310	11-9051
Funeral service managers	0325	11-9061
Gaming managers	0330	11-9071
Lodging managers	0340	11-9081
Medical and health services managers	0350	11-9111
Natural sciences managers	0360	11-9121
Postmasters and mail superintendents	0400	11-9131
Property, real estate, and community association managers	0410	11-9141
Social and community service managers	0420	11-9151
Emergency management directors	0425	11-9161
Managers, all other	0430	11-9199
<i>Business and financial operations occupations</i>	<i>0500-0950</i>	<i>13-0000</i>
Agents and business managers of artists, performers, and athletes	0500	13-1011
Buyers and purchasing agents, farm products	0510	13-1021

<sup>12</sup> Used in the Current Population Survey beginning January 2011



Wholesale and retail buyers, except farm products	0520	13-1022
Purchasing agents, except wholesale, retail, and farm products	0530	13-1023
Claims adjusters, appraisers, examiners, and investigators	0540	13-1030
Compliance officers	0565	13-1041
Cost estimators	0600	13-1051
Human resources workers	0630	13-1070
Compensation, benefits, and job analysis specialists	0640	13-1141
Training and development specialists	0650	13-1151
Logisticians	0700	13-1081
Management analysts	0710	13-1111
Meeting, convention, and event planners	0725	13-1121
Fundraisers	0726	13-1131
Market research analysts and marketing specialists	0735	13-1161
Business operations specialists, all other	0740	13-1199
Accountants and auditors	0800	13-2011
Appraisers and assessors of real estate	0810	13-2021
Budget analysts	0820	13-2031
Credit analysts	0830	13-2041
Financial analysts	0840	13-2051
Personal financial advisors	0850	13-2052
Insurance underwriters	0860	13-2053
Financial examiners	0900	13-2061
Credit counselors and loan officers	0910	13-2070
Tax examiners and collectors, and revenue agents	0930	13-2081
Tax preparers	0940	13-2082
Financial specialists, all other	0950	13-2099

***Professional and related occupations***

**1000-3540      15-0000 - 29-0000**

***Computer and mathematical occupations***

**1000-1240      15-0000**

Computer and information research scientists	1005	15-1111
Computer systems analysts	1006	15-1121
Information security analysts	1007	15-1122
Computer programmers	1010	15-1131
Software developers, applications and systems software	1020	15-1132, 15-1133
Web developers	1030	15-1134
Computer support specialists	1050	15-1150
Database administrators	1060	15-1141
Network and computer systems administrators	1105	15-1142
Computer network architects	1106	15-1143
Computer occupations, all other	1107	15-1199
Actuaries	1200	15-2011
Mathematicians	1210	15-2021
Operations research analysts	1220	15-2031
Statisticians	1230	15-2041
Miscellaneous mathematical science occupations	1240	15-2090

***Architecture and engineering occupations***

**1300-1560      17-0000**

Architects, except naval	1300	17-1010
Surveyors, cartographers, and photogrammetrists	1310	17-1020
Aerospace engineers	1320	17-2011
Agricultural engineers	1330	17-2021
Biomedical engineers	1340	17-2031

Chemical engineers	1350	17-2041
Civil engineers	1360	17-2051
Computer hardware engineers	1400	17-2061
Electrical and electronics engineers	1410	17-2070
Environmental engineers	1420	17-2081
Industrial engineers, including health and safety	1430	17-2110
Marine engineers and naval architects	1440	17-2121
Materials engineers	1450	17-2131
Mechanical engineers	1460	17-2141
Mining and geological engineers, including mining safety engineers	1500	17-2151
Nuclear engineers	1510	17-2161
Petroleum engineers	1520	17-2171
Engineers, all other	1530	17-2199
Drafters	1540	17-3010
Engineering technicians, except drafters	1550	17-3020
Surveying and mapping technicians	1560	17-3031
<i>Life, physical, and social science occupations</i>	<i>1600-1965</i>	<i>19-0000</i>
Agricultural and food scientists	1600	19-1010
Biological scientists	1610	19-1020
Conservation scientists and foresters	1640	19-1030
Medical scientists	1650	19-1040
Life scientists, all other	1660	19-1099
Astronomers and physicists	1700	19-2010
Atmospheric and space scientists	1710	19-2021
Chemists and materials scientists	1720	19-2030
Environmental scientists and geoscientists	1740	19-2040
Physical scientists, all other	1760	19-2099
Economists	1800	19-3011
Survey researchers	1815	19-3022
Psychologists	1820	19-3030
Sociologists	1830	19-3041
Urban and regional planners	1840	19-3051
Miscellaneous social scientists and related workers	1860	19-3090
Agricultural and food science technicians	1900	19-4011
Biological technicians	1910	19-4021
Chemical technicians	1920	19-4031
Geological and petroleum technicians	1930	19-4041
Nuclear technicians	1940	19-4051
Social science research assistants	1950	19-4061
Miscellaneous life, physical, and social science technicians	1965	19-4090
<i>Community and social service occupations</i>	<i>2000-2060</i>	<i>21-0000</i>
Counselors	2000	21-1010
Social workers	2010	21-1020
Probation officers and correctional treatment specialists	2015	21-1092
Social and human service assistants	2016	21-1093
Miscellaneous community and social service specialists, including health educators and community health workers	2025	21-1091, 21-1094, 21-1099
Clergy	2040	21-2011
Directors, religious activities and education	2050	21-2021
Religious workers, all other	2060	21-2099

<i>Legal occupations</i>	<i>2100-2160</i>	<i>23-0000</i>
Lawyers	2100	23-1011
Judicial law clerks	2105	23-1012
Judges, magistrates, and other judicial workers	2110	23-1020
Paralegals and legal assistants	2145	23-2011
Miscellaneous legal support workers	2160	23-2090
<i>Education, training, and library occupations</i>	<i>2200-2550</i>	<i>25-0000</i>
Postsecondary teachers	2200	25-1000
Preschool and kindergarten teachers	2300	25-2010
Elementary and middle school teachers	2310	25-2020
Secondary school teachers	2320	25-2030
Special education teachers	2330	25-2050
Other teachers and instructors	2340	25-3000
Archivists, curators, and museum technicians	2400	25-4010
Librarians	2430	25-4021
Library technicians	2440	25-4031
Teacher assistants	2540	25-9041 25-9011, 25-9021,
Other education, training, and library workers	2550	25-9031, 25-9099
<i>Arts, design, entertainment, sports, and media occupations</i>	<i>2600-2960</i>	<i>27-0000</i>
Artists and related workers	2600	27-1010
Designers	2630	27-1020
Actors	2700	27-2011
Producers and directors	2710	27-2012
Athletes, coaches, umpires, and related workers	2720	27-2020
Dancers and choreographers	2740	27-2030
Musicians, singers, and related workers	2750	27-2040
Entertainers and performers, sports and related workers, all other	2760	27-2099
Announcers	2800	27-3010
News analysts, reporters and correspondents	2810	27-3020
Public relations specialists	2825	27-3031
Editors	2830	27-3041
Technical writers	2840	27-3042
Writers and authors	2850	27-3043
Miscellaneous media and communication workers	2860	27-3090
Broadcast and sound engineering technicians and radio operators	2900	27-4010
Photographers	2910	27-4021
Television, video, and motion picture camera operators and editors	2920	27-4030
Media and communication equipment workers, all other	2960	27-4099
<i>Healthcare practitioners and technical occupations</i>	<i>3000-3540</i>	<i>29-0000</i>
Chiropractors	3000	29-1011
Dentists	3010	29-1020
Dietitians and nutritionists	3030	29-1031
Optometrists	3040	29-1041
Pharmacists	3050	29-1051
Physicians and surgeons	3060	29-1060
Physician assistants	3110	29-1071
Podiatrists	3120	29-1081
Audiologists	3140	29-1181
Occupational therapists	3150	29-1122

Physical therapists	3160	29-1123
Radiation therapists	3200	29-1124
Recreational therapists	3210	29-1125
Respiratory therapists	3220	29-1126
Speech-language pathologists	3230	29-1127
Exercise physiologists	3235	29-1128
Therapists, all other	3245	29-1129
Veterinarians	3250	29-1131
Registered nurses	3255	29-1141
Nurse anesthetists	3256	29-1151
Nurse midwives	3257	29-1161
Nurse practitioners	3258	29-1171
Health diagnosing and treating practitioners, all other	3260	29-1199
Clinical laboratory technologists and technicians	3300	29-2010
Dental hygienists	3310	29-2021
Diagnostic related technologists and technicians	3320	29-2030
Emergency medical technicians and paramedics	3400	29-2041
Health practitioner support technologists and technicians	3420	29-2050
Licensed practical and licensed vocational nurses	3500	29-2061
Medical records and health information technicians	3510	29-2071
Opticians, dispensing	3520	29-2081
Miscellaneous health technologists and technicians	3535	29-2090
Other healthcare practitioners and technical occupations	3540	29-9000
<b>Service occupations</b>	<b>3600-4650</b>	<b>31-0000-39-0000</b>
<i>Healthcare support occupations</i>	<i>3600-3655</i>	<i>31-0000</i>
Nursing, psychiatric, and home health aides	3600	31-1010
Occupational therapy assistants and aides	3610	31-2010
Physical therapist assistants and aides	3620	31-2020
Massage therapists	3630	31-9011
Dental assistants	3640	31-9091
Medical assistants	3645	31-9092
Medical transcriptionists	3646	31-9094
Pharmacy aides	3647	31-9095
Veterinary assistants and laboratory animal caretakers	3648	31-9096
Phlebotomists	3649	31-9097
Miscellaneous healthcare support occupations, including medical equipment preparers	3655	31-9093, 31-9099
<i>Protective service occupations</i>	<i>3700-3955</i>	<i>33-0000</i>
First-line supervisors of correctional officers	3700	33-1011
First-line supervisors of police and detectives	3710	33-1012
First-line supervisors of fire fighting and prevention workers	3720	33-1021
First-line supervisors of protective service workers, all other	3730	33-1099
Firefighters	3740	33-2011
Fire inspectors	3750	33-2020
Bailiffs, correctional officers, and jailers	3800	33-3010
Detectives and criminal investigators	3820	33-3021
Fish and game wardens	3830	33-3031
Parking enforcement workers	3840	33-3041
Police and sheriff's patrol officers	3850	33-3051
Transit and railroad police	3860	33-3052
Animal control workers	3900	33-9011

Private detectives and investigators	3910	33-9021
Security guards and gaming surveillance officers	3930	33-9030
Crossing guards	3940	33-9091
Transportation security screeners	3945	33-9093
Lifeguards and other recreational, and all other protective service workers	3955	33-9092, 33-9099
<i>Food preparation and serving related occupations</i>	<b>4000-4160</b>	<b>35-0000</b>
Chefs and head cooks	4000	35-1011
First-line supervisors of food preparation and serving workers	4010	35-1012
Cooks	4020	35-2010
Food preparation workers	4030	35-2021
Bartenders	4040	35-3011
Combined food preparation and serving workers, including fast food	4050	35-3021
Counter attendants, cafeteria, food concession, and coffee shop	4060	35-3022
Waiters and waitresses	4110	35-3031
Food servers, nonrestaurant	4120	35-3041
Dining room and cafeteria attendants and bartender helpers	4130	35-9011
Dishwashers	4140	35-9021
Hosts and hostesses, restaurant, lounge, and coffee shop	4150	35-9031
Food preparation and serving related workers, all other	4160	35-9099
<i>Building and grounds cleaning and maintenance occupations</i>	<b>4200-4250</b>	<b>37-0000</b>
First-line supervisors of housekeeping and janitorial workers	4200	37-1011
First-line supervisors of landscaping, lawn service, and groundskeeping workers	4210	37-1012
Janitors and building cleaners	4220	37-2011, 37-2019
Maids and housekeeping cleaners	4230	37-2012
Pest control workers	4240	37-2021
Grounds maintenance workers	4250	37-3010
<i>Personal care and service occupations</i>	<b>4300-4650</b>	<b>39-0000</b>
First-line supervisors of gaming workers	4300	39-1010
First-line supervisors of personal service workers	4320	39-1021
Animal trainers	4340	39-2011
Nonfarm animal caretakers	4350	39-2021
Gaming services workers	4400	39-3010
Motion picture projectionists	4410	39-3021
Ushers, lobby attendants, and ticket takers	4420	39-3031
Miscellaneous entertainment attendants and related workers	4430	39-3090
Embalmers and funeral attendants	4460	39-4011, 39-4021
Morticians, undertakers, and funeral directors	4465	39-4031
Barbers	4500	39-5011
Hairdressers, hairstylists, and cosmetologists	4510	39-5012
Miscellaneous personal appearance workers	4520	39-5090
Baggage porters, bellhops, and concierges	4530	39-6010
Tour and travel guides	4540	39-7010
Childcare workers	4600	39-9011
Personal care aides	4610	39-9021
Recreation and fitness workers	4620	39-9030
Residential advisors	4640	39-9041
Personal care and service workers, all other	4650	39-9099
<b>Sales and office occupations</b>	<b>4700-5940</b>	<b>41-0000 –</b>

**43-0000**

<b><i>Sales and related occupations</i></b>	<b>4700-4965</b>	<b>41-0000</b>
First-line supervisors of retail sales workers	4700	41-1011
First-line supervisors of non-retail sales workers	4710	41-1012
Cashiers	4720	41-2010
Counter and rental clerks	4740	41-2021
Parts salespersons	4750	41-2022
Retail salespersons	4760	41-2031
Advertising sales agents	4800	41-3011
Insurance sales agents	4810	41-3021
Securities, commodities, and financial services sales agents	4820	41-3031
Travel agents	4830	41-3041
Sales representatives, services, all other	4840	41-3099
Sales representatives, wholesale and manufacturing	4850	41-4010
Models, demonstrators, and product promoters	4900	41-9010
Real estate brokers and sales agents	4920	41-9020
Sales engineers	4930	41-9031
Telemarketers	4940	41-9041
Door-to-door sales workers, news and street vendors, and related workers	4950	41-9091
Sales and related workers, all other	4965	41-9099
<b><i>Office and administrative support occupations</i></b>	<b>5000-5940</b>	<b>43-0000</b>
First-line supervisors of office and administrative support workers	5000	43-1011
Switchboard operators, including answering service	5010	43-2011
Telephone operators	5020	43-2021
Communications equipment operators, all other	5030	43-2099
Bill and account collectors	5100	43-3011
Billing and posting clerks	5110	43-3021
Bookkeeping, accounting, and auditing clerks	5120	43-3031
Gaming cage workers	5130	43-3041
Payroll and timekeeping clerks	5140	43-3051
Procurement clerks	5150	43-3061
Tellers	5160	43-3071
Financial clerks, all other	5165	43-3099
Brokerage clerks	5200	43-4011
Correspondence clerks	5210	43-4021
Court, municipal, and license clerks	5220	43-4031
Credit authorizers, checkers, and clerks	5230	43-4041
Customer service representatives	5240	43-4051
Eligibility interviewers, government programs	5250	43-4061
File Clerks	5260	43-4071
Hotel, motel, and resort desk clerks	5300	43-4081
Interviewers, except eligibility and loan	5310	43-4111
Library assistants, clerical	5320	43-4121
Loan interviewers and clerks	5330	43-4131
New accounts clerks	5340	43-4141
Order clerks	5350	43-4151
Human resources assistants, except payroll and timekeeping	5360	43-4161
Receptionists and information clerks	5400	43-4171
Reservation and transportation ticket agents and travel clerks	5410	43-4181
Information and record clerks, all other	5420	43-4199

Cargo and freight agents	5500	43-5011
Couriers and messengers	5510	43-5021
Dispatchers	5520	43-5030
Meter readers, utilities	5530	43-5041
Postal service clerks	5540	43-5051
Postal service mail carriers	5550	43-5052
Postal service mail sorters, processors, and processing machine operators	5560	43-5053
Production, planning, and expediting clerks	5600	43-5061
Shipping, receiving, and traffic clerks	5610	43-5071
Stock clerks and order fillers	5620	43-5081
Weighers, measurers, checkers, and samplers, recordkeeping	5630	43-5111
Secretaries and administrative assistants	5700	43-6010
Computer operators	5800	43-9011
Data entry keyers	5810	43-9021
Word processors and typists	5820	43-9022
Desktop publishers	5830	43-9031
Insurance claims and policy processing clerks	5840	43-9041
Mail clerks and mail machine operators, except postal service	5850	43-9051
Office clerks, general	5860	43-9061
Office machine operators, except computer	5900	43-9071
Proofreaders and copy markers	5910	43-9081
Statistical assistants	5920	43-9111
Office and administrative support workers, all other	5940	43-9199

**Natural resources, construction, and maintenance occupations** **6000-7630** **45-0000 - 49-0000**

<b><i>Farming, fishing, and forestry occupations</i></b>	<b>6000-6130</b>	<b>45-0000</b>
First-line supervisors of farming, fishing, and forestry workers	6005	45-1011
Agricultural inspectors	6010	45-2011
Animal breeders	6020	45-2021
Graders and sorters, agricultural products	6040	45-2041
Miscellaneous agricultural workers	6050	45-2090
Fishers and related fishing workers	6100	45-3011
Hunters and trappers	6110	45-3021
Forest and conservation workers	6120	45-4011
Logging workers	6130	45-4020

<b><i>Construction and extraction occupations</i></b>	<b>6200-6940</b>	<b>47-0000</b>
First-line supervisors of construction trades and extraction workers	6200	47-1011
Boilermakers	6210	47-2011
Brickmasons, blockmasons, and stonemasons	6220	47-2020
Carpenters	6230	47-2031
Carpet, floor, and tile installers and finishers	6240	47-2040
Cement masons, concrete finishers, and terrazzo workers	6250	47-2050
Construction laborers	6260	47-2061
Paving, surfacing, and tamping equipment operators	6300	47-2071
Pile-driver operators	6310	47-2072
Operating engineers and other construction equipment operators	6320	47-2073
Drywall installers, ceiling tile installers, and tapers	6330	47-2080
Electricians	6355	47-2111
Glaziers	6360	47-2121

Insulation workers	6400	47-2130
Painters, construction and maintenance	6420	47-2141
Paperhangers	6430	47-2142
Pipelayers, plumbers, pipefitters, and steamfitters	6440	47-2150
Plasterers and stucco masons	6460	47-2161
Reinforcing iron and rebar workers	6500	47-2171
Roofers	6515	47-2181
Sheet metal workers	6520	47-2211
Structural iron and steel workers	6530	47-2221
Solar photovoltaic installers	6540	47-2231
Helpers, construction trades	6600	47-3010
Construction and building inspectors	6660	47-4011
Elevator installers and repairers	6700	47-4021
Fence erectors	6710	47-4031
Hazardous materials removal workers	6720	47-4041
Highway maintenance workers	6730	47-4051
Rail-track laying and maintenance equipment operators	6740	47-4061
Septic tank servicers and sewer pipe cleaners	6750	47-4071
Miscellaneous construction and related workers	6765	47-4090
Derrick, rotary drill, and service unit operators, oil, gas, and mining	6800	47-5010
Earth drillers, except oil and gas	6820	47-5021
Explosives workers, ordnance handling experts, and blasters	6830	47-5031
Mining machine operators	6840	47-5040
Roof bolters, mining	6910	47-5061
Roustabouts, oil and gas	6920	47-5071
Helpers—extraction workers	6930	47-5081
Other extraction workers	6940	47-5051, 47-5099
<b><i>Installation, maintenance, and repair occupations</i></b>	<b>7000-7630</b>	<b>49-0000</b>
First-line supervisors of mechanics, installers, and repairers	7000	49-1011
Computer, automated teller, and office machine repairers	7010	49-2011
Radio and telecommunications equipment installers and repairers	7020	49-2020
Avionics technicians	7030	49-2091
Electric motor, power tool, and related repairers	7040	49-2092
Electrical and electronics installers and repairers, transportation	7050	49-2093
Electrical and electronics repairers, industrial and utility	7100	49-2094, 49-2095
Electronic equipment installers and repairers, motor vehicles	7110	49-2096
Electronic home entertainment equipment installers and repairers	7120	49-2097
Security and fire alarm systems installers	7130	49-2098
Aircraft mechanics and service technicians	7140	49-3011
Automotive body and related repairers	7150	49-3021
Automotive glass installers and repairers	7160	49-3022
Automotive service technicians and mechanics	7200	49-3023
Bus and truck mechanics and diesel engine specialists	7210	49-3031
Heavy vehicle and mobile equipment service technicians and mechanics	7220	49-3040
Small engine mechanics	7240	49-3050
Miscellaneous vehicle and mobile equipment mechanics, installers, and repairers	7260	49-3090
Control and valve installers and repairers	7300	49-9010
Heating, air conditioning, and refrigeration mechanics and installers	7315	49-9021
Home appliance repairers	7320	49-9031
Industrial and refractory machinery mechanics	7330	49-9041, 49-9045
Maintenance and repair workers, general	7340	49-9071
Maintenance workers, machinery	7350	49-9043



Millwrights	7360	49-9044
Electrical power-line installers and repairers	7410	49-9051
Telecommunications line installers and repairers	7420	49-9052
Precision instrument and equipment repairers	7430	49-9060
Wind turbine service technicians	7440	49-9081
Coin, vending, and amusement machine servicers and repairers	7510	49-9091
Commercial divers	7520	49-9092
Locksmiths and safe repairers	7540	49-9094
Manufactured building and mobile home installers	7550	49-9095
Riggers	7560	49-9096
Signal and track switch repairers	7600	49-9097
Helpers—installation, maintenance, and repair workers	7610	49-9098
Other installation, maintenance, and repair workers	7630	49-9093, 49-9099

**Production, transportation, and material moving occupations**

**7700-9750**

**51-0000 -  
53-0000**

***Production occupations***

***7700-8965***

***51-0000***

First-line supervisors of production and operating workers	7700	51-1011
Aircraft structure, surfaces, rigging, and systems assemblers	7710	51-2011
Electrical, electronics, and electromechanical assemblers	7720	51-2020
Engine and other machine assemblers	7730	51-2031
Structural metal fabricators and fitters	7740	51-2041
Miscellaneous assemblers and fabricators	7750	51-2090
Bakers	7800	51-3011
Butchers and other meat, poultry, and fish processing workers	7810	51-3020
Food and tobacco roasting, baking, and drying machine operators and tenders	7830	51-3091
Food batchmakers	7840	51-3092
Food cooking machine operators and tenders	7850	51-3093
Food processing workers, all other	7855	51-3099
Computer control programmers and operators	7900	51-4010
Extruding and drawing machine setters, operators, and tenders, metal and plastic	7920	51-4021
Forging machine setters, operators, and tenders, metal and plastic	7930	51-4022
Rolling machine setters, operators, and tenders, metal and plastic	7940	51-4023
Cutting, punching, and press machine setters, operators, and tenders, metal and plastic	7950	51-4031
Drilling and boring machine tool setters, operators, and tenders, metal and plastic	7960	51-4032
Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic	8000	51-4033
Lathe and turning machine tool setters, operators, and tenders, metal and plastic	8010	51-4034
Milling and planing machine setters, operators, and tenders, metal and plastic	8020	51-4035
Machinists	8030	51-4041
Metal furnace operators, tenders, pourers, and casters	8040	51-4050
Model makers and patternmakers, metal and plastic	8060	51-4060
Molders and molding machine setters, operators, and tenders, metal and plastic	8100	51-4070
Multiple machine tool setters, operators, and tenders, metal and plastic	8120	51-4081
Tool and die makers	8130	51-4111
Welding, soldering, and brazing workers	8140	51-4120
Heat treating equipment setters, operators, and tenders, metal and plastic	8150	51-4191

Layout workers, metal and plastic	8160	51-4192
Plating and coating machine setters, operators, and tenders, metal and plastic	8200	51-4193
Tool grinders, filers, and sharpeners	8210	51-4194
Metal workers and plastic workers, all other	8220	51-4199
Prepress technicians and workers	8250	51-5111
Printing press operators	8255	51-5112
Print binding and finishing workers	8256	51-5113
Laundry and dry-cleaning workers	8300	51-6011
Pressers, textile, garment, and related materials	8310	51-6021
Sewing machine operators	8320	51-6031
Shoe and leather workers and repairers	8330	51-6041
Shoe machine operators and tenders	8340	51-6042
Tailors, dressmakers, and sewers	8350	51-6050
Textile bleaching and dyeing machine operators and tenders	8360	51-6061
Textile cutting machine setters, operators, and tenders	8400	51-6062
Textile knitting and weaving machine setters, operators, and tenders	8410	51-6063
Textile winding, twisting, and drawing out machine setters, operators, and tenders	8420	51-6064
Extruding and forming machine setters, operators, and tenders, synthetic and glass fibers	8430	51-6091
Fabric and apparel patternmakers	8440	51-6092
Upholsterers	8450	51-6093
Textile, apparel, and furnishings workers, all other	8460	51-6099
Cabinetmakers and bench carpenters	8500	51-7011
Furniture finishers	8510	51-7021
Model makers and patternmakers, wood	8520	51-7030
Sawing machine setters, operators, and tenders, wood	8530	51-7041
Woodworking machine setters, operators, and tenders, except sawing	8540	51-7042
Woodworkers, all other	8550	51-7099
Power plant operators, distributors, and dispatchers	8600	51-8010
Stationary engineers and boiler operators	8610	51-8021
Water and wastewater treatment plant and system operators	8620	51-8031
Miscellaneous plant and system operators	8630	51-8090
Chemical processing machine setters, operators, and tenders	8640	51-9010
Crushing, grinding, polishing, mixing, and blending workers	8650	51-9020
Cutting workers	8710	51-9030
Extruding, forming, pressing, and compacting machine setters, operators, and tenders	8720	51-9041
Furnace, kiln, oven, drier, and kettle operators and tenders	8730	51-9051
Inspectors, testers, sorters, samplers, and weighers	8740	51-9061
Jewelers and precious stone and metal workers	8750	51-9071
Medical, dental, and ophthalmic laboratory technicians	8760	51-9080
Packaging and filling machine operators and tenders	8800	51-9111
Painting workers	8810	51-9120
Photographic process workers and processing machine operators	8830	51-9151
Semiconductor processors	8840	51-9141
Adhesive bonding machine operators and tenders	8850	51-9191
Cleaning, washing, and metal pickling equipment operators and tenders	8860	51-9192
Cooling and freezing equipment operators and tenders	8900	51-9193
Etchers and engravers	8910	51-9194
Molders, shapers, and casters, except metal and plastic	8920	51-9195
Paper goods machine setters, operators, and tenders	8930	51-9196
Tire builders	8940	51-9197
Helpers—production workers	8950	51-9198
Production workers, all other	8965	51-9199

<b>Transportation and material moving occupations</b>	<b>9000-9750</b>	<b>53-0000</b>
Supervisors of transportation and material moving workers	9000	53-1000
Aircraft pilots and flight engineers	9030	53-2010
Air traffic controllers and airfield operations specialists	9040	53-2020
Flight attendants	9050	53-2031
Ambulance drivers and attendants, except emergency medical technicians	9110	53-3011
Bus drivers	9120	53-3020
Driver/sales workers and truck drivers	9130	53-3030
Taxi drivers and chauffeurs	9140	53-3041
Motor vehicle operators, all other	9150	53-3099
Locomotive engineers and operators	9200	53-4010
Railroad brake, signal, and switch operators	9230	53-4021
Railroad conductors and yardmasters	9240	53-4031
Subway, streetcar, and other rail transportation workers	9260	53-4041, 53-4099
Sailors and marine oilers	9300	53-5011
Ship and boat captains and operators	9310	53-5020
Ship engineers	9330	53-5031
Bridge and lock tenders	9340	53-6011
Parking lot attendants	9350	53-6021
Automotive and watercraft service attendants	9360	53-6031
Transportation inspectors	9410	53-6051
Transportation attendants, except flight attendants	9415	53-6061
Other transportation workers	9420	53-6041, 53-6099
Conveyor operators and tenders	9500	53-7011
Crane and tower operators	9510	53-7021
Dredge, excavating, and loading machine operators	9520	53-7030
Hoist and winch operators	9560	53-7041
Industrial truck and tractor operators	9600	53-7051
Cleaners of vehicles and equipment	9610	53-7061
Laborers and freight, stock, and material movers, hand	9620	53-7062
Machine feeders and offbearers	9630	53-7063
Packers and packagers, hand	9640	53-7064
Pumping station operators	9650	53-7070
Refuse and recyclable material collectors	9720	53-7081
Mine shuttle car operators	9730	53-7111
Tank car, truck, and ship loaders	9740	53-7121
Material moving workers, all other	9750	53-7199

***G. HRS 2010 v2, 2012 and 2014 Unmasked Industry (2007 Census Industrial Classification System)***

For HRS 2010 v2, 2012 and 2014, industry information reported by HRS respondents was coded using the 2007 Census Industrial Classification System.<sup>13</sup> The following table lists the 4-digit Census Codes and cross-references them to the 2007 North American Industry Classification (NAICS) Codes.

**2007 CENSUS INDUSTRIAL CLASSIFICATION**

<sup>13</sup> The 2007 Census Industrial Classifications were used in the Current Population Survey beginning in January 2009.

<b>2007 Census Codes</b>	<b>Industry Title</b>	<b>2007 NAICS Codes</b>
0170-0290	<b>Agriculture, forestry, fishing, and hunting</b>	11
0170	Crop production	111
0180	Animal production	112
0190	Forestry, except logging	1131, 1132
0270	Logging	1133
0280	Fishing, hunting, and trapping	114
0290	Support activities for agriculture and forestry	115
0370-0490	<b>Mining, quarrying, and oil and gas extraction</b>	21
0370	Oil and gas extraction	211
0380	Coal mining	2121
0390	Metal ore mining	2122
0470	Nonmetallic mineral mining and quarrying	2123
0480	Not specified type of mining	Part of 21
0490	Support activities for mining	213
0770	<b>Construction</b>	23
0770	Construction	23
1070-3990	<b>Manufacturing</b>	31-33
2470-2990	<b>Durable goods manufacturing</b>	-
2470-2590	Nonmetallic mineral products manufacturing	327
2470	Pottery, ceramics, and plumbing fixture manufacturing	32711
2480	Structural clay product manufacturing	32712
2490	Glass and glass product manufacturing	3272
2570	Cement, concrete, lime, and gypsum product manufacturing	3273, 3274
2590	Miscellaneous nonmetallic mineral product manufacturing	3279
2670-2990	Primary metals and fabricated metal products manufacturing	331-332
2670	Iron and steel mills and steel product manufacturing	3311, 3312
2680	Aluminum production and processing	3313
2690	Nonferrous metal (except aluminum) production and processing	3314
2770	Foundries	3315
2780	Metal forgings and stampings	3321
2790	Cutlery and hand tool manufacturing	3322
2870	Structural metals, and boiler, tank, and shipping container manufacturing	3323, 3324
2880	Machine shops; turned product; screw, nut, and bolt manufacturing	3327
2890	Coating, engraving, heat treating and allied activities	3328
2970	Ordnance	332992-332995
2980	Miscellaneous fabricated metal products manufacturing	3325, 3326, 3329 exc. 332992-332995
2990	Not specified metal industries	Part of 331 and 332
3070-3290	Machinery manufacturing	333
3070	Agricultural implement manufacturing	33311
3080	Construction, and mining and oil and gas field machinery manufacturing	33312, 33313
3090	Commercial and service industry machinery manufacturing	3333
3170	Metalworking machinery manufacturing	3335
3180	Engines, turbines, and power transmission equipment manufacturing	3336
3190	Machinery manufacturing, n.e.c.	3332, 3334, 3339
3290	Not specified machinery manufacturing	Part of 333
3360-3390	Computers and electronic products manufacturing	334

3360	Computer and peripheral equipment manufacturing	3341
3370	Communications, and audio and video equipment manufacturing	3342, 3343
3380	Navigational, measuring, electromedical, and control instruments manufacturing	3345
3390	Electronic component and product manufacturing, n.e.c.	3344, 3346
3470-3490	Electrical equipment and appliances manufacturing	335
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