

# O\*NET™ 98



## Data Dictionary

Release 1.0



***O\*NET™ 98***  
***Data Dictionary***

***Release 1.0***



# *Special Notice to Users*

Information in O\*NET 98 is based largely on data supplied by occupational analysts from sources such as the *Dictionary of Occupational Titles* (DOT). O\*NET 98 provides valid and reliable occupational information that may be useful for a variety of purposes, such as career counseling, development of job training programs, skill standards and labor market information. It should be noted that O\*NET 98 occupational information is composite information from many jobs and therefore not intended to describe a particular job.

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The use of O\*NET 98 products in the development of other products, software or systems applications is subject to the following conditions:

1. Since O\*NET is trademarked, users must acknowledge the use of O\*NET 98 in and on their products. The trademark symbol must be properly displayed when referring to O\*NET.

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2. The version number of the source O\*NET 98 database must be clearly stated in and on user products.

3. Any modifications made to the O\*NET data must be clearly specified along with a description of the modifications. Notice of modifications must be prominently displayed in and on user products. Users should be aware that any modification of O\*NET 98 data may compromise its validity and reliability for its intended uses.

4. The O\*NET 98 Viewer (© 1998 DOL/ETA) may be copied and redistributed freely provided that (1) no modifications are made to any files comprising the Viewer, (2) this Agreement accompanies the files, and (3) all files comprising the Viewer are distributed together and installed as a package on the user's computer.

The following independent files included in the Viewer are Copyright © Microsoft Corporation, and may not be distributed separately from the Viewer:

MSARN200.EXE, MSAFIN.DLL, MSAIN200.DLL, MSAJU200.DLL, MSAOLE20.DLL, SOA200.DLL, MSJETINT.DLL, DAO2016.DLL, MSABC200.DLL, MSAEXP20.DLL, MSAJT200.DLL, MSJETERR.DLL.

5. Users must not use the O\*NET or DOT name as a part of a product name, company name, electronic addresses or in any other manner that may imply that DOL/ETA produced, endorses or supports a user's product.

6. Recipients of federal assistance from the U.S. Department of Labor need to ensure that individuals with disabilities are afforded an equal opportunity to use services based on O\*NET 98. For further discussion of these obligations see Equal Opportunity Guidance Letter No. 4 (May 18, 1998), reproduced in its entirety in the O\*NET 98 Viewer (More Information section), and Viewer User's Guide and Data Dictionary.





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**O\*NET™98**

(Use in Text)

**Proper Trademark Citation**

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# *The O\*NET™ 98 Contact List*

The O\*NET 98 *Data Dictionary* was developed under contract to the U.S. Department of Labor, Employment and Training Administration by Trefoil Corporation, Orono, Maine, in cooperation with Aguirre International and the National O\*NET Consortium.

## **SOFTWARE-RELATED TECHNICAL SUPPORT**

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## **CONTENT-RELATED QUESTIONS and DETAILED O\*NET TECHNICAL REPORTS**

National O\*NET Consortium  
O\*NET Support Group  
National Center of O\*NET Development  
<http://www.onetcenter.org/>

## **GENERAL O\*NET PROJECT INFORMATION**

U.S. Department of Labor  
Employment and Training Administration  
<http://www.doleta.gov/programs/onet/>



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# *About O\*NET™ 98 Release 1.0*



# *About O\*NET™ 98 Release 1.0*

## **About This Release**

This release of the four-part O\*NET 98 system is part of an ongoing applied research project being conducted by the U.S. Department of Labor, Employment and Training Administration.

The Department of Labor is replacing its Dictionary of Occupational Titles (DOT) with a new occupational information system known as O\*NET: the Occupational Information Network. O\*NET is designed to identify and describe worker characteristics, catalog key attributes of occupations across jobs in the American economy, and describe and link the work and labor market context for different jobs and organizations. It is intended to help workers, employers, and policymakers understand technological change and competition within the labor market. This release of the O\*NET system consists of:

- A comprehensive relational database that identifies and describes important information about occupations, worker skills and training requirements in the American economy;
- This document, the *O\*NET 98 Data Dictionary*, which provides technical specifications for the O\*NET Database;
- The O\*NET 98 Viewer—a tool that complements the *Data Dictionary* and helps users access and use the information in the database; and
- The *O\*NET 98 Viewer User's Guide*, which serves as documentation for the O\*NET 98 Viewer software.

## About This Volume

This release of the *O\*NET 98 Data Dictionary* contains the following sections:

### Understanding O\*NET 98

Provides overview information on the components of O\*NET 98. This section is intended for new or less experienced O\*NET 98 system users.

### Using the O\*NET Data Dictionary

Explains how to find and understand entries in the *Data Dictionary*. This section is intended for technical users of the O\*NET data system, and provides details on how to locate and use descriptions of the individual data elements contained within the main body of the *Data Dictionary*.

### Data Dictionary Content Model and Entries

Contains (1) five sections that represent five of the main sections or domains of the O\*NET Content Model (Worker Characteristics, Worker Requirements, Experience Requirements, Occupational Requirements, and Occupation-Specific Information); (2) “entries”—the definition, description, and location—for each variable in the database; and (3) the different scale types.

### Explanatory Appendices

Contains the following appendices:

- **Appendix A: *Database Structure*.** A report on the O\*NET Database structure. This report is intended for audiences who are familiar with the concepts of computerized database management systems and who have an understanding of database terminology.
- **Appendix B: *Scale Formats*.** A list of scale formats by which variables in the O\*NET Database are measured. This appendix is intended for researchers and technical users of the O\*NET 98 data system.

- **Appendix C: *Variable Code Information*.** A list of supplemental information on each position in variable codes. This appendix is intended for those users who plan to include O\*NET 98 data in their own database management systems.
- **Appendix D: *The Development of the Occupational Information (O\*NET) Analyst Database*.** A report on the development of the O\*NET Database. This report is geared towards system developers and researchers.
- **Appendix E: *Changes to the O\*NET Database 1.0 from Beta Release 0.9*.** A detailed report of changes in the format, structure and content of the O\*NET Database since the Beta Release. Also describes changes expected in the near future.
- **Appendix F: *Job Zone Definitions*.** The O\*NET Database includes transitional material that classifies occupations into 5 job zones. This appendix lists the job zone definitions.
- **Appendix G: *Stratifying Occupational Units by Specific Vocational Preparation (SVP)*.** A report that describes how the job zones were developed.
- **Appendix H: *Equal Opportunity Guidance Letter No. 4***

## Indices

- Index 1: Element Names
- Index 2: Variable Codes

## Glossary



# *Understanding O\*NET™ 98*





# *Understanding O\*NET™ 98*

## **Introduction**

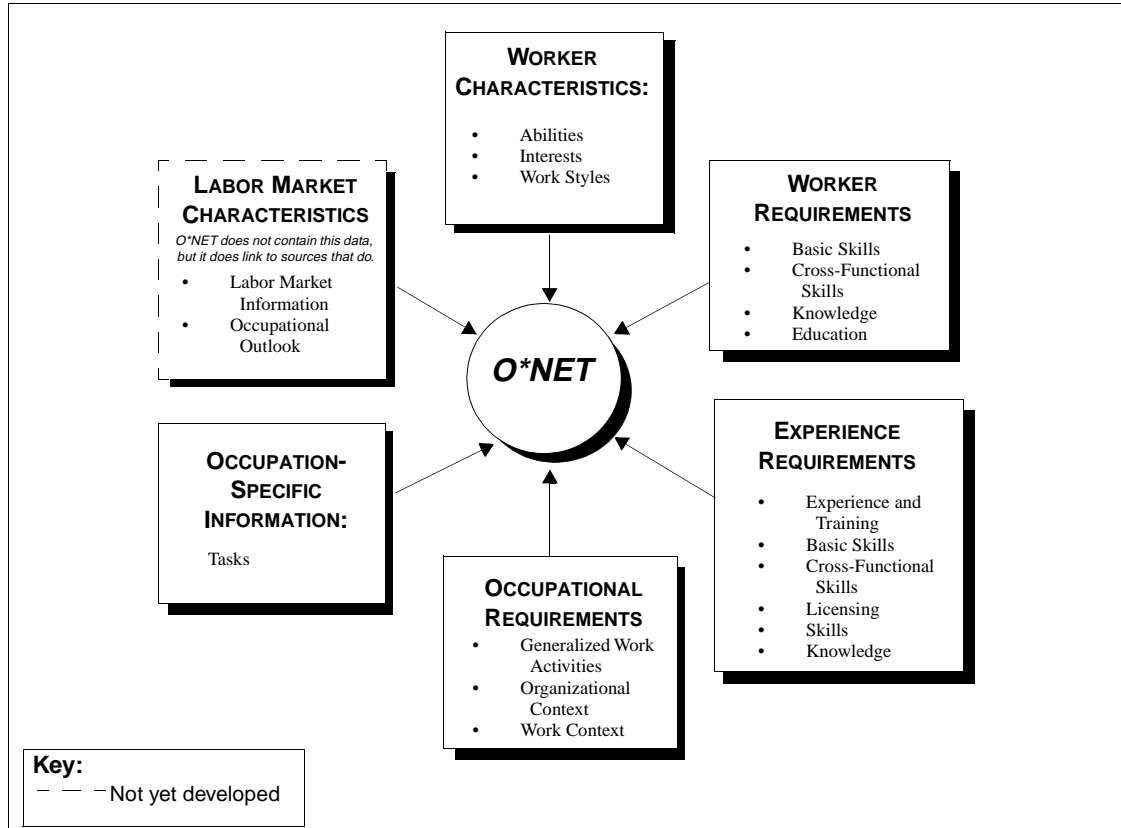
O\*NET 98 consists of a relational database of occupational information, the *Data Dictionary*, and the O\*NET 98 Viewer—a tool that helps all users use and understand the information in the database. The technical framework for the O\*NET occupational information system is the O\*NET Content Model.

See the next section, *Using the O\*NET Data Dictionary*, for complete instructions on using the *Data Dictionary*.

## **The O\*NET Content Model**

The Content Model is the framework for the O\*NET occupational information system. Shown graphically in figure 1, it includes the specific domains and elements in the O\*NET Database that might be used to describe jobs. These components are based on psychological and job analysis research.

Figure 1. The O\*NET Content Model



The Content Model was used to develop measures of attributes and characteristics that may be applied across a wide range of jobs. According to the Content Model, jobs can be described in terms of two general categories of variables: cross-job descriptors and job-specific descriptors. The Content Model focuses primarily on the cross-job descriptors, which allow for cross-job comparisons. There are four types of cross-job descriptors:

- *Worker Characteristics* composed of abilities, interests, and work styles;
- *Worker Requirements* composed of basic skills, cross-functional skills, general knowledge, and education;
- *Experience Requirements* composed of licensing, experience and training, and job-entry requirements for basic and cross-functional skills; and
- *Occupational Requirements* composed of generalized work activities, organizational context, and work context.

Within each type of cross-job descriptor, there is a hierarchical arrangement. For example, basic skills, a type of worker requirement, is organized into two categories—content and process. Content, in turn, is divided into  $x$  basic-level variables, and process is divided into  $y$  basic-level variables. Other types of descriptions are similarly organized.

In addition to cross-job descriptors, the Content Model also includes:

- *Occupation-Specific Information*, tasks that are particular to a specific occupation; and
- *Labor Market Characteristics*, such as pay and openings.

For each element in the O\*NET Content Model, such as Oral Comprehension, O\*NET may include multiple variables, or scales, such as:

- *Level*, or the level of the ability that is needed to perform a job; and
- *Importance*, or how important this ability is to perform on this job.

For each occupation, the scales associated with each variable have numbers associated with them to show the relevance of that measure to the occupation. Typically, these numbers represent mean ratings. For example:

| Scale Values       |                        |       |            |
|--------------------|------------------------|-------|------------|
| Occupation         | Content Model Element  | Level | Importance |
| Financial Managers | Mathematical Reasoning | 4.8   | 4.8        |
| Financial Managers | Oral Comprehension     | 5.3   | 4.8        |
| Marketing Managers | Mathematical Reasoning | 3.7   | 3.7        |
| Marketing Managers | Oral Comprehension     | 5.5   | 5.0        |

For more information on the development and structure of the Content Model, see *Development of Prototype Occupational Information System: Content Model, vols. 1 and 2* (Utah Department of Employment Security, 1995).

## The O\*NET Database

### The O\*NET Database Structure

The O\*NET Database is based on data supplied by occupational analysts who studied 1,122 O\*NET occupations and derived information on 483 descriptors for each occupation. More details on how the data were derived and how they relate to other data are available in Appendix D, *The Development of the Occupational Information (O\*NET) Analyst Database*. The Department of Labor intends to collect data on over 1,200 descriptors for the O\*NET occupations for the update to be released in 2001.

The O\*NET Database is a relational database that links individual tables. Tables within the O\*NET Database fall into four general categories:

- Data tables, containing the statistics associated with variables in the database.
- Descriptive tables that explain the O\*NET Content Model, the *Data Dictionary* (which contains the definition, description, and

location of each variable in the database), and the different scale types.

- Occupation-related tables that contain information on occupation-specific tasks and descriptions.
- Crosswalk tables that display various occupation classification systems and relate them to O\*NET Occupational Codes and Titles.

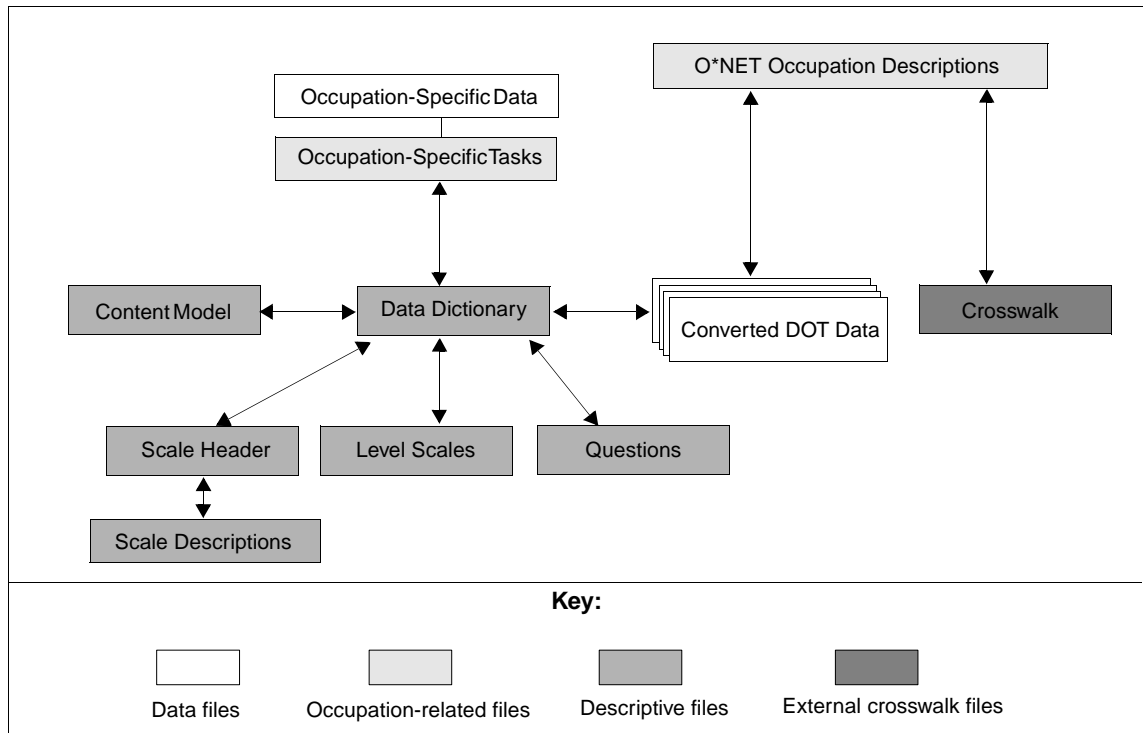
These “Crosswalk” tables allow you to see relationships among the major occupational and educational classification systems used by the federal government. O\*NET data are associated with these external sources by linking O\*NET occupation codes with codes found in the external classification systems. These external systems include the following:

- ***Apprenticeship Information Management System (AIM) codes and titles:*** Cross-references apprenticeable occupations defined by the Bureau of Apprenticeship and Training to O\*NET occupations. Not all apprenticeable occupations are currently represented in this crosswalk, as some of these occupations are based on Occupational Code Requests (OCRs) rather than DOT occupations. Apprenticeable occupations are assigned a four-character code in the Apprenticeship Information Management System.
- ***1990 Census (CEN) codes and titles:*** Uses two questionnaires containing industry, occupation, and class of worker questions. Responses were classified into 236 industrial categories and 501 occupational categories.
- ***Classification of Instructional Programs (CIP) codes and titles:*** Includes federal surveys, and state reports of institutional data, including program offerings, enrollments and completions.
- ***Dictionary of Occupational Titles (DOT) codes and titles:*** Comprehensively identifies and defines virtually all civilian sector occupations.
- ***Guide for Occupational Exploration (GOE) codes:*** Organizes occupations on the basis of interest areas, work groups and subgroups.

- ***Military Occupational Codes (MOC):*** This crosswalk links military occupations to O\*NET. Military occupations are identified by Service Branch (Army, Coast Guard, Air Force, Marine Corps or Navy); EO Code (whether the occupation is an enlisted, commissioned officer, or warrant officer occupation); military coding system (such as Military Occupational Specialties or Navy Enlisted Classification) and MOC (Military Occupational Code). Where there is no occupational distinction in O\*NET terms, pay grades or skill levels are combined into a range in a single linkage.
- ***Office of Personnel Management (OPM) codes and titles:*** Cross-references the O\*NET Occupational Codes and Titles with the Office of Personnel Management (OPM) codes and titles. This crosswalk was designed primarily for OPM's internal use.
- ***Standard Occupational Classification (SOC) codes and titles:*** Provides a mechanism for cross-referencing and aggregating occupation-related data collected by social and economic statistics reporting programs.

Figure 2 illustrates the overall structure of the database and shows how the tables in the database relate to each other.

**Figure 2. O\*NET Relational Database Structure**



### The O\*NET Database Tables

The O\*NET Database contains two central tables: the Content Model table (CM) and the Data Dictionary table (DD). The Content Model table describes the hierarchy of the Content Model underlying the entire O\*NET Database and follows the outline of each of the five types of descriptors (Worker Characteristics, Worker Requirements, Experience Requirements, Occupational Requirements, and Occupation-Specific Information) as shown at the beginning of each section of the Data Dictionary.

The Data Dictionary table presents a list of variables contained in the O\*NET Database, each of which describes an element within the Content Model.

See *Using the O\*NET Data Dictionary* for more information on using O\*NET Database tables.



# *Using the O\*NET™ 98 Data Dictionary*



# *Using the O\*NET™ 98 Data Dictionary*

## **Introduction**

This section, *Using the O\*NET 98 Data Dictionary*, provides you with an explanation of how to find and understand entries in the *Data Dictionary*. This section contains:

- an overview of the *Data Dictionary*,
- instructions on accessing an entry in the *Data Dictionary*, including a sample *Data Dictionary* entry, and
- a description of the O\*NET Database tables.

## **What is the O\*NET 98 Data Dictionary?**

The *O\*NET 98 Data Dictionary* is the primary source of system documentation for the relational database underlying O\*NET. The *Data Dictionary* contains and maintains the definition, description, and location of each data element, or variable, within the O\*NET Database. It is a set of consistent data definitions that helps users better understand and interpret the data within the O\*NET Database.

The *Data Dictionary* includes five tabbed sections that represent five of the main sections or domains of the O\*NET Content Model:

- Worker Characteristics;
- Worker Requirements;
- Experience Requirements;
- Occupational Requirements; and
- Occupation-Specific Information.

Each tabbed section contains the following information:

- A Content Model graphic that highlights the Content Model domain being described in that section of the *Data Dictionary*.
- An outline of the relevant section of the Content Model hierarchy, which provides detail and information about the top levels of the Content Model.
- The variables (also referred to as descriptors) are the lowest levels of the Content Model hierarchy. Variables are presented within a series of “entries” that contain information about the O\*NET elements being presented. Each “entry” in the *Data Dictionary* presents at least one variable; some entries have more than one variable listed.

### Who Should Use the Data Dictionary?

The *O\*NET 98 Data Dictionary* is a reference tool for system developers and researchers who are planning to use the O\*NET Database. It assumes some knowledge of computerized database management systems and an understanding of database terminology.

### Accessing an Entry in the Data Dictionary

There are three main approaches to accessing an entry in the *Data Dictionary*. First, you may be interested in finding information on the variables related to a particular section of the O\*NET Content Model. In this case, use the *Table of Contents*, found at the front of this volume, to guide you to the pages in the *Data Dictionary* that cover that section of the Content Model. Within each tabbed section of the *Data Dictionary*, the variables appear in order according to their position in the Content Model hierarchy.

The second approach should be used when you know the element name (e.g., Oral Comprehension) but not the alphanumeric code of the variable associated with it. *Index I* provides each of the element names in the O\*NET Database in alphabetical order with its corresponding page number in the *Data Dictionary*. This index also indicates the scale associated with each element.

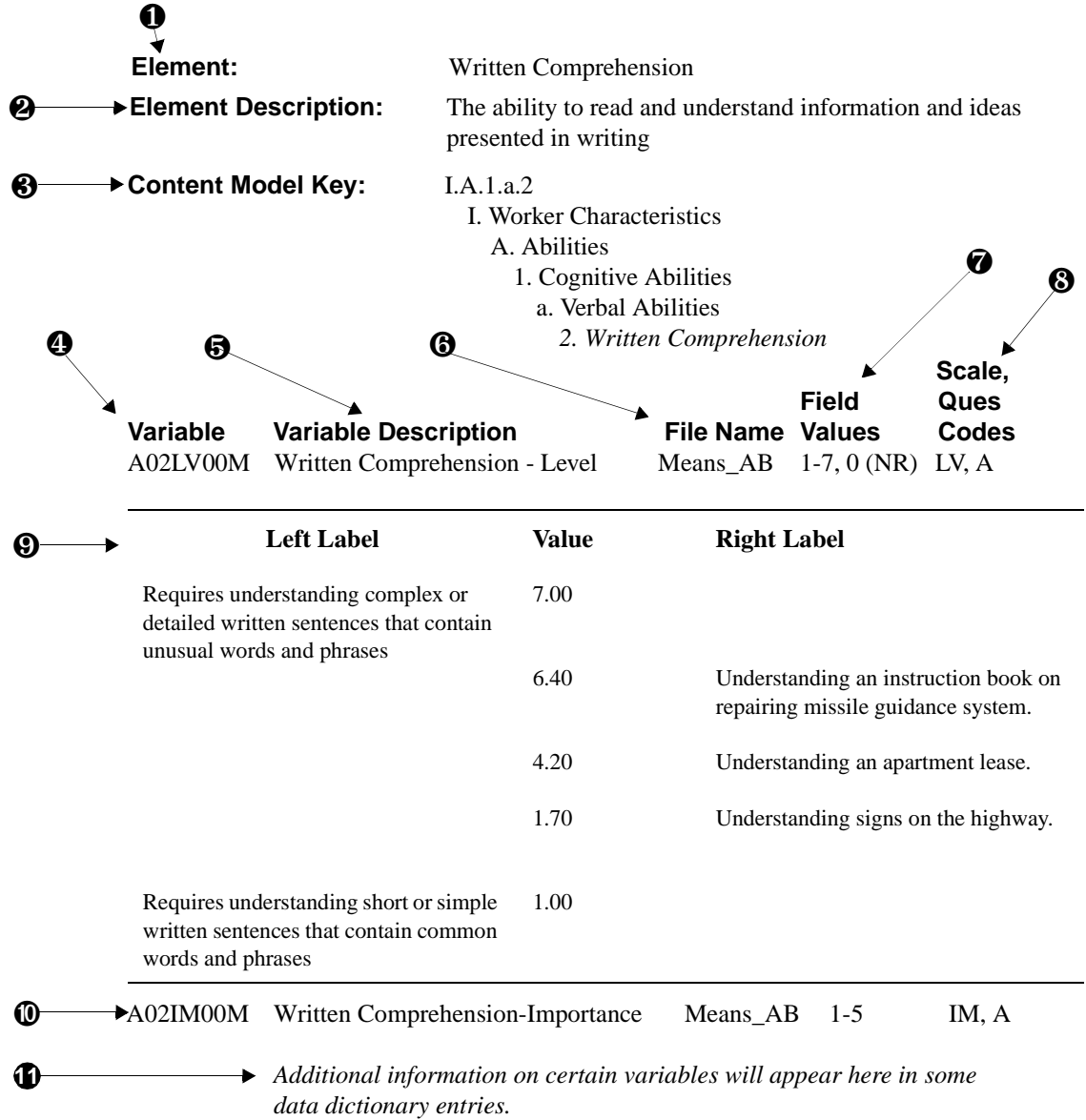
The third approach would be used when you are interested in finding information on a particular variable in the database when you know the

alphanumeric code for the variable, but not the section of the Content Model to which it belongs. In this case, use *Index 2*, found at the end of this volume, to guide you to the relevant page(s) of the *Data Dictionary*. The index lists each variable found in the O\*NET Database (1) alphabetically and (2) numerically within each letter of the alphabet. Like *Index 1*, this index also provides the scale associated with each variable.

### **A Sample Entry**

Each entry in the *Data Dictionary* represents one element in the Content Model. It includes the element name, description, and position in the Content Model hierarchy, as well as the variable(s) name(s), description, location in the data tables, scale, and scale detail. Some entries provide additional information on certain types of variables. A sample entry explaining each field is shown in figure 3.

Figure 3. O\*NET Data Dictionary Sample Entry



## Descriptions of Fields of the O\*NET 98 Data Dictionary

- ① **Element:** The *element* is a label for a Content Model element. It is a characteristic of a job or a characteristic of a person doing the job.
- ② **Description:** The element *description* is a definition of the Content Model element.
- ③ **Content Model Key:** The *Content Model Key* identifies the position of the element being described within the Content Model hierarchy, followed by the complete list of parents of the Content Model element. For ease of use, the Content Model key has been expanded with the category listed per Content Model level. The lowest level of the Content Model hierarchy, shown in italics, is the element being described.
- ④ **Variable:** The *variable* is the alphanumeric code assigned to variables that describe the Content Model element. Some Content Model elements have multiple scales on which the element is to be rated. These Content Model elements have a variable associated with each scale.
- ⑤ **Variable Description:** The *variable description* is the definition of the variable. The definition includes the Content Model element label and the scale description. If the scale description and the scale name are the same, this field will display only the element label. If the statistic type is not a mean and is not contained in the scale description, this field will also display the statistic type.
- ⑥ **File Name:** Name of the table that contains the variable(s) being described.
- ⑦ **Field Values:** The *field value* describes the possible range of values for a variable.
- ⑧ **Scale, Ques. Codes:** The *scale* is the scale name that describes the value of the variable; the *question code* is the code associated with a Question Group from the O\*NET questionnaires.
- ⑨ **Scale Format:** For variables that are measured by the Level scale, the *Data Dictionary* provides the format of the scale, which differs by variable. The *scale format* illustrates the range of values for the scale, as well as the labels associated with each value.
- ⑩ **Additional Variables:** An additional variable associated with the named element that does not have benchmark scales.
- ⑪ **Additional Information:** Some *Data Dictionary* entries provide additional information on specific variables. For example, entries containing variables that are measured by Level of Education or by Job Specialty provide additional text under the Variable Description field.

## The O\*NET Database Tables

The O\*NET Database contains several tables, two of which are key to using the *Data Dictionary*: the Content Model table (CM) and the Data Dictionary table (DD). The Content Model table describes the hierarchy of the Content Model underlying the entire O\*NET Database and follows the outline of each of the five types of descriptors (Worker Characteristics, Worker Requirements, Experience Requirements, Occupational Requirements, and Occupation-Specific Information) as shown at the beginning of each section of the *Data Dictionary*.

The Data Dictionary table presents a list of variables contained in the O\*NET Database, each of which describes an element within the Content Model.

Each of the tables in the database is described below. The actual name of each table is indicated in parentheses after the table's descriptive name.

**Content Model table (CM).** The Content Model table describes the hierarchy of the Content Model underlying the entire O\*NET Database. It lists each Content Model item, along with the following main fields:

- Key—the variable's position in the Content Model hierarchy (e.g., I.A.I.a.2);
- Outline/Position—the level, or position, in the Content Model hierarchy;
- Short Label—a short descriptive label of the Content Model element; and
- Description—a description from the Content Model hierarchy.

The Content Model table follows the outline of each of the five types of descriptors, as shown at the beginning of each section of the *Data Dictionary*.

**Data Dictionary table (DD).** The Data Dictionary table is one of the central tables of the relational database. It presents a list of variables



contained in the O\*NET Database, each of which describes an element within the Content Model. This table contains

- Variable name—the alphanumeric code assigned to an element in the Content Model. The eight-character variable name—for example *A02LV00M*—is composed of the following:

- ❖ *Position 1—Prefixes*: corresponds to the second level of the Content Model hierarchy where *A* equals Abilities, *B* equals Basic Skills, etc. For example,

A02LV00M

See Appendix C for a list of variable code information.

- ❖ *Positions 2-3—Question Group*: contains the number of the question associated with a particular level of the O\*NET Content Model hierarchy. For example,

A02LV00M

is the second of the Level questions in the Abilities hierarchy. See Appendix C for a list of variable code information.

- ❖ *Positions 4-5—Scale Codes*: contains the codes corresponding to the different scales. For example,

A02LV00M

corresponds to Level. See Appendix C for a list of variable code information.

- ❖ **Positions 6-7—Sequence Number:** contains a sequential numerical assignment (00-99) assigned when one or more than one question for a scale occurs with the same scale code in a Content Model group. For example,

A02LV00M

- ❖ **Position 8—Statistic Type:** For example, *M* equals Mean, and *P* equals Percentage, etc. For example:

A02LV00M

See Appendix C for a list of variable code information.

- **Key**—the variable’s position in the Content Model hierarchy (e.g., I.A.I.a.2).
- **Scale**—scale name pointing to scale header and scale detail. More information can be located in the scale header, description, and level scales tables (see below) by using the scale name field as the common link. (See Appendix B for information on the various scale formats.)
- **Question codes**—a code associated with a Question group from the O\*NET questionnaires used during data collection.
- **File name**—the name of the table in which a variable can be found.
- **Statistic type**—mean, median, percentage, number, standard deviation.
- **Source code**—an indicator of the data source for each variable: I (Incumbent data); C (Converted DOT data); or B (Both). Although I (Incumbent) were collected for O\*NET, they are not available for this version.
- **Sequence label**—a short label that identifies a particular variable out of many with the same scale at a particular Content Model level. For example, some questions in the Work Content domain ask respondents to rate “all that apply.”

## Associated Data Dictionary Tables

**Scale header table (SCALE).** The scale header table provides information about the scale name associated with each mean value for a particular variable. It also identifies the scale type, code, and description.

**Scale description table (SCALELBL).** The scale description table includes the scale name, value, and description.

**Level scales table (SCALELVL).** The level scales table contains the right and left scale labels associated with values for the level scale. The right scale label anchors the scale at various points with examples of job behavior that demonstrate different levels of proficiency. The left scale label anchors high and low points on the scale with definitions and requirements.

**Question table (QUESTION).** The question table contains question codes—a code associated with a question group from the O\*NET questionnaire used in data collection—and text associated with various scales.

**Data (means) tables.** Data tables consist of occupation codes with their associated statistic for a variable. The variables have been grouped and placed into multiple data tables. Each of the data tables provides a matrix of O\*NET occupation codes and variable names, and for each occupation and variable, the corresponding statistic. (Each table lists all O\*NET occupations but different sets of variables.) The variables presented in each data table are usually grouped according to the second level of the Content Model hierarchy (e.g., Abilities, under Worker Characteristics).

Following is a list of the current data (means) tables.

| Table    | Descriptor Category         | Scale(s)                                      |
|----------|-----------------------------|---|
| Means_ab | Abilities                   | Level and Importance                          |
| Means_wc | Work Context                | Selected variables only                       |
| Means_sk | Skills                      | Level and Importance                          |
| Means_kn | Knowledges                  | Level and Importance                          |
| Means_gw | Generalized Work Activities | Level, Importance, Frequency                  |
| Means_in | Interests                   | Occupational Interest and Interest High-Point |
| Means_ov | Occupational Values         | Extent  |

Note: Typically, each table name is “means” plus the code for the Content Model level being represented (e.g., “sk” for Skills).

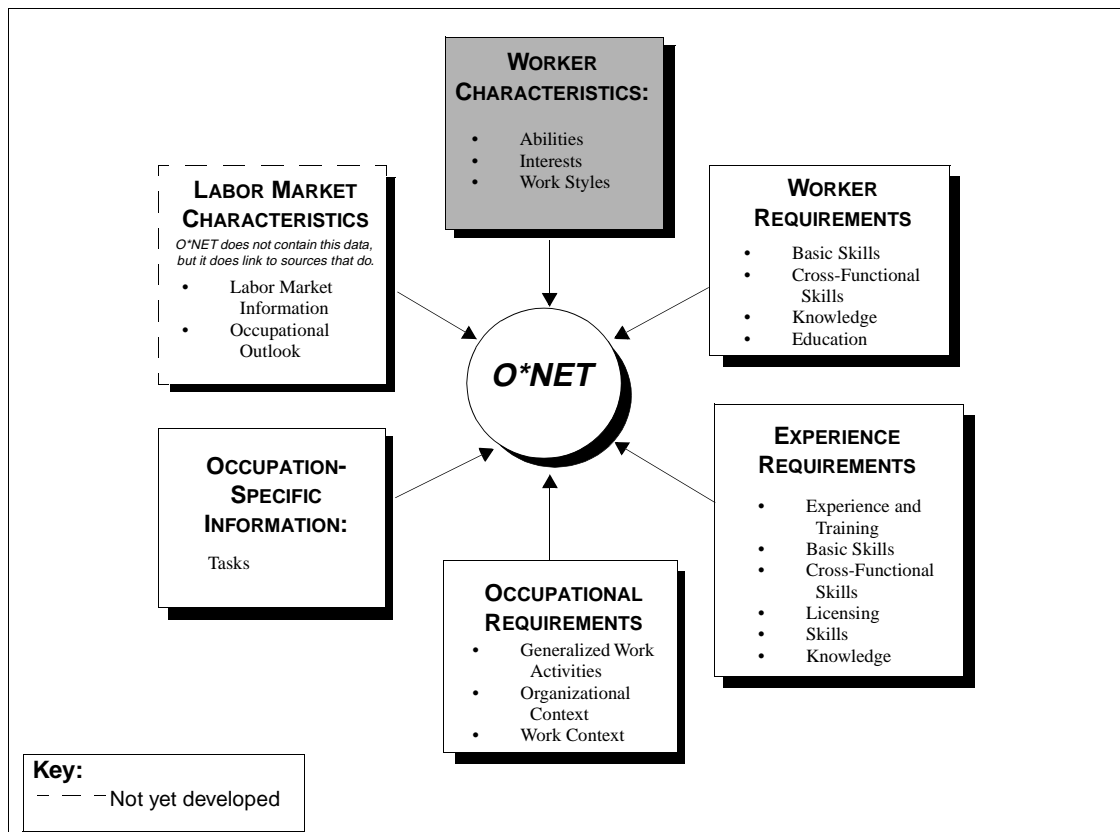
**Crosswalk Tables (xwalk, xwalkttl, xwalkdes, xwalkmoc, moctitle, milcode).** The crosswalk tables provide bi-directional linkages between O\*NET occupations and occupations from other classification systems. The contents of each of the six tables are as follows:

|          |  |
|----------|--|
| XWALK    | Linkages between O*NET and seven of the eight systems crosswalked in this release.   |
| XWALKTTL | Associates descriptive occupational titles with occupational codes used in XWALK.  |
| XWALKDES | Associates a descriptive name with classification system codes used in XWALK and XWALKTTL (for example, DOT is Dictionary of Occupational Titles). |
| XWALKMOC | Linkages between O*NET and military occupations.   |
| MOCTITLE | Associates descriptive occupational titles with military occupational codes used in XWALKMOC.  |
| MILCODE  | Associates descriptive names with classification system codes used in XWALKMOC and MOCTITLE.   |

**O\*NET occupation descriptions table (OCCUPAT).** The occupation descriptions table lists each O\*NET occupation code, title, and description.

**Occupation-specific tasks tables (TASKLIST).** The occupation-specific tasks tables provide a list of tasks for each occupation.

# Worker Characteristics



## O\*NET Data Dictionary : Worker Characteristics

- A. Abilities
  - Enduring attributes of the individual that influence performance
  - 1. Cognitive Abilities
    - Abilities that influence the acquisition and application of knowledge in problem solving
    - a. Verbal Abilities
      - Abilities that influence the acquisition and application of verbal information in problem solving
      - 1. Oral Comprehension
      - 2. Written Comprehension
      - 3. Oral Expression
      - 4. Written Expression
    - b. Idea Generation & Reasoning Abilities
      - Abilities that influence the application and manipulation of information in problem solving
      - 1. Fluency of Ideas
      - 2. Originality
      - 3. Problem Sensitivity
      - 4. Deductive Reasoning
      - 5. Inductive Reasoning
      - 6. Information Ordering
      - 7. Category Flexibility
    - c. Quantitative Abilities
      - Abilities that influence the solution of problems involving mathematical relationships
      - 1. Mathematical Reasoning
      - 2. Number Facility
    - d. Memory
      - Abilities related to the recall of available information
      - 1. Memorization
    - e. Perceptual Abilities
      - Abilities related to the acquisition and organization of visual information
      - 1. Speed of Closure
      - 2. Flexibility of Closure
      - 3. Perceptual Speed
    - f. Spatial Abilities
      - Abilities related to the manipulation and organization of spatial information
      - 1. Spatial Orientation

## O\*NET Data Dictionary : Worker Characteristics

- 2. Visualization
    - g. Attentiveness
      - Abilities related to application of attention
        - 1. Selective Attention
        - 2. Time Sharing
  - 2. Psychomotor Abilities
    - Abilities that influence the capacity to manipulate and control objects
      - a. Fine Manipulative Abilities
        - Abilities related to the manipulation of objects
          - 1. Arm-Hand Steadiness
          - 2. Manual Dexterity
          - 3. Finger Dexterity
      - b. Control Movement Abilities
        - Abilities related to the control and manipulation of objects in time and space
          - 1. Control Precision
          - 2. Multilimb Coordination
          - 3. Response Orientation
          - 4. Rate Control
      - c. Reaction Time and Speed Abilities
        - Abilities related to speed of manipulation of objects
          - 1. Reaction Time
          - 2. Wrist-Finger Speed
          - 3. Speed of Limb Movement
3. Physical Abilities
  - Abilities that influence strength, endurance, flexibility, balance and coordination
    - a. Physical Strength Abilities
      - Abilities related to the capacity to exert force
        - 1. Static Strength
        - 2. Explosive Strength
        - 3. Dynamic Strength
        - 4. Trunk Strength
    - b. Endurance
      - The ability to exert oneself physically over long periods without getting out of breath
        - 1. Stamina
    - c. Flexibility, Balance and Coordination
      - Abilities related to the control of gross body movements
        - 1. Extent Flexibility

## O\*NET Data Dictionary : Worker Characteristics

2. Dynamic Flexibility
  3. Gross Body Coordination
  4. Gross Body Equilibrium
4. Sensory Abilities
- Abilities that influence visual, auditory and speech perception
- a. Visual Abilities
- Abilities related to visual sensory input
1. Near Vision
  2. Far Vision
  3. Visual Color Discrimination
  4. Night Vision
  5. Peripheral Vision
  6. Depth Perception
  7. Glare Sensitivity
- b. Auditory and Speech Abilities
- Abilities related to auditory and oral input
1. Hearing Sensitivity
  2. Auditory Attention
  3. Sound Localization
  4. Speech Recognition
  5. Speech Clarity
- B. Interests
- Preferences for work environments and outcomes
1. Occupational Interests
- Occupational Interest Profiles (OIPs) are compatible with Holland's (1985,1997) model of personality types and work environments. Six interest categories are used to describe the work environment of occupations: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. An OIP consists of six numerical scores indicating how descriptive and characteristic each work environment (or interest area) is for an O\*NET Occupational Unit (OU). In addition, a high-point profile has been assigned indicating which interests are most characteristic of an O\*NET OU. A high-point profile consists of one to three interest codes, depending on how many interest categories meet a minimum degree of descriptiveness for the O\*NET OU.
- a. Realistic
  - b. Investigative
  - c. Artistic
  - d. Social
  - e. Enterprising
  - f. Conventional
  - g. First Interest High-Point
  - h. Second Interest High-Point



## O\*NET Data Dictionary : Worker Characteristics

### i. Third Interest High-Point

### 2. Occupational Values

Occupational Reinforcer Patterns (ORPs) indicate which work values and needs are likely to be reinforced or satisfied by a particular O\*NET Occupational Unit (OU). The use of work values to describe occupations is based on the Theory of Work Adjustment (TWA) developed during the Work Adjustment Project at the University of Minnesota under Research Grants from the U.S. Department of Health, Education and Welfare (Dawis, R.V., England, G.W., & Lofquist, L.H., 1964; Dawis, R.V., & Lofquist L. H., 1984). This theory proposes that job satisfaction is directly related to the degree to which a person's values and corresponding needs are satisfied by his or her work environment. The TWA identifies six work values each with a corresponding set of needs. Every O\*NET OU has an ORP consisting of: 1) 6 numerical scores indicating the mean extent to which each work value is reinforced; and 2) 21 numerical scores indicating the extent to which each need is reinforced.

#### a. Achievement-Mean Extent

Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

1. Ability Utilization
2. Achievement

#### b. Working Conditions-Mean Extent

Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

1. Activity
2. Independence
3. Variety
4. Compensation
5. Security
6. Working Conditions

#### c. Recognition-Mean Extent

Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

1. Advancement
2. Recognition
3. Authority

## O\*NET Data Dictionary : Worker Characteristics

### 4. Social Status

#### d. Relationships-Mean Extent

Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.

1. Co-workers
2. Social Service
3. Moral Values

#### e. Support-Mean Extent

Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.

1. Company Policies and Practices
2. Supervision, Human Relations
3. Supervision, Technical

#### f. Independence-Mean Extent

Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

1. Creativity
2. Responsibility
3. Autonomy

### C. Work Styles

#### Work Styles

#### 1. Achievement Orientation

Job requires personal goal setting, trying to succeed at those goals, and striving to be competent in own work

- a. Achievement/Effort
- b. Persistence
- c. Initiative

#### 2. Social Influence

Job requires having an impact on others in the organization, and displaying energy and leadership

- a. Energy
- b. Leadership Orientation

#### 3. Interpersonal Orientation

Job requires being pleasant, cooperative, sensitive to others, easy to get along with, and having a preference for associating with other organization members

## O\*NET Data Dictionary : Worker Characteristics

- a. Cooperation
- b. Concern for Others
- c. Social Orientation

### 4. Adjustment

Job requires maturity, poise, flexibility, and restraint to cope with pressure, stress, criticism, setbacks, personal and work-related problems, etc.

- a. Self Control
- b. Stress Tolerance
- c. Adaptability/Flexibility

### 5. Conscientiousness

Job requires dependability, commitment to doing the job correctly and carefully, and being trustworthy, accountable, and attentive to details

- a. Dependability
- b. Attention to Detail
- c. Integrity

### 6. Independence

### 7. Practical Intelligence

Job requires generating useful ideas and thinking things through logically

- a. Innovation
- b. Analytical Thinking

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Oral Comprehension

**Description:** The ability to listen to and understand information and ideas presented through spoken words and sentences

**Content Model Key:** I.A.1.a.1

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - a. Verbal Abilities
        - 1. Oral Comprehension*

| Variable | Variable Description     | File Name | Field Values | Scale, Ques Codes |
|----------|--------------------------|-----------|--------------|-------------------|
| A01LV00M | Oral Comprehension-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label  | Value | Right Label  |
|---|-------|--|
| Requires understanding complex or detailed spoken sentences that contain unusual words and phrases. | 7     |  |
|   | 5.5   | Understanding a lecture on advanced physics.           |
|   | 3.8   | Understanding a coach's oral instructions for a sport. |
|   | 1.8   | Understanding a television commercial.                 |
| Requires understanding short or simple spoken sentences that contain common words and phrases.      | 1     |  |

|          |                               |          |     |       |
|----------|-------------------------------|----------|-----|-------|
| A01IM00M | Oral Comprehension-Importance | Means_AB | 1-5 | IM, A |
|----------|-------------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Written Comprehension

**Description:** The ability to read and understand information and ideas presented in writing

**Content Model Key:** I.A.1.a.2

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - a. Verbal Abilities
        - 2. *Written Comprehension*

| Variable | Variable Description        | File Name | Field Values | Scale, Ques Codes |
|----------|-----------------------------|-----------|--------------|-------------------|
| A02LV00M | Written Comprehension-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label   | Value | Right Label   |
|--|-------|---|
| Requires understanding complex or detailed written sentences that contain unusual words and phrases. | 7     |   |
|  | 6.4   | Understanding an instruction book on repairing a missile guidance system. |
|  | 4.2   | Understanding an apartment lease.   |
|  | 1.7   | Understanding signs on the highway.                                       |
| Requires understanding short or simple written sentences that contain common words and phrases.      | 1     |   |

|          |                                  |          |     |       |
|----------|----------------------------------|----------|-----|-------|
| A02IM00M | Written Comprehension-Importance | Means_AB | 1-5 | IM, A |
|----------|----------------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Oral Expression

**Description:** The ability to communicate information and ideas in speaking so others will understand

**Content Model Key:** I.A.1.a.3

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - a. Verbal Abilities
        - 3. *Oral Expression*

| Variable  | Variable Description       | File Name | Field Values  | Scale, Ques Codes |
|---|----------------------------|-----------|---|-------------------|
| A03LV00M  | Oral Expression-Level      | Means_AB  | 1-7, 0(NR)  | LV, A             |
| Left Label  |                            | Value     | Right Label   |                   |
| Requires speaking in a clear and well organized way to communicate complicated ideas to others. |                            | 7         |   |                   |
|   |                            | 6.4       | Explaining advanced principles of genetics to college freshman. |                   |
|   |                            | 3.8       | Giving directions to a lost motorist.                           |                   |
|   |                            | 1.8       | Canceling newspaper delivery by phone.                          |                   |
| Requires speaking to communicate simple ideas to others.  |                            | 1         |   |                   |
| A03IM00M  | Oral Expression-Importance | Means_AB  | 1-5   | IM, A             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Written Expression

**Description:** The ability to communicate information and ideas in writing so others will understand

**Content Model Key:** I.A.1.a.4

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - a. Verbal Abilities
        - 4. *Written Expression*

| Variable | Variable Description     | File Name | Field Values | Scale, Ques Codes |
|----------|--------------------------|-----------|--------------|-------------------|
| A04LV00M | Written Expression-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label  | Value | Right Label  |
|---|-------|--|
| Requires clear and well organized use of words and sentences to communicate complicated ideas to others in writing. | 7     |  |
|   | 6.5   | Writing an advanced economics textbook.  |
|   | 3.8   | Writing a job recommendation for a subordinate.                                |
|   | 1.2   | Writing a note to remind someone to take something out of the freezer to thaw. |
| Requires use of words and sentences to communicate simple ideas to others in writing.                               | 1     |  |

|          |                               |          |     |       |
|----------|-------------------------------|----------|-----|-------|
| A04IM00M | Written Expression-Importance | Means_AB | 1-5 | IM, A |
|----------|-------------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Fluency of Ideas

**Description:** The ability to come up with a number of ideas about a given topic. It concerns the number of ideas produced and not the quality, correctness, or creativity of the ideas.

**Content Model Key:** I.A.1.b.1

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - b. Idea Generation & Reasoning Abilities
        - 1. *Fluency of Ideas*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|------------------------|-----------|--------------|-------------------|
| A05LV00M | Fluency of Ideas-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label  | Value | Right Label  |
|---|-------|--|
| Requires the production of many ideas about a very specialized topic. | 7     |  |
|   | 5.8   | Naming all the possible strategies for a particular military battle.       |
|   | 3.6   | Thinking of as many ideas as possible for the name of a new research firm. |
|   | 1.5   | Naming four different uses for a screwdriver.                              |
| Requires the production of one or two ideas about a common topic.     | 1     |  |

|          |                             |          |     |       |
|----------|-----------------------------|----------|-----|-------|
| A05IM00M | Fluency of Ideas-Importance | Means_AB | 1-5 | IM, A |
|----------|-----------------------------|----------|-----|-------|



## O\*NET Data Dictionary : Worker Characteristics

**Element:** Originality

**Description:** The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem

**Content Model Key:** I.A.1.b.2

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - b. Idea Generation & Reasoning Abilities
        - 2. *Originality*

| Variable   | Variable Description   | File Name | Field Values  | Scale, Ques Codes |
|--|------------------------|-----------|---|-------------------|
| A06LV00M   | Originality-Level      | Means_AB  | 1-7, 0(NR)  | LV, A             |
| Left Label   |                        | Value     | Right Label   |                   |
| Requires the production of extremely clever or creative ideas about an unusual topic or situation. |                        | 7         |   |                   |
|  |                        | 6.5       | Inventing a new type of man-made fiber.                     |                   |
|  |                        | 4.5       | Redesigning job tasks to be more interesting for employees. |                   |
|  |                        | 1.9       | Using a credit card to open a locked door.                  |                   |
| Requires the production of one or two ideas showing little creativity about a common topic.        |                        | 1         |   |                   |
| A06IM00M   | Originality-Importance | Means_AB  | 1-5   | IM, A             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Problem Sensitivity

**Description:** The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.

**Content Model Key:** I.A.1.b.3

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - b. Idea Generation & Reasoning Abilities
        - 3. *Problem Sensitivity*

| Variable | Variable Description      | File Name | Field Values | Scale, Ques Codes |
|----------|---------------------------|-----------|--------------|-------------------|
| A07LV00M | Problem Sensitivity-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label   | Value | Right Label   |
|--|-------|---|
| Requires recognizing very unusual or complex problems and identifying all elements of the problem. | 7     |   |
|  | 5.6   | Recognizing an illness at an early stage of a disease when there are only a few symptoms. |
|  | 3.9   | Recognizing from the mood of prisoners that a prison riot is likely to occur.             |
|  | 1.3   | Recognizing that an unplugged lamp won't work.  |
| Requires recognizing common or simple problems.  | 1     |   |

|          |                                |          |     |       |
|----------|--------------------------------|----------|-----|-------|
| A07IM00M | Problem Sensitivity-Importance | Means_AB | 1-5 | IM, A |
|----------|--------------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Deductive Reasoning

**Description:** The ability to apply general rules to specific problems to come up with logical answers. It involves deciding if an answer makes sense.

**Content Model Key:** I.A.1.b.4

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - b. Idea Generation & Reasoning Abilities
        - 4. *Deductive Reasoning*

| Variable | Variable Description      | File Name | Field Values | Scale, Ques Codes |
|----------|---------------------------|-----------|--------------|-------------------|
| A08LV00M | Deductive Reasoning-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label  | Value | Right Label   |
|---|-------|---|
| Requires many logical steps using general rules to arrive at answers to complex problems.           | 7     |   |
|   | 6.2   | Designing an aircraft wing using the principals of aerodynamics.                |
|   | 4.9   | Deciding what factors to consider in selecting stocks.                          |
|   | 1.6   | Knowing that, due to the law of gravity, a stalled car can coast down the hill. |
| Requires only one or two steps, using one general rule, to arrive at an answer to a simple problem. | 1     |   |

|          |                                |          |     |       |
|----------|--------------------------------|----------|-----|-------|
| A08IM00M | Deductive Reasoning-Importance | Means_AB | 1-5 | IM, A |
|----------|--------------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Inductive Reasoning

**Description:** The ability to combine separate pieces of information, or specific answers to problems, to form general rules or conclusions. It includes coming up with a logical explanation for why a series of seemingly unrelated events occur together.

**Content Model Key:** I.A.1.b.5

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - b. Idea Generation & Reasoning Abilities
        - 5. *Inductive Reasoning*

| Variable   | Variable Description           | File Name  | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |   |   |  |     |  |  |     |   |  |   |  |
|--|--------------------------------|--|--------------|-------------------|------------|-------|-------------|--|---|--|--|---|---|--|-----|--|--|-----|---|--|---|--|
| A09LV00M   | Inductive Reasoning-Level      | Means_AB   | 1-7, 0(NR)   | LV, A             |            |       |             |  |   |  |  |   |   |  |     |  |  |     |   |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Requires developing a rule or theory to explain how very different things or groups of things are related.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6</td> <td>Diagnosing a disease using the results of many different lab tests.</td> </tr> <tr> <td></td> <td style="text-align: center;">4.5</td> <td>Determining the prime suspect based on evidence gathered at a crime scene.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Determining clothing to wear based on the weather report.</td> </tr> <tr> <td>Requires developing a simple basic rule to explain how two similar things are related.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |                                |  |              |                   | Left Label | Value | Right Label | Requires developing a rule or theory to explain how very different things or groups of things are related. | 7 |  |  | 6 | Diagnosing a disease using the results of many different lab tests. |  | 4.5 | Determining the prime suspect based on evidence gathered at a crime scene. |  | 1.5 | Determining clothing to wear based on the weather report. | Requires developing a simple basic rule to explain how two similar things are related. | 1 |  |
| Left Label   | Value                          | Right Label  |              |                   |            |       |             |  |   |  |  |   |   |  |     |  |  |     |   |  |   |  |
| Requires developing a rule or theory to explain how very different things or groups of things are related.   | 7                              |  |              |                   |            |       |             |  |   |  |  |   |   |  |     |  |  |     |   |  |   |  |
|  | 6                              | Diagnosing a disease using the results of many different lab tests.        |              |                   |            |       |             |  |   |  |  |   |   |  |     |  |  |     |   |  |   |  |
|  | 4.5                            | Determining the prime suspect based on evidence gathered at a crime scene. |              |                   |            |       |             |  |   |  |  |   |   |  |     |  |  |     |   |  |   |  |
|  | 1.5                            | Determining clothing to wear based on the weather report.                  |              |                   |            |       |             |  |   |  |  |   |   |  |     |  |  |     |   |  |   |  |
| Requires developing a simple basic rule to explain how two similar things are related.   | 1                              |  |              |                   |            |       |             |  |   |  |  |   |   |  |     |  |  |     |   |  |   |  |
| A09IM00M   | Inductive Reasoning-Importance | Means_AB   | 1-5          | IM, A             |            |       |             |  |   |  |  |   |   |  |     |  |  |     |   |  |   |  |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Information Ordering

**Description:** The ability to correctly follow a given rule or set of rules in order to arrange things or actions in a certain order. The things or actions can include numbers, letters, words, pictures, procedures, sentences, and mathematical or logical operations.

**Content Model Key:** I.A.1.b.6

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - b. Idea Generation & Reasoning Abilities
        - 6. *Information Ordering*

| Variable   | Variable Description            | File Name | Field Values   | Scale, Ques Codes |
|--|---------------------------------|-----------|--|-------------------|
| A10LV00M   | Information Ordering-Level      | Means_AB  | 1-7, 0(NR)   | LV, A             |
| Left Label   |                                 | Value     | Right Label  |                   |
| Requires putting in order a large amount of information using two or more complex rules. |                                 | 7         |  |                   |
|  |                                 | 6.2       | Assembling a nuclear warhead.  |                   |
|  |                                 | 4.8       | Mixing chemicals according to a specific sequence so they do not become toxic. |                   |
|  |                                 | 2.4       | Following the correct steps to change a tire.                                  |                   |
|  |                                 | 1.3       | Putting things in numerical order.   |                   |
| Requires putting in order a small amount of information according to a simple rule.      |                                 | 1         |  |                   |
| A10IM00M   | Information Ordering-Importance | Means_AB  | 1-5  | IM, A             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Category Flexibility

**Description:** The ability to produce many rules so that each rule tells how to group (or combine) a set of things in a different way.

**Content Model Key:** I.A.1.b.7

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - b. Idea Generation & Reasoning Abilities
        - 7. *Category Flexibility*

| Variable | Variable Description       | File Name | Field Values | Scale, Ques Codes |
|----------|----------------------------|-----------|--------------|-------------------|
| A11LV00M | Category Flexibility-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label   | Value | Right Label   |
|--|-------|---|
| Requires the production of a large number of rules to make many different groupings of unrelated things. | 7     |   |
|  | 5.9   | Classifying man-made fibers in terms of their strength, cost, flexibility, melting points, etc. |
|  | 3.4   | Classifying flowers according to size, color, smell, and uses.                                  |
|  | 1.7   | Sorting nails in a toolbox on the basis of length.  |
| Requires the production of only one rule, and thus only one grouping of a set of very similar things.    | 1     |   |

|          |                                 |          |     |       |
|----------|---------------------------------|----------|-----|-------|
| A11IM00M | Category Flexibility-Importance | Means_AB | 1-5 | IM, A |
|----------|---------------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Mathematical Reasoning

**Description:** The ability to understand and organize a problem and then to select a mathematical method or formula to solve the problem

**Content Model Key:** I.A.1.c.1

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - c. Quantitative Abilities
        - 1. *Mathematical Reasoning*

| Variable | Variable Description         | File Name | Field Values | Scale, Ques Codes |
|----------|------------------------------|-----------|--------------|-------------------|
| A12LV00M | Mathematical Reasoning-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label   | Value | Right Label   |
|--|-------|---|
| Requires understanding and organizing a very complex problem needing many detailed mathematical formulas and methods to solve the problem. | 7     |   |
|  | 5.8   | Determining the mathematics required to simulate a space craft landing on the moon. |
|  | 4.2   | Deciding how to calculate profits to determine the amounts of yearly bonuses.       |
|  | 1.4   | Determining how much 10 oranges will cost when they are priced at 2 for 29 cents.   |
| Requires understanding and organizing an easy problem needing only one or two simple mathematical steps.                                   | 1     |   |

|          |                                   |          |     |       |
|----------|-----------------------------------|----------|-----|-------|
| A12IM00M | Mathematical Reasoning-Importance | Means_AB | 1-5 | IM, A |
|----------|-----------------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Number Facility

**Description:** The ability to add, subtract, multiply, or divide quickly and correctly

**Content Model Key:** I.A.1.c.2

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - c. Quantitative Abilities
        - 2. *Number Facility*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|-----------------------|-----------|--------------|-------------------|
| A13LV00M | Number Facility-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label   | Value | Right Label   |
|--|-------|---|
| Requires fast and accurate calculations using many different operations, with complex numbers. | 7     |   |
|  | 6.5   | Manually calculating the flight path of an aircraft, taking into account speed, fuel, wind, and altitude. |
|  | 4.6   | Computing the interest payment that should be generated from an investment.                               |
|  | 2.9   | Balancing a checkbook.  |
|  | 1.2   | Adding 2 and 7.   |
| Requires simple calculations when more than enough time is available.                          | 1     |   |

|          |                            |          |     |       |
|----------|----------------------------|----------|-----|-------|
| A13IM00M | Number Facility-Importance | Means_AB | 1-5 | IM, A |
|----------|----------------------------|----------|-----|-------|



## O\*NET Data Dictionary : Worker Characteristics

**Element:** Memorization

**Description:** The ability to remember information such as words, numbers, pictures, and procedures

**Content Model Key:** I.A.1.d.1

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - d. Memory
        - 1. Memorization*

| Variable | Variable Description | File Name | Field Values | Scale, Ques Codes |
|----------|----------------------|-----------|--------------|-------------------|
| A14LV00M | Memorization-Level   | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label  | Value | Right Label  |
|---|-------|--|
| Requires remembering a large amount of complex material over a long period of time. | 7     |  |
|   | 5.9   | Reciting the Gettysburg Address after studying it for 15 minutes.            |
|   | 4     | Reciting the first names of the five people you just met.                    |
|   | 1.2   | Remembering the number on your bus to be sure you get back on the right one. |
| Requires remembering a small amount of simple material for a short period of time.  | 1     |  |

|          |                         |          |     |       |
|----------|-------------------------|----------|-----|-------|
| A14IM00M | Memorization-Importance | Means_AB | 1-5 | IM, A |
|----------|-------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Speed of Closure

**Description:** The ability to quickly make sense of information that seems to be without meaning or organization. It involves quickly combining and organizing different pieces of information into a meaningful pattern

**Content Model Key:** I.A.1.e.1

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - e. Perceptual Abilities
        - 1. *Speed of Closure*

| Variable   | Variable Description        | File Name | Field Values  | Scale, Ques Codes |
|--|-----------------------------|-----------|---|-------------------|
| A15LV00M   | Speed of Closure-Level      | Means_AB  | 1-7, 0(NR)  | LV, A             |
| Left Label   |                             | Value     | Right Label   |                   |
| Requires quick combination of many different pieces of information to identify a very complex and unusual pattern.     |                             | 7         |   |                   |
|  |                             | 5.1       | Interpreting the patterns on a weather radarscope to decide if the weather is changing. |                   |
|  |                             | 4         | Making sense out of strange handwriting.  |                   |
|  |                             | 2.6       | Recognizing a song after hearing only the first few notes.                              |                   |
| Requires the combination of two or three pieces of information into a simple pattern, when time is not very important. |                             | 1         |   |                   |
| A15IM00M   | Speed of Closure-Importance | Means_AB  | 1-5   | IM, A             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Flexibility of Closure

**Description:** The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material

**Content Model Key:** I.A.1.e.2

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - e. Perceptual Abilities
        - 2. *Flexibility of Closure*

| Variable | Variable Description         | File Name | Field Values | Scale, Ques Codes |
|----------|------------------------------|-----------|--------------|-------------------|
| A16LV00M | Flexibility of Closure-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label  | Value | Right Label  |
|---|-------|--|
| Requires detecting an unusual, complex pattern in highly complex, confusing, and distracting background material. | 7     |  |
|   | 6     | Identifying camouflaged tanks while flying in a high speed airplane. |
|   | 4.1   | Looking for a golf ball in the rough.                                |
|   | 2     | Tuning in a radio weather station in a noisy truck.                  |
| Requires detecting an easy-to-find pattern in simple background material.   | 1     |  |

|          |                                   |          |     |       |
|----------|-----------------------------------|----------|-----|-------|
| A16IM00M | Flexibility of Closure-Importance | Means_AB | 1-5 | IM, A |
|----------|-----------------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Perceptual Speed

**Description:** The ability to quickly and accurately compare letters, numbers, objects, pictures, or patterns. The things to be compared may be presented at the same time or one after the other. This ability also includes comparing a presented object with a remembered object

**Content Model Key:** I.A.1.e.3

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - e. Perceptual Abilities
        - 3. *Perceptual Speed*

| Variable   | Variable Description        | File Name | Field Values   | Scale, Ques Codes |
|--|-----------------------------|-----------|--|-------------------|
| A17LV00M   | Perceptual Speed-Level      | Means_AB  | 1-7, 0(NR)   | LV, A             |
| Left Label   |                             | Value     | Right Label  |                   |
| Requires very quick and accurate comparisons of highly detailed pictures and patterns.   |                             | 7         |  |                   |
|  |                             | 5.3       | Inspecting electrical parts for defects as they flow by on a fast-moving assembly line.            |                   |
|  |                             | 4         | Reading five temperature gauges in 10 seconds to make sure each temperature in within safe limits. |                   |
|  |                             | 2.5       | Sorting mail according to zip codes with no time pressure.   |                   |
| Requires accuracy and some quickness in comparing letters, numbers, or objects that are obviously the same or different from each other. |                             | 1         |  |                   |
| A17IM00M   | Perceptual Speed-Importance | Means_AB  | 1-5  | IM, A             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Spatial Orientation

**Description:** The ability to know one's location in relation to the environment, or to know where other objects are in relation to one's self

**Content Model Key:** I.A.1.f.1

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - f. Spatial Abilities
        - 1. *Spatial Orientation*

| Variable | Variable Description      | File Name | Field Values | Scale, Ques Codes |
|----------|---------------------------|-----------|--------------|-------------------|
| A18LV00M | Spatial Orientation-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label  | Value | Right Label   |
|---|-------|---|
| Requires staying oriented in a changing environment.    | 7     |   |
|   | 6.5   | Navigating an ocean voyage using only the positions of the sun and stars.                       |
|   | 3.4   | Finding your way through a familiar room when the lights are out without bumping into anything. |
|   | 2     | Using the floor plan to locate a store in a shopping mall.                                      |
| Requires some orientation in an unchanging environment. | 1     |   |

|          |                                |          |     |       |
|----------|--------------------------------|----------|-----|-------|
| A18IM00M | Spatial Orientation-Importance | Means_AB | 1-5 | IM, A |
|----------|--------------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Visualization

**Description:** The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged

**Content Model Key:** I.A.1.f.2

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - f. Spatial Abilities
        - 2. *Visualization*

| Variable | Variable Description | File Name | Field Values | Scale, Ques Codes |
|----------|----------------------|-----------|--------------|-------------------|
| A19LV00M | Visualization-Level  | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label  | Value | Right Label  |
|---|-------|--|
| Requires imagining how something unusual will look after many complex changes in its position or in the arrangement of its parts. | 7     |  |
|   | 5.8   | Anticipating opponent's as well as your own future moves in a chess game.            |
|   | 4     | Following a diagram to assemble a metal storage cabinet.                             |
|   | 1.5   | Imagining how to put paper in the typewriter so the letterhead comes out at the top. |
| Requires imagining how something familiar will look after one simple change in its position or in the arrangement of its parts.   | 1     |  |

|          |                          |          |     |       |
|----------|--------------------------|----------|-----|-------|
| A19IM00M | Visualization-Importance | Means_AB | 1-5 | IM, A |
|----------|--------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Selective Attention

**Description:** The ability to concentrate and not be distracted while performing a task over a period of time

**Content Model Key:** I.A.1.g.1

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - g. Attentiveness
        - 1. *Selective Attention*

| Variable | Variable Description      | File Name | Field Values | Scale, Ques Codes |
|----------|---------------------------|-----------|--------------|-------------------|
| A20LV00M | Selective Attention-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label  | Value | Right Label  |
|---|-------|--|
| Requires intense concentration on a complex task in the presence of a great deal of background distraction. | 7     |  |
|   | 6     | Studying a technical manual in a noisy boiler room.                      |
|   | 4     | Monitoring security TV screens for intruders throughout the night shift. |
|   | 1.8   | Answering a business call with coworkers talking nearby.                 |
| Requires enough attention to do a simple, routine task in the presence of a little background distraction.  | 1     |  |

|          |                                |          |     |       |
|----------|--------------------------------|----------|-----|-------|
| A20IM00M | Selective Attention-Importance | Means_AB | 1-5 | IM, A |
|----------|--------------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Time Sharing

**Description:** The ability to efficiently shift back and forth between two or more activities or sources of information (such as speech, sounds, touch, or other sources)

**Content Model Key:** I.A.1.g.2

- I. Worker Characteristics
  - A. Abilities
    - 1. Cognitive Abilities
      - g. Attentiveness
        - 2. *Time Sharing*

| Variable | Variable Description | File Name | Field Values | Scale, Ques Codes |
|----------|----------------------|-----------|--------------|-------------------|
| A21LV00M | Time Sharing-Level   | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label   | Value | Right Label   |
|--|-------|---|
| Requires using more than two sources to get complex information at a rapid rate. | 7     |   |
|  | 6.2   | Monitoring radar and radio transmissions to keep track of aircraft during periods of heavy traffic. |
|  | 4.8   | Watching the actions of several team members while coaching a player on the sidelines.              |
|  | 3.3   | Watching street signs while driving at 30 miles per hour.   |
|  | 1.8   | Listening to music while filing papers.   |
| Requires use of two sources to get simple information at a slow pace.            | 1     |   |

|          |                         |          |     |       |
|----------|-------------------------|----------|-----|-------|
| A21IM00M | Time Sharing-Importance | Means_AB | 1-5 | IM, A |
|----------|-------------------------|----------|-----|-------|



## O\*NET Data Dictionary : Worker Characteristics

**Element:** Arm-Hand Steadiness

**Description:** The ability to keep the hand and arm steady while making an arm movement or while holding the arm and hand in one position

**Content Model Key:** I.A.2.a.1

- I. Worker Characteristics
  - A. Abilities
    - 2. Psychomotor Abilities
      - a. Fine Manipulative Abilities
        - 1. *Arm-Hand Steadiness*

| Variable   | Variable Description           | File Name                   | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |     |                             |  |     |                     |  |     |                    |   |   |  |
|--|--------------------------------|-----------------------------|--------------|-------------------|------------|-------|-------------|---|---|--|--|-----|-----------------------------|--|-----|---------------------|--|-----|--------------------|---|---|--|
| A22LV00M   | Arm-Hand Steadiness-Level      | Means_AB                    | 1-7, 0(NR)   | LV, A             |            |       |             |   |   |  |  |     |                             |  |     |                     |  |     |                    |   |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Requires extreme steadiness to move the arm and hand or to hold them in position.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.3</td> <td>Cutting facets in diamonds.</td> </tr> <tr> <td></td> <td style="text-align: center;">4.1</td> <td>Threading a needle.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Lighting a candle.</td> </tr> <tr> <td>Requires only a little steadiness to move the arm and hand or to hold them in one position.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |                                |                             |              |                   | Left Label | Value | Right Label | Requires extreme steadiness to move the arm and hand or to hold them in position. | 7 |  |  | 6.3 | Cutting facets in diamonds. |  | 4.1 | Threading a needle. |  | 1.5 | Lighting a candle. | Requires only a little steadiness to move the arm and hand or to hold them in one position. | 1 |  |
| Left Label   | Value                          | Right Label                 |              |                   |            |       |             |   |   |  |  |     |                             |  |     |                     |  |     |                    |   |   |  |
| Requires extreme steadiness to move the arm and hand or to hold them in position.  | 7                              |                             |              |                   |            |       |             |   |   |  |  |     |                             |  |     |                     |  |     |                    |   |   |  |
|  | 6.3                            | Cutting facets in diamonds. |              |                   |            |       |             |   |   |  |  |     |                             |  |     |                     |  |     |                    |   |   |  |
|  | 4.1                            | Threading a needle.         |              |                   |            |       |             |   |   |  |  |     |                             |  |     |                     |  |     |                    |   |   |  |
|  | 1.5                            | Lighting a candle.          |              |                   |            |       |             |   |   |  |  |     |                             |  |     |                     |  |     |                    |   |   |  |
| Requires only a little steadiness to move the arm and hand or to hold them in one position.  | 1                              |                             |              |                   |            |       |             |   |   |  |  |     |                             |  |     |                     |  |     |                    |   |   |  |
| A22IM00M   | Arm-Hand Steadiness-Importance | Means_AB                    | 1-5          | IM, A             |            |       |             |   |   |  |  |     |                             |  |     |                     |  |     |                    |   |   |  |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Manual Dexterity

**Description:** The ability to quickly make coordinated movements of one hand, a hand together with its arm, or two hands to grasp, manipulate, or assemble objects

**Content Model Key:** I.A.2.a.2

- I. Worker Characteristics
  - A. Abilities
    - 2. Psychomotor Abilities
      - a. Fine Manipulative Abilities
        - 2. *Manual Dexterity*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|------------------------|-----------|--------------|-------------------|
| A23LV00M | Manual Dexterity-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label   | Value | Right Label   |
|--|-------|---|
| Requires very fast coordinated use of one hand, a hand and arms, or two hands to grasp, place, move, or assemble objects.    | 7     |   |
|  | 6.9   | Performing open-heart surgery using surgical instruments. |
|  | 4.1   | Packaging oranges in crates as quickly as possible.       |
|  | 1.2   | Screwing a light bulb into a lamp socket.                 |
| Requires some speed and coordination to grasp, place, move, or assemble objects with one hand, a hand and arm, or two hands. | 1     |   |

|          |                             |          |     |       |
|----------|-----------------------------|----------|-----|-------|
| A23IM00M | Manual Dexterity-Importance | Means_AB | 1-5 | IM, A |
|----------|-----------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Finger Dexterity

**Description:** The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects

**Content Model Key:** I.A.2.a.3

- I. Worker Characteristics
  - A. Abilities
    - 2. Psychomotor Abilities
      - a. Fine Manipulative Abilities
        - 3. *Finger Dexterity*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|------------------------|-----------|--------------|-------------------|
| A24LV00M | Finger Dexterity-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label  | Value | Right Label  |
|---|-------|--|
| Requires very fast coordinated use of the fingers of one or both hands to grasp, place, move, or assemble very small objects. | 7     |  |
|   | 6.5   | Putting together the inner workings of a small wrist watch.    |
|   | 4.2   | Attaching small knobs to stereo equipment on an assembly line. |
|   | 1.5   | Putting coins in a parking meter.                              |
| Requires some speed and coordination to grasp, place, move, or assemble small objects with fingers of one or both hands.      | 1     |  |

|          |                             |          |     |       |
|----------|-----------------------------|----------|-----|-------|
| A24IM00M | Finger Dexterity-Importance | Means_AB | 1-5 | IM, A |
|----------|-----------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Control Precision

**Description:** The ability to quickly and repeatedly make precise adjustments in moving the controls of a machine or vehicle to exact positions

**Content Model Key:** I.A.2.b.1

- I. Worker Characteristics
  - A. Abilities
    - 2. Psychomotor Abilities
      - b. Control Movement Abilities
        - 1. Control Precision

| Variable  | Variable Description         | File Name | Field Values                                 | Scale, Ques Codes |
|---|------------------------------|-----------|--|-------------------|
| A25LV00M  | Control Precision-Level      | Means_AB  | 1-7, 0(NR)                                   | LV, A             |
| Left Label  |                              | Value     | Right Label                                  |                   |
| Requires extreme precision to quickly and repeatedly adjust very sensitive controls.  |                              | 7         |  |                   |
|   |                              | 6         | Drilling a tooth.                            |                   |
|   |                              | 3.8       | Adjusting farm tractor controls.             |                   |
|   |                              | 1.5       | Adjusting a room light with a dimmer switch. |                   |
| Requires some precision to adjust a control once or twice under little time pressure. |                              | 1         |  |                   |
| A25IM00M  | Control Precision-Importance | Means_AB  | 1-5  | IM, A             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Multilimb Coordination

**Description:** The ability to coordinate movements of two or more limbs together (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down. It does not involve performing the activities while the body is in motion

**Content Model Key:** I.A.2.b.2

- I. Worker Characteristics
  - A. Abilities
    - 2. Psychomotor Abilities
      - b. Control Movement Abilities
        - 2. *Multilimb Coordination*

| Variable   | Variable Description              | File Name                                  | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |     |                                      |  |     |  |  |     |                |  |   |  |
|--|-----------------------------------|--|--------------|-------------------|------------|-------|-------------|--|---|--|--|-----|--------------------------------------|--|-----|--|--|-----|----------------|--|---|--|
| A26LV00M   | Multilimb Coordination-Level      | Means_AB                                   | 1-7, 0(NR)   | LV, A             |            |       |             |  |   |  |  |     |                                      |  |     |  |  |     |                |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Requires a high degree of coordination to perform very complex movements involving the use of all four limbs together.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">5.8</td> <td>Playing the drum set in a jazz band.</td> </tr> <tr> <td></td> <td style="text-align: center;">4.1</td> <td>Operating a forklift truck in a warehouse.</td> </tr> <tr> <td></td> <td style="text-align: center;">2.5</td> <td>Rowing a boat.</td> </tr> <tr> <td>Requires a low degree of coordination to perform simple movements using two limbs at a time.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |                                   |  |              |                   | Left Label | Value | Right Label | Requires a high degree of coordination to perform very complex movements involving the use of all four limbs together. | 7 |  |  | 5.8 | Playing the drum set in a jazz band. |  | 4.1 | Operating a forklift truck in a warehouse. |  | 2.5 | Rowing a boat. | Requires a low degree of coordination to perform simple movements using two limbs at a time. | 1 |  |
| Left Label   | Value                             | Right Label                                |              |                   |            |       |             |  |   |  |  |     |                                      |  |     |  |  |     |                |  |   |  |
| Requires a high degree of coordination to perform very complex movements involving the use of all four limbs together.   | 7                                 |  |              |                   |            |       |             |  |   |  |  |     |                                      |  |     |  |  |     |                |  |   |  |
|  | 5.8                               | Playing the drum set in a jazz band.       |              |                   |            |       |             |  |   |  |  |     |                                      |  |     |  |  |     |                |  |   |  |
|  | 4.1                               | Operating a forklift truck in a warehouse. |              |                   |            |       |             |  |   |  |  |     |                                      |  |     |  |  |     |                |  |   |  |
|  | 2.5                               | Rowing a boat.                             |              |                   |            |       |             |  |   |  |  |     |                                      |  |     |  |  |     |                |  |   |  |
| Requires a low degree of coordination to perform simple movements using two limbs at a time.   | 1                                 |  |              |                   |            |       |             |  |   |  |  |     |                                      |  |     |  |  |     |                |  |   |  |
| A26IM00M   | Multilimb Coordination-Importance | Means_AB                                   | 1-5          | IM, A             |            |       |             |  |   |  |  |     |                                      |  |     |  |  |     |                |  |   |  |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Response Orientation

**Description:** The ability to choose quickly and correctly between two or more movements in response to two or more signals (lights, sounds, pictures, etc.). It includes the speed with which the correct response is started with the hand, foot, or other body parts

**Content Model Key:** I.A.2.b.3

- I. Worker Characteristics
  - A. Abilities
    - 2. Psychomotor Abilities
      - b. Control Movement Abilities
        - 3. *Response Orientation*

| Variable  | Variable Description            | File Name | Field Values  | Scale, Ques Codes |
|---|---------------------------------|-----------|---|-------------------|
| A27LV00M  | Response Orientation-Level      | Means_AB  | 1-7, 0(NR)  | LV, A             |
| Left Label  |                                 | Value     | Right Label   |                   |
| Requires the extremely rapid selection of the correct movement when there are many signals and many response possibilities. |                                 | 7         |   |                   |
|   |                                 | 6.7       | In a spacecraft which is out of control, reacting quickly to each malfunction with the correct control movements. |                   |
|   |                                 | 5         | Hitting either the automobile brake or gas pedal in a skid situation.   |                   |
|   |                                 | 2         | When the doorbell and telephone ring at the same time, quickly selecting which to answer first.                   |                   |
| Requires some speed in selection of the correct movement when there are two signals or two response possibilities.          |                                 | 1         |   |                   |
| A27IM00M  | Response Orientation-Importance | Means_AB  | 1-5   | IM, A             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Rate Control

**Description:** The ability to time the adjustments of a movement or equipment control in anticipation of changes in the speed and/or direction of a continuously moving object or scene

**Content Model Key:** I.A.2.b.4

- I. Worker Characteristics
  - A. Abilities
    - 2. Psychomotor Abilities
      - b. Control Movement Abilities
        - 4. *Rate Control*

| Variable | Variable Description | File Name | Field Values | Scale, Ques Codes |
|----------|----------------------|-----------|--------------|-------------------|
| A28LV00M | Rate Control-Level   | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label  | Value | Right Label   |
|---|-------|---|
| Requires precisely timed control adjustments to random changes of a high-speed object moving in several directions. | 7     |   |
|   | 6.5   | Operating aircraft controls used to land a jet on an aircraft carrier in rough weather. |
|   | 4.8   | Shooting a duck in flight.  |
|   | 3.6   | Keeping up with a car you are following when the speed of that car changes.             |
|   | 2.4   | Riding a bicycle alongside a jogger.  |
| Requires timed control adjustments to a slow-moving, almost predictable object moving in a single direction.        | 1     |   |

|          |                         |          |     |       |
|----------|-------------------------|----------|-----|-------|
| A28IM00M | Rate Control-Importance | Means_AB | 1-5 | IM, A |
|----------|-------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Reaction Time

**Description:** The ability to quickly respond (with the hand, finger, or foot) to one signal (sound, light, picture, etc.) when it appears

**Content Model Key:** I.A.2.c.1

- I. Worker Characteristics
  - A. Abilities
    - 2. Psychomotor Abilities
      - c. Reaction Time and Speed Abilities
        - 1. Reaction Time

| Variable | Variable Description | File Name | Field Values | Scale, Ques Codes |
|----------|----------------------|-----------|--------------|-------------------|
| A29LV00M | Reaction Time-Level  | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label   | Value | Right Label  |
|--|-------|--|
| Requires extreme quickness in starting the movement when a signal appears. | 7     |  |
|  | 6     | Hitting the brake when a pedestrian steps in front of the car.   |
|  | 4     | Throwing a switch when a red warning light goes on.              |
|  | 2.1   | Starting to slow down the car when a traffic light turns yellow. |
| Requires some quickness in starting the movement when a signal appears.    | 1     |  |

|          |                          |          |     |       |
|----------|--------------------------|----------|-----|-------|
| A29IM00M | Reaction Time-Importance | Means_AB | 1-5 | IM, A |
|----------|--------------------------|----------|-----|-------|



## O\*NET Data Dictionary : Worker Characteristics

**Element:** Wrist-Finger Speed

**Description:** The ability to make fast, simple, repeated movements of the fingers, hands, and wrists

**Content Model Key:** I.A.2.c.2

- I. Worker Characteristics
  - A. Abilities
    - 2. Psychomotor Abilities
      - c. Reaction Time and Speed Abilities
        - 2. *Wrist-Finger Speed*

| Variable  | Variable Description          | File Name | Field Values   | Scale, Ques Codes |
|---|-------------------------------|-----------|--|-------------------|
| A30LV00M  | Wrist-Finger Speed-Level      | Means_AB  | 1-7, 0(NR)   | LV, A             |
| Left Label  |                               | Value     | Right Label  |                   |
| Requires movements of the fingers, hands, and wrists at an extremely fast pace. |                               | 7         |  |                   |
|   |                               | 6         | Typing a document at the speed of 90 words per minute. |                   |
|   |                               | 3.3       | Carving roast beef in a cafeteria.                     |                   |
|   |                               | 2         | Using a manual pencil sharpener.                       |                   |
| Requires movement of the fingers, hands, and wrists at a slow pace.             |                               | 1         |  |                   |
| A30IM00M  | Wrist-Finger Speed-Importance | Means_AB  | 1-5  | IM, A             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Speed of Limb Movement

**Description:** The ability to quickly move the arms or legs

**Content Model Key:** I.A.2.c.3

- I. Worker Characteristics
  - A. Abilities
    - 2. Psychomotor Abilities
      - c. Reaction Time and Speed Abilities
        - 3. *Speed of Limb Movement*

| Variable   | Variable Description              | File Name | Field Values                         | Scale, Ques Codes |
|--|-----------------------------------|-----------|--------------------------------------|-------------------|
| A31LV00M   | Speed of Limb Movement-Level      | Means_AB  | 1-7, 0(NR)                           | LV, A             |
| Left Label   |                                   | Value     | Right Label                          |                   |
| Requires very fast movements of the arms or legs when little time is allowed to complete the movement. |                                   | 7         |                                      |                   |
|  |                                   | 6         | Throwing punches in a boxing match.  |                   |
|  |                                   | 4.2       | Swatting a fly with a fly swatter.   |                   |
|  |                                   | 2.3       | Sawing through a thin piece of wood. |                   |
| Requires movement of the arms or legs when a fairly long time is allowed to complete the movement.     |                                   | 1         |                                      |                   |
| A31IM00M   | Speed of Limb Movement-Importance | Means_AB  | 1-5                                  | IM, A             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Static Strength

**Description:** The ability to exert maximum muscle force to lift, push, pull, or carry objects

**Content Model Key:** I.A.3.a.1

- I. Worker Characteristics
  - A. Abilities
    - 3. Physical Abilities
      - a. Physical Strength Abilities
        - 1. *Static Strength*

| Variable   | Variable Description       | File Name | Field Values   | Scale, Ques Codes |
|--|----------------------------|-----------|--|-------------------|
| A32LV00M   | Static Strength-Level      | Means_AB  | 1-7, 0(NR)   | LV, A             |
| Left Label   |                            | Value     | Right Label  |                   |
| Requires use of all the muscle force possible to lift, carry, push, or pull a very heavy object. |                            | 7         |  |                   |
|  |                            | 6.3       | Lifting 75-pound bags of cement onto a truck.          |                   |
|  |                            | 3.9       | Pulling a 40-pound sack of fertilizer across the lawn. |                   |
|  |                            | 1.2       | Pushing an empty shopping cart.                        |                   |
| Requires use of a little muscle force to lift, carry, push, or pull a light object.              |                            | 1         |  |                   |
| A32IM00M   | Static Strength-Importance | Means_AB  | 1-5  | IM, A             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Explosive Strength

**Description:** The ability to use short bursts of muscle force to propel oneself (as in jumping or sprinting), or to throw an object

**Content Model Key:** I.A.3.a.2

- I. Worker Characteristics
  - A. Abilities
    - 3. Physical Abilities
      - a. Physical Strength Abilities
        - 2. *Explosive Strength*

| Variable | Variable Description     | File Name | Field Values | Scale, Ques Codes |
|----------|--------------------------|-----------|--------------|-------------------|
| A33LV00M | Explosive Strength-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label   | Value | Right Label  |
|--|-------|--|
| Requires bursts of all the muscle force possible to propel one's own body weight or objects. | 7     |  |
|  | 6.5   | Propelling (throwing) a shot-put in a track meet.  |
|  | 5.5   | Running up a flight of stairs with fire equipment. |
|  | 4     | Jumping onto a 3-foot high platform.               |
|  | 2.2   | Hitting a nail with a hammer.                      |
| Requires bursts of a little muscle force to move one's own body weight or objects.           | 1     |  |

|          |                               |          |     |       |
|----------|-------------------------------|----------|-----|-------|
| A33IM00M | Explosive Strength-Importance | Means_AB | 1-5 | IM, A |
|----------|-------------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Dynamic Strength

**Description:** The ability to exert muscle force repeatedly or continuously over time. This involves muscular endurance and resistance to muscle fatigue

**Content Model Key:** I.A.3.a.3

- I. Worker Characteristics
  - A. Abilities
    - 3. Physical Abilities
      - a. Physical Strength Abilities
        - 3. *Dynamic Strength*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|------------------------|-----------|--------------|-------------------|
| A34LV00M | Dynamic Strength-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label   | Value | Right Label                                      |
|--|-------|--|
| Requires use of all the muscle force possible to hold up or move the body weight or objects for a long period of time. | 7     |  |
|  | 6.8   | Performing a gymnastics routine using the rings. |
|  | 4.8   | Climbing a 48-foot long extension ladder.        |
|  | 1.5   | Using pruning shears to trim a bush.             |
| Requires use of a little muscle force to hold up or move the body weight or objects for a short time.                  | 1     |  |

|          |                             |          |     |       |
|----------|-----------------------------|----------|-----|-------|
| A34IM00M | Dynamic Strength-Importance | Means_AB | 1-5 | IM, A |
|----------|-----------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Trunk Strength

**Description:** The ability to use one's abdominal and lower back muscles to support part of the body repeatedly or continuously over time without "giving out" or fatiguing

**Content Model Key:** I.A.3.a.4

- I. Worker Characteristics
  - A. Abilities
    - 3. Physical Abilities
      - a. Physical Strength Abilities
        - 4. *Trunk Strength*

| Variable | Variable Description | File Name | Field Values | Scale, Ques Codes |
|----------|----------------------|-----------|--------------|-------------------|
| A35LV00M | Trunk Strength-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label  | Value | Right Label  |
|---|-------|--|
| Requires use of all the abdominal and lower back muscle force possible to hold up or move part of the body for a long period of time. | 7     |  |
|   | 6.5   | Doing 100 sit-ups.                                 |
|   | 4     | Shoveling snow for a half-hour to clear a walkway. |
|   | 1.5   | Sitting up in an office chair.                     |
| Requires use of a little abdominal and lower back muscle force to hold up or move part of the body for a short time.                  | 1     |  |

|          |                           |          |     |       |
|----------|---------------------------|----------|-----|-------|
| A35IM00M | Trunk Strength-Importance | Means_AB | 1-5 | IM, A |
|----------|---------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Stamina

**Description:** The ability to exert one's self physically over long periods of time without getting winded or out of breath

**Content Model Key:** I.A.3.b.1

- I. Worker Characteristics
  - A. Abilities
    - 3. Physical Abilities
      - b. Endurance
        - 1. *Stamina*

| Variable | Variable Description | File Name | Field Values | Scale, Ques Codes |
|----------|----------------------|-----------|--------------|-------------------|
| A36LV00M | Stamina-Level        | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label   | Value | Right Label                                      |
|--|-------|--|
| Requires physical activity of the whole body over a long time, with great strain on the heart and lungs.   | 7     |  |
|  | 6     | Running a 10 mile race.                          |
|  | 4     | Climbing 6 flights of stairs.                    |
|  | 1.2   | Walking a quarter of a mile to deliver a letter. |
| Requires physical activity of the whole body over a short time, with little strain on the heart and lungs. | 1     |  |

|          |                    |          |     |       |
|----------|--------------------|----------|-----|-------|
| A36IM00M | Stamina-Importance | Means_AB | 1-5 | IM, A |
|----------|--------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Extent Flexibility

**Description:** The ability to bend, stretch, twist, or reach out with the body, arms, and/or legs

**Content Model Key:** I.A.3.c.1

- I. Worker Characteristics
  - A. Abilities
    - 3. Physical Abilities
      - c. Flexibility, Balance and Coordination
        - 1. Extent Flexibility

| Variable   | Variable Description          | File Name | Field Values  | Scale, Ques Codes |
|--|-------------------------------|-----------|---|-------------------|
| A37LV00M   | Extent Flexibility-Level      | Means_AB  | 1-7, 0(NR)  | LV, A             |
| Left Label   |                               | Value     | Right Label   |                   |
| Requires a high degree of bending, stretching, twisting, or reaching out into unusual positions. |                               | 7         |   |                   |
|  |                               | 5.8       | Working under a car dashboard to repair the heater. |                   |
|  |                               | 3.5       | Reaching for a box on a high warehouse shelf.       |                   |
|  |                               | 1.8       | Reaching for a microphone in a patrol car.          |                   |
| Requires a low degree of bending, stretching, twisting, or reaching out.                         |                               | 1         |   |                   |
| A37IM00M   | Extent Flexibility-Importance | Means_AB  | 1-5   | IM, A             |



## O\*NET Data Dictionary : Worker Characteristics

**Element:** Dynamic Flexibility

**Description:** The ability to quickly and repeatedly bend, stretch, twist, or reach out with the body, arms, and/or legs

**Content Model Key:** I.A.3.c.2

- I. Worker Characteristics
  - A. Abilities
    - 3. Physical Abilities
      - c. Flexibility, Balance and Coordination
        - 2. *Dynamic Flexibility*

| Variable | Variable Description      | File Name | Field Values | Scale, Ques Codes |
|----------|---------------------------|-----------|--------------|-------------------|
| A38LV00M | Dynamic Flexibility-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label  | Value | Right Label   |
|---|-------|---|
| Requires many fast and repeated body bending, twisting, or stretching movements.                    | 7     |   |
|   | 6.1   | Maneuvering a kayak through swift rapids.                   |
|   | 4.6   | Performing a dance routine as part of a cheerleading squad. |
|   | 2     | Hand picking a bushel of apples from a tree.                |
| Requires a few repeated bending, twisting, or stretching movements in which speed is not important. | 1     |   |

|          |                                |          |     |       |
|----------|--------------------------------|----------|-----|-------|
| A38IM00M | Dynamic Flexibility-Importance | Means_AB | 1-5 | IM, A |
|----------|--------------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Gross Body Coordination

**Description:** The ability to coordinate the movement of the arms, legs, and torso together in activities where the whole body is in motion

**Content Model Key:** I.A.3.c.3

- I. Worker Characteristics
  - A. Abilities
    - 3. Physical Abilities
      - c. Flexibility, Balance and Coordination
        - 3. *Gross Body Coordination*

| Variable  | Variable Description               | File Name                        | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |     |                            |  |   |                                  |  |     |                                |   |   |  |
|---|------------------------------------|----------------------------------|--------------|-------------------|------------|-------|-------------|--|---|--|--|-----|----------------------------|--|---|----------------------------------|--|-----|--------------------------------|---|---|--|
| A39LV00M  | Gross Body Coordination-Level      | Means_AB                         | 1-7, 0(NR)   | LV, A             |            |       |             |  |   |  |  |     |                            |  |   |                                  |  |     |                                |   |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Requires a high degree of overall body coordination to do difficult sets of movements.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.3</td> <td>Performing a ballet dance.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Swimming the length of the pool.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Getting in and out of a truck.</td> </tr> <tr> <td>Requires a small degree of overall body coordination to do simple common movements.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |                                    |                                  |              |                   | Left Label | Value | Right Label | Requires a high degree of overall body coordination to do difficult sets of movements. | 7 |  |  | 6.3 | Performing a ballet dance. |  | 4 | Swimming the length of the pool. |  | 1.5 | Getting in and out of a truck. | Requires a small degree of overall body coordination to do simple common movements. | 1 |  |
| Left Label  | Value                              | Right Label                      |              |                   |            |       |             |  |   |  |  |     |                            |  |   |                                  |  |     |                                |   |   |  |
| Requires a high degree of overall body coordination to do difficult sets of movements.  | 7                                  |                                  |              |                   |            |       |             |  |   |  |  |     |                            |  |   |                                  |  |     |                                |   |   |  |
|   | 6.3                                | Performing a ballet dance.       |              |                   |            |       |             |  |   |  |  |     |                            |  |   |                                  |  |     |                                |   |   |  |
|   | 4                                  | Swimming the length of the pool. |              |                   |            |       |             |  |   |  |  |     |                            |  |   |                                  |  |     |                                |   |   |  |
|   | 1.5                                | Getting in and out of a truck.   |              |                   |            |       |             |  |   |  |  |     |                            |  |   |                                  |  |     |                                |   |   |  |
| Requires a small degree of overall body coordination to do simple common movements.   | 1                                  |                                  |              |                   |            |       |             |  |   |  |  |     |                            |  |   |                                  |  |     |                                |   |   |  |
| A39IM00M  | Gross Body Coordination-Importance | Means_AB                         | 1-5          | IM, A             |            |       |             |  |   |  |  |     |                            |  |   |                                  |  |     |                                |   |   |  |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Gross Body Equilibrium

**Description:** The ability to keep or regain one's body balance or stay upright when in an unstable position

**Content Model Key:** I.A.3.c.4

- I. Worker Characteristics
  - A. Abilities
    - 3. Physical Abilities
      - c. Flexibility, Balance and Coordination
        - 4. *Gross Body Equilibrium*

| Variable | Variable Description         | File Name | Field Values | Scale, Ques Codes |
|----------|------------------------------|-----------|--------------|-------------------|
| A40LV00M | Gross Body Equilibrium-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label   | Value | Right Label  |
|--|-------|--|
| Requires keeping or getting back body balance when many forces are working against keeping body balance.   | 7     |  |
|  | 5.8   | Walking on narrow beams in high-rise construction. |
|  | 4.1   | Walking on ice across a pond.                      |
|  | 2     | Standing on a ladder.                              |
| Requires keeping or getting back balance when a fairly weak force is working against keeping body balance. | 1     |  |

|          |                                   |          |     |       |
|----------|-----------------------------------|----------|-----|-------|
| A40IM00M | Gross Body Equilibrium-Importance | Means_AB | 1-5 | IM, A |
|----------|-----------------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Near Vision

**Description:** The ability to see details of objects at a close range (within a few feet of the observer)

**Content Model Key:** I.A.4.a.1

- I. Worker Characteristics
  - A. Abilities
    - 4. Sensory Abilities
      - a. Visual Abilities
        - 1. Near Vision

| Variable   | Variable Description   | File Name | Field Values                                | Scale, Ques Codes |
|--|------------------------|-----------|---|-------------------|
| A41LV00M   | Near Vision-Level      | Means_AB  | 1-7, 0(NR)                                  | LV, A             |
| Left Label   |                        | Value     | Right Label                                 |                   |
| Requires fine visual distinctions at a close range.  |                        | 7         |   |                   |
|  |                        | 6.2       | Detecting minor defects in a diamond.       |                   |
|  |                        | 4.8       | Reading the fine print of a legal document. |                   |
|  |                        | 2.8       | Reading dials on the car dashboard.         |                   |
| Requires gross visual distinctions at a close range. |                        | 1         |   |                   |
| A41IM00M   | Near Vision-Importance | Means_AB  | 1-5   | IM, A             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Far Vision

**Description:** The ability to see details at a distance

**Content Model Key:** I.A.4.a.2

- I. Worker Characteristics
  - A. Abilities
    - 4. Sensory Abilities
      - a. Visual Abilities
        - 2. *Far Vision*

| Variable | Variable Description | File Name | Field Values | Scale, Ques Codes |
|----------|----------------------|-----------|--------------|-------------------|
| A42LV00M | Far Vision-Level     | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label   | Value | Right Label  |
|--|-------|--|
| Requires fine visual distinctions at a distant range.  | 7     |  |
|  | 6.8   | Detecting differences in ocean vessels on the horizon. |
|  | 3.9   | Focusing a slide projector.                            |
|  | 2.5   | Reading a roadside billboard.                          |
| Requires gross visual distinctions at a distant range. | 1     |  |

|          |                       |          |     |       |
|----------|-----------------------|----------|-----|-------|
| A42IM00M | Far Vision-Importance | Means_AB | 1-5 | IM, A |
|----------|-----------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Visual Color Discrimination

**Description:** The ability to match or detect differences between colors, including shades of color and brightness

**Content Model Key:** I.A.4.a.3

I. Worker Characteristics

A. Abilities

4. Sensory Abilities

a. Visual Abilities

3. *Visual Color Discrimination*

| Variable | Variable Description              | File Name | Field Values | Scale, Ques Codes |
|----------|-----------------------------------|-----------|--------------|-------------------|
| A43LV00M | Visual Color Discrimination-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label   | Value | Right Label   |
|--|-------|---|
| Requires distinctions between a variety of colors that are closely related in terms of color, shade, and brightness. | 7     |   |
|  | 6.2   | Painting a color portrait from a living subject.                        |
|  | 3.8   | Tracing an electrical circuit which is marked by various colored wires. |
|  | 1.2   | Separating laundry into colors and whites.                              |
| Requires distinctions between a few colors that are very different in terms of color, shade, and brightness.         | 1     |   |

|          |  |          |     |       |
|----------|--|----------|-----|-------|
| A43IM00M | Visual Color Discrimination-Importance | Means_AB | 1-5 | IM, A |
|----------|--|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Night Vision

**Description:** The ability to see under low light conditions

**Content Model Key:** I.A.4.a.4

- I. Worker Characteristics
  - A. Abilities
    - 4. Sensory Abilities
      - a. Visual Abilities
        - 4. *Night Vision*

| Variable   | Variable Description    | File Name | Field Values   | Scale, Ques Codes |
|--|-------------------------|-----------|--|-------------------|
| A44LV00M   | Night Vision-Level      | Means_AB  | 1-7, 0(NR)   | LV, A             |
| Left Label   |                         | Value     | Right Label  |                   |
| Requires visual detection and identification of detail under extremely low light conditions. |                         | 7         |  |                   |
|  |                         | 6.1       | Finding your way through the woods on a moonless night.              |                   |
|  |                         | 4.5       | Taking notes during a slide presentation.                            |                   |
|  |                         | 1.8       | Reading street signs when driving at dusk (just after the sun sets). |                   |
| Requires some visual detection under nearly normal light conditions.                         |                         | 1         |  |                   |
| A44IM00M   | Night Vision-Importance | Means_AB  | 1-5  | IM, A             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Peripheral Vision

**Description:** The ability to see objects or movement of objects to one's side when the eyes are focused forward

**Content Model Key:** I.A.4.a.5

- I. Worker Characteristics
  - A. Abilities
    - 4. Sensory Abilities
      - a. Visual Abilities
        - 5. *Peripheral Vision*

| Variable | Variable Description    | File Name | Field Values | Scale, Ques Codes |
|----------|-------------------------|-----------|--------------|-------------------|
| A45LV00M | Peripheral Vision-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label  | Value | Right Label  |
|---|-------|--|
| Requires the detection of small objects or small movements at the edges of the field of vision. | 7     |  |
|   | 5.5   | When piloting a plane in air combat, distinguishing friendly and enemy aircraft. |
|   | 4.2   | Being aware of the location of your teammates while dribbling a basketball.      |
|   | 2     | Keeping in step while marching in a military formation.                          |
| Requires the general detection of relatively large objects or movements to the side.            | 1     |  |

|          |                              |          |     |       |
|----------|------------------------------|----------|-----|-------|
| A45IM00M | Peripheral Vision-Importance | Means_AB | 1-5 | IM, A |
|----------|------------------------------|----------|-----|-------|



## O\*NET Data Dictionary : Worker Characteristics

**Element:** Depth Perception

**Description:** The ability to judge which of several objects is closer or farther away from the observer, or to judge the distance between an object and the observer

**Content Model Key:** I.A.4.a.6

- I. Worker Characteristics
  - A. Abilities
    - 4. Sensory Abilities
      - a. Visual Abilities
        - 6. *Depth Perception*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|------------------------|-----------|--------------|-------------------|
| A46LV00M | Depth Perception-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label  | Value | Right Label   |
|---|-------|---|
| Requires the detection of small differences in distance.              | 7     |   |
|   | 5.8   | Throwing a long pass to a teammate who is surrounded by opponents.  |
|   | 4.2   | Operating a crane to move materials from a truck bed to the ground. |
|   | 2     | Merging a car into traffic on a city street.                        |
| Requires the general discrimination of relative positions of objects. | 1     |   |

|          |                             |          |     |       |
|----------|-----------------------------|----------|-----|-------|
| A46IM00M | Depth Perception-Importance | Means_AB | 1-5 | IM, A |
|----------|-----------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Glare Sensitivity

**Description:** The ability to see objects in the presence of glare or bright lighting

**Content Model Key:** I.A.4.a.7

- I. Worker Characteristics
  - A. Abilities
    - 4. Sensory Abilities
      - a. Visual Abilities
        - 7. *Glare Sensitivity*

| Variable  | Variable Description         | File Name                                      | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |   |                                 |  |     |   |  |     |  |  |   |  |
|---|------------------------------|--|--------------|-------------------|------------|-------|-------------|---|---|--|--|---|---------------------------------|--|-----|---|--|-----|--|--|---|--|
| A47LV00M  | Glare Sensitivity-Level      | Means_AB                                       | 1-7, 0(NR)   | LV, A             |            |       |             |   |   |  |  |   |                                 |  |     |   |  |     |  |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Requires visual detection of fine detail in very high glare conditions.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6</td> <td>Snow skiing in bright sunlight.</td> </tr> <tr> <td></td> <td style="text-align: center;">4.8</td> <td>Seeing boats on the horizon when sailing.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Driving on a familiar roadway on a cloudy day.</td> </tr> <tr> <td>Requires some visual detection in conditions of minimal glare.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |                              |  |              |                   | Left Label | Value | Right Label | Requires visual detection of fine detail in very high glare conditions. | 7 |  |  | 6 | Snow skiing in bright sunlight. |  | 4.8 | Seeing boats on the horizon when sailing. |  | 1.5 | Driving on a familiar roadway on a cloudy day. | Requires some visual detection in conditions of minimal glare. | 1 |  |
| Left Label  | Value                        | Right Label                                    |              |                   |            |       |             |   |   |  |  |   |                                 |  |     |   |  |     |  |  |   |  |
| Requires visual detection of fine detail in very high glare conditions.   | 7                            |  |              |                   |            |       |             |   |   |  |  |   |                                 |  |     |   |  |     |  |  |   |  |
|   | 6                            | Snow skiing in bright sunlight.                |              |                   |            |       |             |   |   |  |  |   |                                 |  |     |   |  |     |  |  |   |  |
|   | 4.8                          | Seeing boats on the horizon when sailing.      |              |                   |            |       |             |   |   |  |  |   |                                 |  |     |   |  |     |  |  |   |  |
|   | 1.5                          | Driving on a familiar roadway on a cloudy day. |              |                   |            |       |             |   |   |  |  |   |                                 |  |     |   |  |     |  |  |   |  |
| Requires some visual detection in conditions of minimal glare.  | 1                            |  |              |                   |            |       |             |   |   |  |  |   |                                 |  |     |   |  |     |  |  |   |  |
| A47IM00M  | Glare Sensitivity-Importance | Means_AB                                       | 1-5          | IM, A             |            |       |             |   |   |  |  |   |                                 |  |     |   |  |     |  |  |   |  |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Hearing Sensitivity

**Description:** The ability to detect or tell the difference between sounds that vary over broad ranges of pitch and loudness

**Content Model Key:** I.A.4.b.1

- I. Worker Characteristics
  - A. Abilities
    - 4. Sensory Abilities
      - b. Auditory and Speech Abilities
        - 1. *Hearing Sensitivity*

| Variable   | Variable Description           | File Name | Field Values   | Scale, Ques Codes |
|--|--------------------------------|-----------|--|-------------------|
| A48LV00M   | Hearing Sensitivity-Level      | Means_AB  | 1-7, 0(NR)   | LV, A             |
| Left Label   |                                | Value     | Right Label  |                   |
| Requires making distinctions between sounds of very similar pitch or loudness and detecting sounds of low intensity.                 |                                | 7         |  |                   |
|  |                                | 6.1       | Tuning an orchestra.                                       |                   |
|  |                                | 4.5       | Diagnosing what is wrong with a car engine from its sound. |                   |
|  |                                | 1.5       | Noticing when the hourly watch alarm goes off.             |                   |
| Requires making distinctions between sounds that are very different in pitch or loudness and detecting sounds of moderate intensity. |                                | 1         |  |                   |
| A48IM00M   | Hearing Sensitivity-Importance | Means_AB  | 1-5  | IM, A             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Auditory Attention

**Description:** The ability to focus on a single source of auditory (hearing) information in the presence of other distracting sounds

**Content Model Key:** I.A.4.b.2

- I. Worker Characteristics
  - A. Abilities
    - 4. Sensory Abilities
      - b. Auditory and Speech Abilities
        - 2. *Auditory Attention*

| Variable | Variable Description     | File Name | Field Values | Scale, Ques Codes |
|----------|--------------------------|-----------|--------------|-------------------|
| A49LV00M | Auditory Attention-Level | Means_AB  | 1-7, 0(NR)   | LV, A             |

| Left Label  | Value | Right Label  |
|---|-------|--|
| Requires highly focused attention to a complex target sound in the presence of many other distracting sounds. | 7     |  |
|   | 6     | Listening to instructions from a coworker in a noisy saw mill. |
|   | 4.8   | Listening for your flight announcement at an airport.          |
|   | 2     | Listening to a lecture while people are whispering nearby.     |
| Requires focusing on a simple target sound in an otherwise quiet situation.                                   | 1     |  |

|          |                               |          |     |       |
|----------|-------------------------------|----------|-----|-------|
| A49IM00M | Auditory Attention-Importance | Means_AB | 1-5 | IM, A |
|----------|-------------------------------|----------|-----|-------|

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Sound Localization

**Description:** The ability to tell the direction from which a sound originated

**Content Model Key:** I.A.4.b.3

- I. Worker Characteristics
  - A. Abilities
    - 4. Sensory Abilities
      - b. Auditory and Speech Abilities
        - 3. *Sound Localization*

| Variable   | Variable Description          | File Name | Field Values   | Scale, Ques Codes |
|--|-------------------------------|-----------|--|-------------------|
| A50LV00M   | Sound Localization-Level      | Means_AB  | 1-7, 0(NR)   | LV, A             |
| Left Label   |                               | Value     | Right Label  |                   |
| Requires determining the precise location of several sounds that may be faint or producing echoes. |                               | 7         |  |                   |
|  |                               | 6.5       | Determining the direction of an emergency vehicle from the sound of its siren. |                   |
|  |                               | 3.8       | Finding a ringing telephone in an unfamiliar apartment.                        |                   |
|  |                               | 2         | Listening to a stereo to determine which speaker is working.                   |                   |
| Requires determining the general direction from which a sound originated.                          |                               | 1         |  |                   |
| A50IM00M   | Sound Localization-Importance | Means_AB  | 1-5  | IM, A             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Speech Recognition

**Description:** The ability to identify and understand the speech of another person

**Content Model Key:** I.A.4.b.4

- I. Worker Characteristics
  - A. Abilities
    - 4. Sensory Abilities
      - b. Auditory and Speech Abilities
        - 4. *Speech Recognition*

| Variable  | Variable Description          | File Name | Field Values  | Scale, Ques Codes |
|---|-------------------------------|-----------|---|-------------------|
| A51LV00M  | Speech Recognition-Level      | Means_AB  | 1-7, 0(NR)  | LV, A             |
| Left Label  |                               | Value     | Right Label   |                   |
| Requires hearing and understanding complex speech that is unclear or distorted. |                               | 7         |   |                   |
|   |                               | 5.8       | Understanding a speech presented by someone with a strong foreign accent. |                   |
|   |                               | 4         | Identifying a former customer's voice over the telephone.                 |                   |
|   |                               | 1.5       | Recognizing the voice of a coworker.                                      |                   |
| Requires hearing and understanding simple speech under normal conditions.       |                               | 1         |   |                   |
| A51IM00M  | Speech Recognition-Importance | Means_AB  | 1-5   | IM, A             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Speech Clarity

**Description:** The ability to speak clearly so that it is understandable to a listener

**Content Model Key:** I.A.4.b.5

- I. Worker Characteristics
  - A. Abilities
    - 4. Sensory Abilities
      - b. Auditory and Speech Abilities
        - 5. *Speech Clarity*

| Variable   | Variable Description      | File Name | Field Values  | Scale, Ques Codes |
|--|---------------------------|-----------|---|-------------------|
| A52LV00M   | Speech Clarity-Level      | Means_AB  | 1-7, 0(NR)  | LV, A             |
| Left Label   |                           | Value     | Right Label   |                   |
| Requires speaking many complex words in a clear fashion. |                           | 7         |   |                   |
|  |                           | 5.8       | Giving a lecture to a large audience.                         |                   |
|  |                           | 3.5       | Making announcements over the loud speaker at a sports event. |                   |
|  |                           | 1.4       | Calling the numbers in a bingo game.                          |                   |
| Requires speaking a few simple words in a clear fashion. |                           | 1         |   |                   |
| A52IM00M   | Speech Clarity-Importance | Means_AB  | 1-5   | IM, A             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Realistic

**Description:** Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.

**Content Model Key:** I.B.1.a

- I. Worker Characteristics
  - B. Interests
    - 1. Occupational Interests
      - a. Realistic*

| <b>Variable</b> | <b>Variable Description</b>      | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|----------------------------------|------------------|---------------------|--------------------------|
| I01OI00M        | Realistic-Occupational Interests | Means_IN         | 1-7                 | OI, C                    |



## O\*NET Data Dictionary : Worker Characteristics

**Element:** Investigative

**Description:** Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.

**Content Model Key:** I.B.1.b

- I. Worker Characteristics
  - B. Interests
    - 1. Occupational Interests
      - b. Investigative*

| <b>Variable</b> | <b>Variable Description</b>          | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--------------------------------------|------------------|---------------------|--------------------------|
| I02OI00M        | Investigative-Occupational Interests | Means_IN         | 1-7                 | OI, C                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Artistic

**Description:** Artistic occupations frequently involve working with forms, designs and patterns. They often require self-expression and the work can be done without following a clear set of rules.

**Content Model Key:** I.B.1.c

- I. Worker Characteristics
  - B. Interests
    - 1. Occupational Interests
      - c. Artistic*

| <b>Variable</b> | <b>Variable Description</b>     | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---------------------------------|------------------|---------------------|--------------------------|
| I03OI00M        | Artistic-Occupational Interests | Means_IN         | 1-7                 | OI, C                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Social

**Description:** Social occupations frequently involve working with, communicating with, and teaching people. These occupations often involve helping or providing service to others.

**Content Model Key:** I.B.1.d

- I. Worker Characteristics
  - B. Interests
    - 1. Occupational Interests
      - d. Social*

| <b>Variable</b> | <b>Variable Description</b>   | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-------------------------------|------------------|---------------------|--------------------------|
| I04OI00M        | Social-Occupational Interests | Means_IN         | 1-7                 | OI, C                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Enterprising

**Description:** Enterprising occupations frequently involve starting up and carrying out projects. These occupations can involve leading people and making many decisions. Sometimes they require risk taking and often deal with business.

**Content Model Key:** I.B.1.e

- I. Worker Characteristics
  - B. Interests
    - 1. Occupational Interests
      - e. Enterprising*

| <b>Variable</b> | <b>Variable Description</b>         | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-------------------------------------|------------------|---------------------|--------------------------|
| I05OI00M        | Enterprising-Occupational Interests | Means_IN         | 1-7                 | OI, C                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Conventional

**Description:** Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.

**Content Model Key:** I.B.1.f

- I. Worker Characteristics
  - B. Interests
    - 1. Occupational Interests
      - f. Conventional*

| <b>Variable</b> | <b>Variable Description</b>         | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-------------------------------------|------------------|---------------------|--------------------------|
| I06OI00M        | Conventional-Occupational Interests | Means_IN         | 1-7                 | OI, C                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** First Interest High-Point

**Description:** Primary-Rank Descriptiveness

**Content Model Key:** I.B.1.g

- I. Worker Characteristics
  - B. Interests
    - 1. Occupational Interests
      - g. *First Interest High-Point*

| <b>Variable</b> | <b>Variable Description</b>   | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| *I07IH00H       | First Interest High-Point-Occupational Interest High-Point: Highest Hierarchy Value | Means_IN         | 1-6,0(N/A)          | IH                       |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Second Interest High-Point

**Description:** Secondary-Cutoff/Rank descriptiveness

**Content Model Key:** I.B.1.h

- I. Worker Characteristics
  - B. Interests
    - 1. Occupational Interests
      - h. Second Interest High-Point*

| <b>Variable</b> | <b>Variable Description</b>  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| *I08IH00H       | Second Interest High-Point-Occupational Interest High-Point: Highest Hierarchy Value | Means_IN         | 1-6,0(N/A)          | IH                       |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Third Interest High-Point

**Description:** Tertiary-Cutoff/Rank descriptiveness

**Content Model Key:** I.B.1.i

- I. Worker Characteristics
  - B. Interests
    - 1. Occupational Interests
      - i. Third Interest High-Point*

| <b>Variable</b> | <b>Variable Description</b>   | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| *I09IH00H       | Third Interest High-Point-Occupational Interest High-Point: Highest Hierarchy Value | Means_IN         | 1-6,0(N/A)          | IH                       |



## O\*NET Data Dictionary : Worker Characteristics

**Element:** Achievement-Mean Extent

**Description:** Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.

**Content Model Key:** I.B.2.a

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - a. *Achievement-Mean Extent*

| <b>Variable</b> | <b>Variable Description</b>    | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--------------------------------|------------------|---------------------|--------------------------|
| VAGEN01M        | Achievement-Mean Extent-Extent | Means_OV         | 1-5                 | EN                       |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Ability Utilization

**Description:** Workers on this job make use of their individual abilities

**Content Model Key:** I.B.2.a.1

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - a. Achievement-Mean Extent
        - 1. Ability Utilization*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| V01EN00M        | Ability Utilization-Extent  | Means_OV         | 1-5                 | EN, A                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Achievement

**Description:** Workers on this job get a feeling of accomplishment

**Content Model Key:** I.B.2.a.2

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - a. Achievement-Mean Extent
        - 2. *Achievement*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| V02EN00M        | Achievement-Extent          | Means_OV         | 1-5                 | EN, B                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Working Conditions-Mean Extent

**Description:** Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.

**Content Model Key:** I.B.2.b

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - b. Working Conditions-Mean Extent*

| <b>Variable</b> | <b>Variable Description</b>           | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---------------------------------------|------------------|---------------------|--------------------------|
| VAGEN02M        | Working Conditions-Mean Extent-Extent | Means_OV         | 1-5                 | EN                       |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Activity

**Description:** Workers on this job are busy all the time

**Content Model Key:** I.B.2.b.1

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - b. Working Conditions-Mean Extent
        - 1. Activity*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| V03EN00M        | Activity-Extent             | Means_OV         | 1-5                 | EN, C                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Independence

**Description:** Workers on this job do their work alone

**Content Model Key:** I.B.2.b.2

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - b. Working Conditions-Mean Extent
        - 2. *Independence*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| V10EN00M        | Independence-Extent         | Means_OV         | 1-5                 | EN, J                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Variety

**Description:** Workers on this job have something different to do every day

**Content Model Key:** I.B.2.b.3

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - b. Working Conditions-Mean Extent
        - 3. *Variety*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| V19EN00M        | Variety-Extent              | Means_OV         | 1-5                 | EN, S                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Compensation

**Description:** Workers on this job are paid well in comparison with other workers

**Content Model Key:** I.B.2.b.4

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - b. Working Conditions-Mean Extent
        - 4. *Compensation*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| V07EN00M        | Compensation-Extent         | Means_OV         | 1-5                 | EN, G                    |



## O\*NET Data Dictionary : Worker Characteristics

**Element:** Security

**Description:** Workers on this job have steady employment

**Content Model Key:** I.B.2.b.5

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - b. Working Conditions-Mean Extent
        - 5. *Security*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| V14EN00M        | Security-Extent             | Means_OV         | 1-5                 | EN, N                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Working Conditions

**Description:** Workers on this job have good working conditions

**Content Model Key:** I.B.2.b.6

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - b. Working Conditions-Mean Extent
        - 6. *Working Conditions*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| V20EN00M        | Working Conditions-Extent   | Means_OV         | 1-5                 | EN, T                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Recognition-Mean Extent

**Description:** Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.

**Content Model Key:** I.B.2.c

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - c. Recognition-Mean Extent*

| <b>Variable</b> | <b>Variable Description</b>    | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--------------------------------|------------------|---------------------|--------------------------|
| VAGEN03M        | Recognition-Mean Extent-Extent | Means_OV         | 1-5                 | EN                       |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Advancement

**Description:** Workers on this job have opportunities for advancement

**Content Model Key:** I.B.2.c.1

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - c. Recognition-Mean Extent
        - 1. Advancement*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| V04EN00M        | Advancement-Extent          | Means_OV         | 1-5                 | EN, D                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Recognition

**Description:** Workers on this job receive recognition for the work they do

**Content Model Key:** I.B.2.c.2

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - c. Recognition-Mean Extent
        - 2. *Recognition*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| V12EN00M        | Recognition-Extent          | Means_OV         | 1-5                 | EN, L                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Authority

**Description:** Workers on this job give directions and instructions to others

**Content Model Key:** I.B.2.c.3

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - c. Recognition-Mean Extent
        - 3. *Authority*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| V05EN00M        | Authority-Extent            | Means_OV         | 1-5                 | EN, E                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Social Status

**Description:** Workers on this job are looked up to by others in their company and their community

**Content Model Key:** I.B.2.c.4

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - c. Recognition-Mean Extent
        - 4. *Social Status*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| V16EN00M        | Social Status-Extent        | Means_OV         | 1-5                 | EN, P                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Relationships-Mean Extent

**Description:** Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.

**Content Model Key:** I.B.2.d

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - d. Relationships-Mean Extent*

| <b>Variable</b> | <b>Variable Description</b>      | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|----------------------------------|------------------|---------------------|--------------------------|
| VAGEN04M        | Relationships-Mean Extent-Extent | Means_OV         | 1-5                 | EN                       |



## O\*NET Data Dictionary : Worker Characteristics

**Element:** Co-workers

**Description:** Workers on this job have co-workers who are easy to get along with

**Content Model Key:** I.B.2.d.1

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - d. Relationships-Mean Extent
        - 1. *Co-workers*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| V08EN00M        | Co-workers-Extent           | Means_OV         | 1-5                 | EN, H                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Social Service

**Description:** Workers on this job have work where they do things for other people

**Content Model Key:** I.B.2.d.2

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - d. Relationships-Mean Extent
        - 2. *Social Service*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| V15EN00M        | Social Service-Extent       | Means_OV         | 1-5                 | EN, O                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Moral Values

**Description:** Workers on this job are never pressured to do things that go against their sense of right and wrong

**Content Model Key:** I.B.2.d.3

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - d. Relationships-Mean Extent
        - 3. *Moral Values*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| V11EN00M        | Moral Values-Extent         | Means_OV         | 1-5                 | EN, K                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Support-Mean Extent

**Description:** Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.

**Content Model Key:** I.B.2.e

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - e. Support-Mean Extent*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| VAGEN05M        | Support-Mean Extent-Extent  | Means_OV         | 1-5                 | EN                       |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Company Policies and Practices

**Description:** Workers on this job are treated fairly by the company

**Content Model Key:** I.B.2.e.1

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - e. Support-Mean Extent
        - 1. *Company Policies and Practices*

| <b>Variable</b> | <b>Variable Description</b>           | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---------------------------------------|------------------|---------------------|--------------------------|
| V06EN00M        | Company Policies and Practices-Extent | Means_OV         | 1-5                 | EN, F                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Supervision, Human Relations

**Description:** Workers on this job have supervisors who back up their workers with management

**Content Model Key:** I.B.2.e.2

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - e. Support-Mean Extent
        - 2. *Supervision, Human Relations*

| <b>Variable</b> | <b>Variable Description</b>         | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-------------------------------------|------------------|---------------------|--------------------------|
| V17EN00M        | Supervision, Human Relations-Extent | Means_OV         | 1-5                 | EN, Q                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Supervision, Technical

**Description:** Workers on this job have supervisors who train their workers well

**Content Model Key:** I.B.2.e.3

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - e. Support-Mean Extent
        - 3. *Supervision, Technical*

| <b>Variable</b> | <b>Variable Description</b>   | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-------------------------------|------------------|---------------------|--------------------------|
| V18EN00M        | Supervision, Technical-Extent | Means_OV         | 1-5                 | EN, R                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Independence-Mean Extent

**Description:** Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.

**Content Model Key:** I.B.2.f

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - f. Independence-Mean Extent*

| <b>Variable</b> | <b>Variable Description</b>     | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---------------------------------|------------------|---------------------|--------------------------|
| VAGEN06M        | Independence-Mean Extent-Extent | Means_OV         | 1-5                 | EN                       |



## O\*NET Data Dictionary : Worker Characteristics

**Element:** Creativity

**Description:** Workers on this job try out their own ideas

**Content Model Key:** I.B.2.f.1

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - f. Independence-Mean Extent
        - 1. Creativity

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| V09EN00M        | Creativity-Extent           | Means_OV         | 1-5                 | EN, I                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Responsibility

**Description:** Workers on this job make decisions on their own

**Content Model Key:** I.B.2.f.2

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - f. Independence-Mean Extent
        - 2. *Responsibility*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| V13EN00M        | Responsibility-Extent       | Means_OV         | 1-5                 | EN, M                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Autonomy

**Description:** Workers on this job plan their work with little supervision

**Content Model Key:** I.B.2.f.3

- I. Worker Characteristics
  - B. Interests
    - 2. Occupational Values
      - f. Independence-Mean Extent
        - 3. *Autonomy*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| V21EN00M        | Autonomy-Extent             | Means_OV         | 1-5                 | EN, U                    |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Achievement/Effort

**Description:** Job requires establishing and maintaining personally challenging achievement goals, and exerting effort toward task mastery

**Content Model Key:** I.C.1.a

- I. Worker Characteristics
  - C. Work Styles
    - 1. Achievement Orientation
      - a. *Achievement/Effort*

| Variable   | Variable Description          | File Name | Field Values  | Scale, Ques Codes |
|------------|-------------------------------|-----------|---|-------------------|
| S01LV00M   | Achievement/Effort-Level      | Means_WS  | 1-7, 0(NR)  | LV, S             |
| Left Label |                               | Value     | Right Label   |                   |
|            |                               | 6.5       | Requires continual extensive effort toward achievement of work goals. |                   |
|            |                               | 4         | Requires sustained effort toward achievement of work goals.           |                   |
|            |                               | 2         | Requires moderate levels of effort toward achievement of work goals.  |                   |
| S01IM00M   | Achievement/Effort-Importance | Means_WS  | 1-5   | IM, S             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Persistence

**Description:** Job requires persistence in the face of obstacles on the job

**Content Model Key:** I.C.1.b

- I. Worker Characteristics
  - C. Work Styles
    - 1. Achievement Orientation
      - b. Persistence*

| Variable   | Variable Description   | File Name | Field Values   | Scale, Ques Codes |
|------------|------------------------|-----------|--|-------------------|
| S02LV00M   | Persistence-Level      | Means_WS  | 1-7, 0(NR)   | LV, S             |
| Left Label |                        | Value     | Right Label  |                   |
|            |                        | 6.5       | Requires high levels of persistence when work becomes difficult. |                   |
|            |                        | 4         | Requires moderate levels of persistence on the job.              |                   |
|            |                        | 2         | Requires little persistence on the job.                          |                   |
| S02IM00M   | Persistence-Importance | Means_WS  | 1-5  | IM, S             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Initiative

**Description:** Job requires being willing to take on responsibilities and challenges

**Content Model Key:** I.C.1.c

- I. Worker Characteristics
  - C. Work Styles
    - 1. Achievement Orientation
      - c. *Initiative*

| Variable   | Variable Description  | File Name | Field Values   | Scale, Ques Codes |
|------------|-----------------------|-----------|--|-------------------|
| S03LV00M   | Initiative-Level      | Means_WS  | 1-7, 0(NR)   | LV, S             |
| Left Label |                       | Value     | Right Label  |                   |
|            |                       | 6.5       | Requires taking on new or additional responsibilities and challenges.                  |                   |
|            |                       | 4         | Requires considerable willingness to take on new work responsibilities and challenges. |                   |
|            |                       | 2         | Requires some willingness to take on new work responsibilities or challenges.          |                   |
| S03IM00M   | Initiative-Importance | Means_WS  | 1-5  | IM, S             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Energy

**Description:** Job requires the energy and stamina to accomplish work tasks

**Content Model Key:** I.C.2.a

- I. Worker Characteristics
  - C. Work Styles
    - 2. Social Influence
      - a. *Energy*

| Variable   | Variable Description | File Name | Field Values   | Scale, Ques Codes |
|------------|----------------------|-----------|--|-------------------|
| S04LV00M   | Energy-Level         | Means_WS  | 1-7, 0(NR)   | LV, S             |
| Left Label |                      | Value     | Right Label  |                   |
|            |                      | 6.5       | Requires very high levels of energy to get tasks done. |                   |
|            |                      | 4         | Requires moderate levels of energy to get tasks done.  |                   |
|            |                      | 2         | Requires little energy to get tasks done.              |                   |
| S04IM00M   | Energy-Importance    | Means_WS  | 1-5  | IM, S             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Leadership Orientation

**Description:** Job requires a willingness to lead, take charge, and offer opinions and direction

**Content Model Key:** I.C.2.b

- I. Worker Characteristics
  - C. Work Styles
    - 2. Social Influence
      - b. Leadership Orientation*

| Variable   | Variable Description              | File Name | Field Values   | Scale, Ques Codes |
|------------|-----------------------------------|-----------|--|-------------------|
| S05LV00M   | Leadership Orientation-Level      | Means_WS  | 1-7, 0(NR)   | LV, S             |
| Left Label |                                   | Value     | Right Label  |                   |
|            |                                   | 6.5       | Requires a strong preference for making decisions and leading or directing other organization members. |                   |
|            |                                   | 4         | Requires some preference for making decisions and leading or directing other organization members.     |                   |
|            |                                   | 2         | Requires little leading or decision-making.  |                   |
| S05IM00M   | Leadership Orientation-Importance | Means_WS  | 1-5  | IM, S             |



## O\*NET Data Dictionary : Worker Characteristics

**Element:** Cooperation

**Description:** Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude

**Content Model Key:** I.C.3.a

- I. Worker Characteristics
  - C. Work Styles
    - 3. Interpersonal Orientation
      - a. Cooperation

| Variable   | Variable Description   | File Name | Field Values  | Scale, Ques Codes |
|------------|------------------------|-----------|---|-------------------|
| S06LV00M   | Cooperation-Level      | Means_WS  | 1-7, 0(NR)  | LV, S             |
| Left Label |                        | Value     | Right Label   |                   |
|            |                        | 6.5       | Requires working very smoothly and cooperatively with others on the job.      |                   |
|            |                        | 4         | Generally requires working smoothly and cooperatively with others on the job. |                   |
|            |                        | 2         | Requires little interaction with others.                                      |                   |
| S06IM00M   | Cooperation-Importance | Means_WS  | 1-5   | IM, S             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Concern for Others

**Description:** Job requires being sensitive to others' needs and feelings, and being understanding and helpful on the job

**Content Model Key:** I.C.3.b

- I. Worker Characteristics
  - C. Work Styles
    - 3. Interpersonal Orientation
      - b. Concern for Others*

| Variable   | Variable Description          | File Name | Field Values   | Scale, Ques Codes |
|------------|-------------------------------|-----------|--|-------------------|
| S07LV00M   | Concern for Others-Level      | Means_WS  | 1-7, 0(NR)   | LV, S             |
| Left Label |                               | Value     | Right Label  |                   |
|            |                               | 6.5       | Requires very high levels of sensitivity to others' needs and feelings, and showing consistent caring and support for others on the job. |                   |
|            |                               | 4         | Requires high levels of sensitivity, caring and support towards others on the job.   |                   |
|            |                               | 2         | Requires only moderate levels of sensitivity, caring, and support for others on the job.   |                   |
| S07IM00M   | Concern for Others-Importance | Means_WS  | 1-5  | IM, S             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Social Orientation

**Description:** Job requires preferring to work with others rather than alone and being personally connected with others on the job

**Content Model Key:** I.C.3.c

- I. Worker Characteristics
  - C. Work Styles
    - 3. Interpersonal Orientation
      - c. *Social Orientation*

| Variable   | Variable Description          | File Name | Field Values  | Scale, Ques Codes |
|------------|-------------------------------|-----------|---|-------------------|
| S08LV00M   | Social Orientation-Level      | Means_WS  | 1-7, 0(NR)  | LV, S             |
| Left Label |                               | Value     | Right Label   |                   |
|            |                               | 6.5       | Requires a high degree of participation and working closely with other organization members.                |                   |
|            |                               | 4         | Requires a moderate degree of participation and, at times, working closely with other organization members. |                   |
|            |                               | 2         | Requires little participation with other organization members; usually works alone.                         |                   |
| S08IM00M   | Social Orientation-Importance | Means_WS  | 1-5   | IM, S             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Self Control

**Description:** Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior even in very difficult situations

**Content Model Key:** I.C.4.a

- I. Worker Characteristics
  - C. Work Styles
    - 4. Adjustment
      - a. *Self Control*

| Variable   | Variable Description    | File Name | Field Values  | Scale, Ques Codes |
|------------|-------------------------|-----------|---|-------------------|
| S09LV00M   | Self Control-Level      | Means_WS  | 1-7, 0(NR)  | LV, S             |
| Left Label |                         | Value     | Right Label   |                   |
|            |                         | 6.5       | Requires a very high degree of self-control even in difficult situations. |                   |
|            |                         | 4         | Requires a high degree of self-control.                                   |                   |
|            |                         | 2         | Requires a moderate degree of self-control.                               |                   |
| S09IM00M   | Self Control-Importance | Means_WS  | 1-5   | IM, S             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Stress Tolerance

**Description:** Job requires accepting criticism and dealing calmly and effectively with high stress situations

**Content Model Key:** I.C.4.b

- I. Worker Characteristics
  - C. Work Styles
    - 4. Adjustment
      - b. Stress Tolerance*

| Variable   | Variable Description        | File Name | Field Values   | Scale, Ques Codes |
|------------|-----------------------------|-----------|--|-------------------|
| S10LV00M   | Stress Tolerance-Level      | Means_WS  | 1-7, 0(NR)   | LV, S             |
| Left Label |                             | Value     | Right Label  |                   |
|            |                             | 6.5       | Requires being extremely calm and tolerant of stress imposed by other people or by circumstances.  |                   |
|            |                             | 4         | Requires being moderately calm and tolerant of stress imposed by other people or by circumstances. |                   |
|            |                             | 2         | Little stress, imposed by other people or by circumstances, is evident for this job.               |                   |
| S10IM00M   | Stress Tolerance-Importance | Means_WS  | 1-5  | IM, S             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Adaptability/Flexibility

**Description:** Job requires being open to change (positive or negative) and to considerable variety in the workplace

**Content Model Key:** I.C.4.c

- I. Worker Characteristics
  - C. Work Styles
    - 4. Adjustment
      - c. *Adaptability/Flexibility*

| Variable   | Variable Description                | File Name | Field Values   | Scale, Ques Codes |
|------------|-------------------------------------|-----------|--|-------------------|
| S11LV00M   | Adaptability/Flexibility-Level      | Means_WS  | 1-7, 0(NR)   | LV, S             |
| Left Label |                                     | Value     | Right Label  |                   |
|            |                                     | 6.5       | Requires being highly flexible and adaptable even to rapidly changing work situations.   |                   |
|            |                                     | 4         | Requires being moderately flexible and adaptable to changing work situations.            |                   |
|            |                                     | 2         | Little flexibility or adaptability to changing work situations is required for this job. |                   |
| S11IM00M   | Adaptability/Flexibility-Importance | Means_WS  | 1-5  | IM, S             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Dependability

**Description:** Job requires being reliable, responsible, and dependable, and fulfilling obligations

**Content Model Key:** I.C.5.a

- I. Worker Characteristics
  - C. Work Styles
    - 5. Conscientiousness
      - a. *Dependability*

| Variable   | Variable Description     | File Name | Field Values  | Scale, Ques Codes |
|------------|--------------------------|-----------|---|-------------------|
| S12LV00M   | Dependability-Level      | Means_WS  | 1-7, 0(NR)  | LV, S             |
| Left Label |                          | Value     | Right Label   |                   |
|            |                          | 6.5       | Requires very high levels of responsibility and dependability in fulfilling job and work obligations. |                   |
|            |                          | 4         | Requires moderate levels of responsibility and dependability in fulfilling job and work obligations.  |                   |
|            |                          | 2         | Requires minimal levels of responsibility and dependability in fulfilling job and work obligations.   |                   |
| S12IM00M   | Dependability-Importance | Means_WS  | 1-5   | IM, S             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Attention to Detail

**Description:** Job requires being careful about detail and thorough in completing work tasks

**Content Model Key:** I.C.5.b

- I. Worker Characteristics
  - C. Work Styles
    - 5. Conscientiousness
      - b. Attention to Detail*

| Variable   | Variable Description           | File Name | Field Values   | Scale, Ques Codes |
|------------|--------------------------------|-----------|--|-------------------|
| S13LV00M   | Attention to Detail-Level      | Means_WS  | 1-7, 0(NR)   | LV, S             |
| Left Label |                                | Value     | Right Label  |                   |
|            |                                | 6.5       | Requires a very high degree of care and thoroughness in handling details on the job. |                   |
|            |                                | 4         | Requires a moderate degree of care and attention to detail in handling job duties.   |                   |
|            |                                | 2         | Requires little attention to detail in handling job duties.                          |                   |
| S13IM00M   | Attention to Detail-Importance | Means_WS  | 1-5  | IM, S             |



## O\*NET Data Dictionary : Worker Characteristics

**Element:** Integrity

**Description:** Job requires being honest and avoiding unethical behavior

**Content Model Key:** I.C.5.c

- I. Worker Characteristics
  - C. Work Styles
    - 5. Conscientiousness
      - c. *Integrity*

| Variable   | Variable Description | File Name | Field Values  | Scale, Ques Codes |
|------------|----------------------|-----------|---|-------------------|
| S14LV00M   | Integrity-Level      | Means_WS  | 1-7, 0(NR)  | LV, S             |
| Left Label |                      | Value     | Right Label   |                   |
|            |                      | 6.5       | Requires a very high level of integrity and a willingness to abide by a strict code of ethics and behavior. |                   |
|            |                      | 4         | Requires a high level of integrity and a willingness to abide by a standard code of ethics and behavior.    |                   |
|            |                      | 2         | Requires integrity, but this is not a central part of the job.  |                   |
| S14IM00M   | Integrity-Importance | Means_WS  | 1-5   | IM, S             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Independence

**Description:** Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done

**Content Model Key:** I.C.6

- I. Worker Characteristics
  - C. Work Styles
    - 6. *Independence*

| Variable   | Variable Description    | File Name | Field Values   | Scale, Ques Codes |
|------------|-------------------------|-----------|--|-------------------|
| S15LV00M   | Independence-Level      | Means_WS  | 1-7, 0(NR)   | LV, S             |
| Left Label |                         | Value     | Right Label  |                   |
|            |                         | 6.5       | Requires a very high level of autonomy, with little or no dependence on supervisors or others to get the job done. |                   |
|            |                         | 4         | Requires a moderate level of autonomy, with some dependence on supervisors or others to get the job done.          |                   |
|            |                         | 2         | Requires little autonomy; job activities are closely supervised.   |                   |
| S15IM00M   | Independence-Importance | Means_WS  | 1-5  | IM, S             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Innovation

**Description:** Job requires creativity and alternative thinking to come up with new ideas for and answers to work-related problems

**Content Model Key:** I.C.7.a

- I. Worker Characteristics
  - C. Work Styles
    - 7. Practical Intelligence
      - a. Innovation

| Variable   | Variable Description  | File Name | Field Values   | Scale, Ques Codes |
|------------|-----------------------|-----------|--|-------------------|
| S16LV00M   | Innovation-Level      | Means_WS  | 1-7, 0(NR)   | LV, S             |
| Left Label |                       | Value     | Right Label  |                   |
|            |                       | 6.5       | Requires a lot of creative thinking and coming up with new ideas related to work, to address job and work issues or problems.      |                   |
|            |                       | 4         | Requires moderate levels of creative thinking and coming up with ideas related to work to address job and work issues or problems. |                   |
|            |                       | 2         | Requires little creative thinking related to work issues and problems.   |                   |
| S16IM00M   | Innovation-Importance | Means_WS  | 1-5  | IM, S             |

## O\*NET Data Dictionary : Worker Characteristics

**Element:** Analytical Thinking

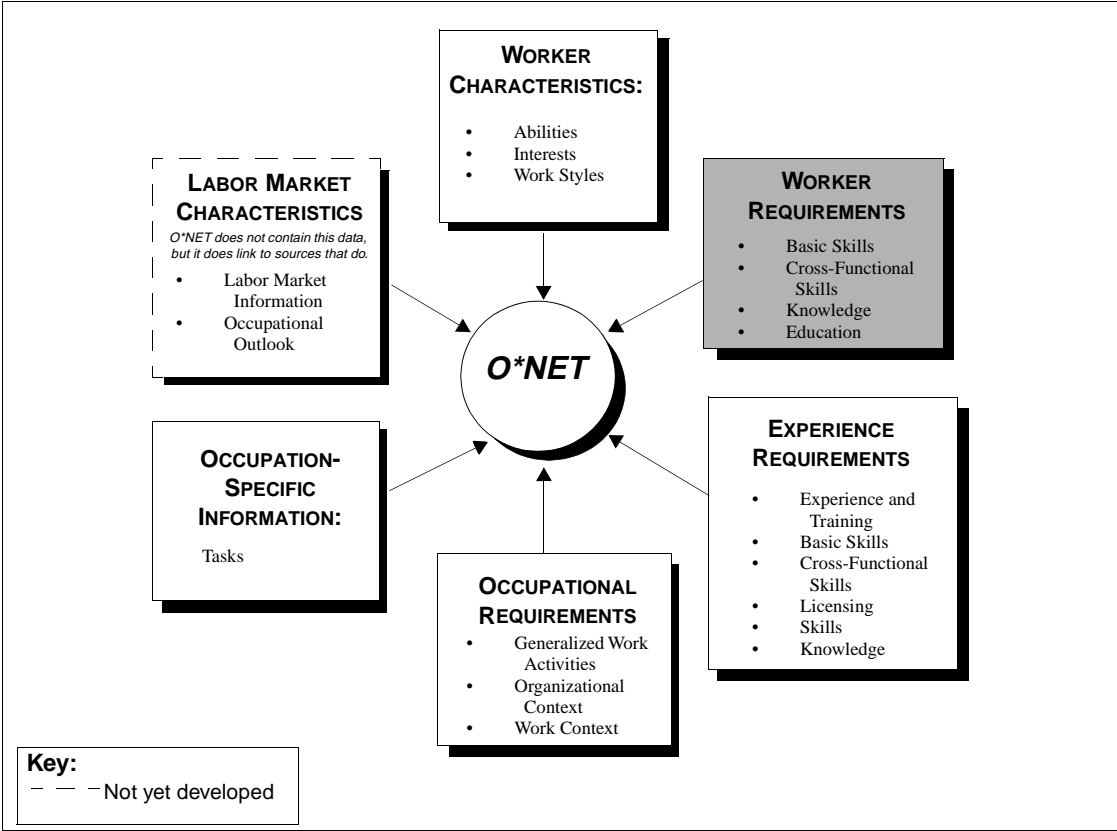
**Description:** Job requires analyzing information, and using logic to address work or job issues and problems

**Content Model Key:** I.C.7.b

- I. Worker Characteristics
  - C. Work Styles
    - 7. Practical Intelligence
      - b. Analytical Thinking*

| Variable   | Variable Description           | File Name | Field Values   | Scale, Ques Codes |
|------------|--------------------------------|-----------|--|-------------------|
| S17LV00M   | Analytical Thinking-Level      | Means_WS  | 1-7, 0(NR)   | LV, S             |
| Left Label |                                | Value     | Right Label  |                   |
|            |                                | 6.5       | Requires being very good at analyzing complex issues, data, or problems related to work, and consistently coming up with useful information. |                   |
|            |                                | 4         | Requires being generally good at analyzing complex issues, data, or problems related to work, and coming up with useful information.         |                   |
|            |                                | 2         | Requires little analysis of issues, data, or problems related to work.   |                   |
| S17IM00M   | Analytical Thinking-Importance | Means_WS  | 1-5  | IM, S             |

# Worker Requirements



## O\*NET Data Dictionary : Worker Requirements

|                                   |  |
|-----------------------------------|--|
| A. Basic Skills                   | Developed capacities that facilitate learning or the more rapid acquisition of knowledge                     |
| 1. Content                        | Background structures needed to work with and acquire more specific skills in a variety of different domains |
| a. Reading Comprehension          |  |
| b. Active Listening               |  |
| c. Writing                        |  |
| d. Speaking                       |  |
| e. Mathematics                    |  |
| f. Science                        |  |
| 2. Process                        | Procedures that contribute to the more rapid acquisition of knowledge and skill across a variety of domains  |
| a. Critical Thinking              |  |
| b. Active Learning                |  |
| c. Learning Strategies            |  |
| d. Monitoring                     |  |
| B. Cross-Functional Skills        | Developed capacities that facilitate performance of activities that occur across jobs                        |
| 1. Social Skills                  | Developed capacities used to work with people to achieve goals   |
| a. Social Perceptiveness          |  |
| b. Coordination                   |  |
| c. Persuasion                     |  |
| d. Negotiation                    |  |
| e. Instructing                    |  |
| f. Service Orientation            |  |
| 2. Complex Problem Solving Skills | Developed capacities used to solve novel, ill-defined problems in complex, real-world settings               |
| a. Problem Identification         |  |
| b. Information Gathering          |  |
| c. Information Organization       |  |
| d. Synthesis/Reorganization       |  |
| e. Idea Generation                |  |
| f. Idea Evaluation                |  |
| g. Implementation Planning        |  |
| h. Solution Appraisal             |  |

## O\*NET Data Dictionary : Worker Requirements

3. Technical Skills
- Developed capacities used to design, set-up, operate, and correct malfunctions involving application of machines or technological systems
- a. Operations Analysis
  - b. Technology Design
  - c. Equipment Selection
  - d. Installation
  - e. Programming
  - f. Testing
  - g. Operation Monitoring
  - h. Operation and Control
  - i. Product Inspection
  - j. Equipment Maintenance
  - k. Troubleshooting
  - l. Repairing
4. Systems Skills
- Developed capacities used to understand, monitor, and improve socio-technical systems
- a. Visioning
  - b. Systems Perception
  - c. Identifying Downstream Consequences
  - d. Identification of Key Causes
  - e. Judgment and Decision Making
  - f. Systems Evaluation
5. Resource Management Skills
- Developed capacities used to allocate resources efficiently
- a. Time Management
  - b. Management of Financial Resources
  - c. Management of Material Resources
  - d. Management of Personnel Resources
- C. Knowledge
- Organized sets of principles and facts applying in general domains
1. Business and Management
- Knowledge of principles and facts related to business administration and accounting, human and material resource management in organizations, sales and marketing, economics, and office information and organizing systems
- a. Administration and Management
  - b. Clerical
  - c. Economics and Accounting
  - d. Sales and Marketing
  - e. Customer and Personal Service

## O\*NET Data Dictionary : Worker Requirements

f. Personnel and Human Resources

2. Manufacturing and Production

Knowledge of principles and facts related to the production, processing, storage, and distribution of manufactured and agricultural goods

- a. Production and Processing
- b. Food Production

3. Engineering and Technology

Knowledge of the design, development, and application of technology for specific purposes.

- a. Computers and Electronics
- b. Engineering and Technology
- c. Design
- d. Building and Construction
- e. Mechanical

4. Mathematics and Science

Knowledge of the history, theories, methods, and applications of the physical, biological, social, mathematical, and geography

- a. Mathematics
- b. Physics
- c. Chemistry
- d. Biology
- e. Psychology
- f. Sociology and Anthropology
- g. Geography

5. Health Services

Knowledge of principles and facts regarding diagnosing, curing, and preventing disease, and improving and preserving physical and mental health and well-being

- a. Medicine and Dentistry
- b. Therapy and Counseling

6. Education and Training

7. Arts and Humanities

Knowledge of facts and principles related to the branches of learning concerned with human thought, language, and the arts.

- a. English Language
- b. Foreign Language
- c. Fine Arts
- d. History and Archeology
- e. Philosophy and Theology



## O\*NET Data Dictionary : Worker Requirements

8. Law and Public Safety
- Knowledge of regulations and methods for maintaining people and property free from danger, injury, or damage; the rules of public conduct established and enforced by legislation, and the political process establishing such rules.
- a. Public Safety and Security
  - b. Law, Government and Jurisprudence
9. Communications
- Knowledge of the science and art of delivering information
- a. Telecommunications
  - b. Communications and Media
10. Transportation
- D. Education
- Prior educational experience required to perform in a job
- 1. Level of Education
  - 2. Instructional Program Required
  - 3. Education Level in Specific Subjects
- The amount of education required in 15 subject areas to perform in a job. Subject areas cover most of the courses that occur in high school, junior college, college undergraduate degree programs, and other education and training programs
- a. Technical Vocational
  - b. Business Vocational
  - c. English/Language Arts
  - d. Oral Communication
  - e. Languages
  - f. Basic Math
  - g. Advanced Math
  - h. Physical Science
  - i. Computer Science
  - j. Biological Science
  - k. Applied Science
  - l. Social Science
  - m. Arts
  - n. Humanities
  - o. Physical Education

## O\*NET Data Dictionary : Worker Requirements

**Element:** Reading Comprehension

**Description:** Understanding written sentences and paragraphs in work related documents

**Content Model Key:** II.A.1.a

- II. Worker Requirements
  - A. Basic Skills
    - 1. Content
      - a. Reading Comprehension*

| Variable   | Variable Description             | File Name | Field Values   | Scale, Ques Codes |
|------------|----------------------------------|-----------|--|-------------------|
| B01LV00M   | Reading Comprehension-Level      | Means_SK  | 1-7, 0(NR)   | LV, B             |
| Left Label |                                  | Value     | Right Label  |                   |
|            |                                  | 6         | Reading a scientific journal article describing surgical procedures. |                   |
|            |                                  | 4         | Reading a memo from management describing new personnel policies.    |                   |
|            |                                  | 2         | Reading step-by-step instructions for completing a form.             |                   |
| B01IM00M   | Reading Comprehension-Importance | Means_SK  | 1-5  | IM, B             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Active Listening

**Description:** Listening to what other people are saying and asking questions as appropriate

**Content Model Key:** II.A.1.b

- II. Worker Requirements
  - A. Basic Skills
    - 1. Content
      - b. Active Listening*

| Variable   | Variable Description        | File Name | Field Values  | Scale, Ques Codes |
|------------|-----------------------------|-----------|---|-------------------|
| B02LV00M   | Active Listening-Level      | Means_SK  | 1-7, 0(NR)  | LV, B             |
| Left Label |                             | Value     | Right Label   |                   |
|            |                             | 6         | Presiding as judge in a complex legal disagreement. |                   |
|            |                             | 4         | Answering inquiries regarding credit references.    |                   |
|            |                             | 2         | Taking a customer's order.                          |                   |
| B02IM00M   | Active Listening-Importance | Means_SK  | 1-5   | IM, B             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Writing

**Description:** Communicating effectively with others in writing as indicated by the needs of the audience

**Content Model Key:** II.A.1.c

- II. Worker Requirements
  - A. Basic Skills
    - 1. Content
      - c. Writing*

| Variable   | Variable Description | File Name | Field Values                                      | Scale, Ques Codes |
|------------|----------------------|-----------|---|-------------------|
| B03LV00M   | Writing-Level        | Means_SK  | 1-7, 0(NR)  | LV, B             |
| Left Label |                      | Value     | Right Label                                       |                   |
|            |                      | 6         | Writing a novel for publication.                  |                   |
|            |                      | 4         | Writing a memo to staff outlining new directives. |                   |
|            |                      | 2         | Taking a telephone message.                       |                   |
| B03IM00M   | Writing-Importance   | Means_SK  | 1-5   | IM, B             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Speaking

**Description:** Talking to others to effectively convey information

**Content Model Key:** II.A.1.d

II. Worker Requirements

A. Basic Skills

1. Content

*d. Speaking*

| Variable  | Variable Description | File Name  | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |   |  |  |   |   |
|---|----------------------|--|--------------|-------------------|------------|-------|-------------|--|---|--|--|---|--|--|---|---|
| B04LV00M  | Speaking-Level       | Means_SK   | 1-7, 0(NR)   | LV, B             |            |       |             |  |   |  |  |   |  |  |   |   |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 50%;">Right Label</th> </tr> </thead> <tbody> <tr> <td></td> <td style="text-align: center;">6</td> <td>Arguing a legal case before the Supreme Court.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Interviewing applicants to obtain personal and work history.</td> </tr> <tr> <td></td> <td style="text-align: center;">2</td> <td>Greeting tourists and explaining tourist attractions.</td> </tr> </tbody> </table> |                      |  |              |                   | Left Label | Value | Right Label |  | 6 | Arguing a legal case before the Supreme Court. |  | 4 | Interviewing applicants to obtain personal and work history. |  | 2 | Greeting tourists and explaining tourist attractions. |
| Left Label  | Value                | Right Label  |              |                   |            |       |             |  |   |  |  |   |  |  |   |   |
|   | 6                    | Arguing a legal case before the Supreme Court.               |              |                   |            |       |             |  |   |  |  |   |  |  |   |   |
|   | 4                    | Interviewing applicants to obtain personal and work history. |              |                   |            |       |             |  |   |  |  |   |  |  |   |   |
|   | 2                    | Greeting tourists and explaining tourist attractions.        |              |                   |            |       |             |  |   |  |  |   |  |  |   |   |
| B04IM00M  | Speaking-Importance  | Means_SK   | 1-5          | IM, B             |            |       |             |  |   |  |  |   |  |  |   |   |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Mathematics

**Description:** Using mathematics to solve problems

**Content Model Key:** II.A.1.e

- II. Worker Requirements
  - A. Basic Skills
    - 1. Content
      - e. Mathematics*

| Variable   | Variable Description   | File Name | Field Values  | Scale, Ques Codes |
|------------|------------------------|-----------|---|-------------------|
| B05LV00M   | Mathematics-Level      | Means_SK  | 1-7, 0(NR)  | LV, B             |
| Left Label |                        | Value     | Right Label   |                   |
|            |                        | 6         | Developing a mathematical model to simulate and resolve an engineering problem. |                   |
|            |                        | 4         | Calculating the square footage of a new home under construction.                |                   |
|            |                        | 2         | Counting the amount of change to be given to a customer.                        |                   |
| B05IM00M   | Mathematics-Importance | Means_SK  | 1-5   | IM, B             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Science

**Description:** Using scientific methods to solve problems

**Content Model Key:** II.A.1.f

- II. Worker Requirements
  - A. Basic Skills
    - 1. Content
      - f. Science*

| Variable   | Variable Description | File Name | Field Values  | Scale, Ques Codes |
|------------|----------------------|-----------|---|-------------------|
| B06LV00M   | Science-Level        | Means_SK  | 1-7, 0(NR)  | LV, B             |
| Left Label |                      | Value     | Right Label   |                   |
|            |                      | 6         | Conducting analyses of aerodynamic systems to determine the practicality of an aircraft design. |                   |
|            |                      | 4         | Conducting product tests to ensure safety standards are met, following written instructions.    |                   |
|            |                      | 2         | Conducting standard tests to determine soil quality.  |                   |
| B06IM00M   | Science-Importance   | Means_SK  | 1-5   | IM, B             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Critical Thinking

**Description:** Using logic and analysis to identify the strengths and weaknesses of different approaches

**Content Model Key:** II.A.2.a

- II. Worker Requirements
  - A. Basic Skills
    - 2. Process
      - a. *Critical Thinking*

| Variable   | Variable Description         | File Name | Field Values  | Scale, Ques Codes |
|------------|------------------------------|-----------|---|-------------------|
| B07LV00M   | Critical Thinking-Level      | Means_SK  | 1-7, 0(NR)  | LV, B             |
| Left Label |                              | Value     | Right Label   |                   |
|            |                              | 6         | Writing a legal brief challenging a federal law.                      |                   |
|            |                              | 4         | Evaluating customer complaints and determining appropriate responses. |                   |
|            |                              | 2         | Determining whether a subordinate has a good excuse for being late.   |                   |
| B07IM00M   | Critical Thinking-Importance | Means_SK  | 1-5   | IM, B             |



## O\*NET Data Dictionary : Worker Requirements

**Element:** Active Learning

**Description:** Working with new material or information to grasp its implications

**Content Model Key:** II.A.2.b

II. Worker Requirements

A. Basic Skills

2. Process

*b. Active Learning*

| Variable   | Variable Description       | File Name | Field Values  | Scale, Ques Codes |
|------------|----------------------------|-----------|---|-------------------|
| B08LV00M   | Active Learning-Level      | Means_SK  | 1-7, 0(NR)  | LV, B             |
| Left Label |                            | Value     | Right Label   |                   |
|            |                            | 6         | Identifying the implications of a new scientific theory for product design.           |                   |
|            |                            | 4         | Determining the impact of new menu changes on a restaurant's purchasing requirements. |                   |
|            |                            | 2         | Thinking about the implications of a newspaper article for job opportunities.         |                   |
| B08IM00M   | Active Learning-Importance | Means_SK  | 1-5   | IM, B             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Learning Strategies

**Description:** Using multiple approaches when learning or teaching new things

**Content Model Key:** II.A.2.c

II. Worker Requirements

A. Basic Skills

2. Process

*c. Learning Strategies*

| Variable   | Variable Description           | File Name | Field Values  | Scale, Ques Codes |
|------------|--------------------------------|-----------|---|-------------------|
| B09LV00M   | Learning Strategies-Level      | Means_SK  | 1-7, 0(NR)  | LV, B             |
| Left Label |                                | Value     | Right Label   |                   |
|            |                                | 6         | Applying principles of educational psychology to developing new teaching methods.         |                   |
|            |                                | 4         | Identifying an alternative approach that might help trainees who are having difficulties. |                   |
|            |                                | 2         | Learning a different method of completing a task from a co-worker.                        |                   |
| B09IM00M   | Learning Strategies-Importance | Means_SK  | 1-5   | IM, B             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Monitoring

**Description:** Assessing how well one is doing when learning or doing something

**Content Model Key:** II.A.2.d

II. Worker Requirements

A. Basic Skills

2. Process

*d. Monitoring*

| Variable   | Variable Description  | File Name | Field Values   | Scale, Ques Codes |
|------------|-----------------------|-----------|--|-------------------|
| B10LV00M   | Monitoring-Level      | Means_SK  | 1-7, 0(NR)   | LV, B             |
| Left Label |                       | Value     | Right Label  |                   |
|            |                       | 6         | Reviewing corporate productivity and developing a plan to increase productivity.                       |                   |
|            |                       | 4         | Monitoring a meeting's progress and revising the agenda to ensure that important topics are discussed. |                   |
|            |                       | 2         | Proofreading and correcting a letter.  |                   |
| B10IM00M   | Monitoring-Importance | Means_SK  | 1-5  | IM, B             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Social Perceptiveness

**Description:** Being aware of others' reactions and understanding why they react the way they do

**Content Model Key:** II.B.1.a

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 1. Social Skills
      - a. Social Perceptiveness*

| Variable   | Variable Description             | File Name | Field Values   | Scale, Ques Codes |
|------------|----------------------------------|-----------|--|-------------------|
| C01LV00M   | Social Perceptiveness-Level      | Means_SK  | 1-7, 0(NR)   | LV, C             |
| Left Label |                                  | Value     | Right Label  |                   |
|            |                                  | 6         | Counseling depressive patients during a crisis period.                     |                   |
|            |                                  | 4         | Being aware of how a co-worker's promotion will affect a work group.       |                   |
|            |                                  | 2         | Noticing that customers are angry because they have been waiting too long. |                   |
| C01IM00M   | Social Perceptiveness-Importance | Means_SK  | 1-5  | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Coordination

**Description:** Adjusting actions in relation to others' actions

**Content Model Key:** II.B.1.b

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 1. Social Skills
      - b. Coordination*

| Variable   | Variable Description    | File Name | Field Values  | Scale, Ques Codes |
|------------|-------------------------|-----------|---|-------------------|
| C02LV00M   | Coordination-Level      | Means_SK  | 1-7, 0(NR)  | LV, C             |
| Left Label |                         | Value     | Right Label   |                   |
|            |                         | 6         | Working as director of a consulting project calling for interaction with multiple subcontractors. |                   |
|            |                         | 4         | Working with others to put a new roof on a house.   |                   |
|            |                         | 2         | Scheduling appointments for a medical clinic.   |                   |
| C02IM00M   | Coordination-Importance | Means_SK  | 1-5   | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Persuasion

**Description:** Persuading others to approach things differently

**Content Model Key:** II.B.1.c

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 1. Social Skills
      - c. Persuasion*

| Variable   | Variable Description  | File Name | Field Values  | Scale, Ques Codes |
|------------|-----------------------|-----------|---|-------------------|
| C03LV00M   | Persuasion-Level      | Means_SK  | 1-7, 0(NR)  | LV, C             |
| Left Label |                       | Value     | Right Label   |                   |
|            |                       | 6         | Changing the opinion of the jury in a complex legal case. |                   |
|            |                       | 4         | Convincing a supervisor to purchase a new copy machine.   |                   |
|            |                       | 2         | Soliciting donations for a charity.                       |                   |
| C03IM00M   | Persuasion-Importance | Means_SK  | 1-5   | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Negotiation

**Description:** Bringing others together and trying to reconcile differences

**Content Model Key:** II.B.1.d

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 1. Social Skills
      - d. Negotiation*

| Variable   | Variable Description   | File Name | Field Values  | Scale, Ques Codes |
|------------|------------------------|-----------|---|-------------------|
| C04LV00M   | Negotiation-Level      | Means_SK  | 1-7, 0(NR)  | LV, C             |
| Left Label |                        | Value     | Right Label   |                   |
|            |                        | 6         | Working as an ambassador in negotiating a new treaty.             |                   |
|            |                        | 4         | Contracting with a wholesaler to sell items at a given cost.      |                   |
|            |                        | 2         | Presenting justification to a manager for altering work schedule. |                   |
| C04IM00M   | Negotiation-Importance | Means_SK  | 1-5   | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Instructing

**Description:** Teaching others how to do something

**Content Model Key:** II.B.1.e

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 1. Social Skills
      - e. Instructing*

| Variable   | Variable Description   | File Name | Field Values   | Scale, Ques Codes |
|------------|------------------------|-----------|--|-------------------|
| C05LV00M   | Instructing-Level      | Means_SK  | 1-7, 0(NR)   | LV, C             |
| Left Label |                        | Value     | Right Label  |                   |
|            |                        | 6         | Demonstrating surgical procedures to interns in a teaching hospital. |                   |
|            |                        | 4         | Instructing a co-worker in how to operate a software program.        |                   |
|            |                        | 2         | Instructing a new employee in the use of a time clock.               |                   |
| C05IM00M   | Instructing-Importance | Means_SK  | 1-5  | IM, C             |



## O\*NET Data Dictionary : Worker Requirements

**Element:** Service Orientation

**Description:** Actively looking for ways to help people

**Content Model Key:** II.B.1.f

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 1. Social Skills
      - f. Service Orientation*

| Variable   | Variable Description           | File Name | Field Values  | Scale, Ques Codes |
|------------|--------------------------------|-----------|---|-------------------|
| C06LV00M   | Service Orientation-Level      | Means_SK  | 1-7, 0(NR)  | LV, C             |
| Left Label |                                | Value     | Right Label   |                   |
|            |                                | 6         | Directing relief agency operations in a disaster area.                      |                   |
|            |                                | 4         | Making flight reservations for customers, using airline reservation system. |                   |
|            |                                | 2         | Asking customers if they would like cups of coffee.                         |                   |
| C06IM00M   | Service Orientation-Importance | Means_SK  | 1-5   | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Problem Identification

**Description:** Identifying the nature of problems

**Content Model Key:** II.B.2.a

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 2. Complex Problem Solving Skills
      - a. *Problem Identification*

| Variable   | Variable Description              | File Name | Field Values   | Scale, Ques Codes |
|------------|-----------------------------------|-----------|--|-------------------|
| C07LV00M   | Problem Identification-Level      | Means_SK  | 1-7, 0(NR)   | LV, C             |
| Left Label |                                   | Value     | Right Label  |                   |
|            |                                   | 6         | Analyzing corporate finances to develop a restructuring plan.                        |                   |
|            |                                   | 4         | Identifying and resolving customer complaints.                                       |                   |
|            |                                   | 2         | Comparing invoices of incoming articles to ensure they meet required specifications. |                   |
| C07IM00M   | Problem Identification-Importance | Means_SK  | 1-5  | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Information Gathering

**Description:** Knowing how to find information and identifying essential information

**Content Model Key:** II.B.2.b

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 2. Complex Problem Solving Skills
      - b. Information Gathering*

| Variable   | Variable Description             | File Name | Field Values  | Scale, Ques Codes |
|------------|----------------------------------|-----------|---|-------------------|
| C08LV00M   | Information Gathering-Level      | Means_SK  | 1-7, 0(NR)  | LV, C             |
| Left Label |                                  | Value     | Right Label   |                   |
|            |                                  | 6         | Analyzing industry indices and competitors' annual reports to determine feasibility of expansion. |                   |
|            |                                  | 4         | Conducting an employee opinion survey.  |                   |
|            |                                  | 2         | Looking up procedures in a manual.  |                   |
| C08IM00M   | Information Gathering-Importance | Means_SK  | 1-5   | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Information Organization

**Description:** Finding ways to structure or classify multiple pieces of information

**Content Model Key:** II.B.2.c

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 2. Complex Problem Solving Skills
      - c. Information Organization*

| Variable   | Variable Description                | File Name | Field Values   | Scale, Ques Codes |
|------------|-------------------------------------|-----------|--|-------------------|
| C09LV00M   | Information Organization-Level      | Means_SK  | 1-7, 0(NR)   | LV, C             |
| Left Label |                                     | Value     | Right Label  |                   |
|            |                                     | 6         | Developing a prototype for a new database system.          |                   |
|            |                                     | 4         | Classifying library materials according to subject matter. |                   |
|            |                                     | 2         | Laying out tools to complete a job.                        |                   |
| C09IM00M   | Information Organization-Importance | Means_SK  | 1-5  | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Synthesis/Reorganization

**Description:** Reorganizing information to get a better approach to problems or tasks

**Content Model Key:** II.B.2.d

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 2. Complex Problem Solving Skills
      - d. Synthesis/Reorganization*

| Variable   | Variable Description                | File Name | Field Values  | Scale, Ques Codes |
|------------|-------------------------------------|-----------|---|-------------------|
| C10LV00M   | Synthesis/Reorganization-Level      | Means_SK  | 1-7, 0(NR)  | LV, C             |
| Left Label |                                     | Value     | Right Label   |                   |
|            |                                     | 6         | Determining the best order in which to present evidence in a criminal trial.  |                   |
|            |                                     | 4         | Redesigning a floor layout to take advantage of new manufacturing techniques. |                   |
|            |                                     | 2         | Rearranging a filing system to make it easier to get needed material.         |                   |
| C10IM00M   | Synthesis/Reorganization-Importance | Means_SK  | 1-5   | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Idea Generation

**Description:** Generating a number of different approaches to problems

**Content Model Key:** II.B.2.e

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 2. Complex Problem Solving Skills
      - e. Idea Generation*

| Variable   | Variable Description       | File Name | Field Values  | Scale, Ques Codes |
|------------|----------------------------|-----------|---|-------------------|
| C11LV00M   | Idea Generation-Level      | Means_SK  | 1-7, 0(NR)  | LV, C             |
| Left Label |                            | Value     | Right Label   |                   |
|            |                            | 6         | Developing alternative transportation plans for a growing urban area. |                   |
|            |                            | 4         | Developing recruitment strategies.                                    |                   |
|            |                            | 2         | Finding alternative routes while making deliveries.                   |                   |
| C11IM00M   | Idea Generation-Importance | Means_SK  | 1-5   | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Idea Evaluation

**Description:** Evaluating the likely success of an idea in relation to the demands of the situation

**Content Model Key:** II.B.2.f

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 2. Complex Problem Solving Skills
      - f. Idea Evaluation*

| Variable   | Variable Description       | File Name | Field Values  | Scale, Ques Codes |
|------------|----------------------------|-----------|---|-------------------|
| C12LV00M   | Idea Evaluation-Level      | Means_SK  | 1-7, 0(NR)  | LV, C             |
| Left Label |                            | Value     | Right Label   |                   |
|            |                            | 6         | Analyzing probable outcomes of public health policies to combat a disease epidemic. |                   |
|            |                            | 4         | Evaluating and selecting employee suggestions for possible implementation.          |                   |
|            |                            | 2         | Determining which procedure to apply to get a report typed more quickly.            |                   |
| C12IM00M   | Idea Evaluation-Importance | Means_SK  | 1-5   | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Implementation Planning

**Description:** Developing approaches for implementing an idea

**Content Model Key:** II.B.2.g

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 2. Complex Problem Solving Skills
      - g. Implementation Planning*

| Variable   | Variable Description               | File Name | Field Values  | Scale, Ques Codes |
|------------|------------------------------------|-----------|---|-------------------|
| C13LV00M   | Implementation Planning-Level      | Means_SK  | 1-7, 0(NR)  | LV, C             |
| Left Label |                                    | Value     | Right Label   |                   |
|            |                                    | 6         | Developing and implementing a plan to provide emergency relief for a major metropolitan area.             |                   |
|            |                                    | 4         | Scheduling deliveries based on distance between sites, staffing time, availability of vehicles, and cost. |                   |
|            |                                    | 2         | Scheduling and coordinating a one-day meeting.  |                   |
| C13IM00M   | Implementation Planning-Importance | Means_SK  | 1-5   | IM, C             |



## O\*NET Data Dictionary : Worker Requirements

**Element:** Solution Appraisal

**Description:** Observing and evaluating the outcomes of a problem solution to identify lessons learned or redirect efforts

**Content Model Key:** II.B.2.h

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 2. Complex Problem Solving Skills
      - h. Solution Appraisal*

| Variable   | Variable Description          | File Name | Field Values   | Scale, Ques Codes |
|------------|-------------------------------|-----------|--|-------------------|
| C14LV00M   | Solution Appraisal-Level      | Means_SK  | 1-7, 0(NR)   | LV, C             |
| Left Label |                               | Value     | Right Label  |                   |
|            |                               | 6         | Reviewing, assessing, and modifying the implementation of a new business plan. |                   |
|            |                               | 4         | Measuring customer satisfaction after introduction of new billing procedures.  |                   |
|            |                               | 2         | Identifying and correcting an error made in preparing a report.                |                   |
| C14IM00M   | Solution Appraisal-Importance | Means_SK  | 1-5  | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Operations Analysis

**Description:** Analyzing needs and product requirements to create a design

**Content Model Key:** II.B.3.a

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 3. Technical Skills
      - a. *Operations Analysis*

| Variable   | Variable Description           | File Name | Field Values  | Scale, Ques Codes |
|------------|--------------------------------|-----------|---|-------------------|
| C15LV00M   | Operations Analysis-Level      | Means_SK  | 1-7, 0(NR)  | LV, C             |
| Left Label |                                | Value     | Right Label   |                   |
|            |                                | 6         | Identifying the control system needed for a new process production plant. |                   |
|            |                                | 4         | Suggesting changes in software to make a system more user friendly.       |                   |
|            |                                | 2         | Selecting a photocopy machine for an office.                              |                   |
| C15IM00M   | Operations Analysis-Importance | Means_SK  | 1-5   | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Technology Design

**Description:** Generating or adapting equipment and technology to serve user needs

**Content Model Key:** II.B.3.b

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 3. Technical Skills
      - b. Technology Design*

| Variable   | Variable Description         | File Name | Field Values   | Scale, Ques Codes |
|------------|------------------------------|-----------|--|-------------------|
| C16LV00M   | Technology Design-Level      | Means_SK  | 1-7, 0(NR)   | LV, C             |
| Left Label |                              | Value     | Right Label  |                   |
|            |                              | 6         | Creating new technology for producing industrial diamonds. |                   |
|            |                              | 4         | Redesigning the handle on a hand tool for easier gripping. |                   |
|            |                              | 2         | Adjusting exercise equipment for use by a customer.        |                   |
| C16IM00M   | Technology Design-Importance | Means_SK  | 1-5  | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Equipment Selection

**Description:** Determining the kind of tools and equipment needed to do a job

**Content Model Key:** II.B.3.c

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 3. Technical Skills
      - c. Equipment Selection*

| Variable   | Variable Description           | File Name | Field Values  | Scale, Ques Codes |
|------------|--------------------------------|-----------|---|-------------------|
| C17LV00M   | Equipment Selection-Level      | Means_SK  | 1-7, 0(NR)  | LV, C             |
| Left Label |                                | Value     | Right Label   |                   |
|            |                                | 6         | Identifying the equipment needed to produce a new product line.       |                   |
|            |                                | 4         | Choosing a software application to use to complete a work assignment. |                   |
|            |                                | 2         | Selecting a screwdriver to use in adjusting a vehicle's carburetor.   |                   |
| C17IM00M   | Equipment Selection-Importance | Means_SK  | 1-5   | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Installation

**Description:** Installing equipment, machines, wiring, or programs to meet specifications

**Content Model Key:** II.B.3.d

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 3. Technical Skills
      - d. Installation*

| Variable   | Variable Description    | File Name | Field Values   | Scale, Ques Codes |
|------------|-------------------------|-----------|--|-------------------|
| C18LV00M   | Installation-Level      | Means_SK  | 1-7, 0(NR)   | LV, C             |
| Left Label |                         | Value     | Right Label  |                   |
|            |                         | 6         | Installing a "one of a kind" process production molding machine. |                   |
|            |                         | 4         | Installing new switches for a telephone exchange.                |                   |
|            |                         | 2         | Installing a new air filter in an air conditioner.               |                   |
| C18IM00M   | Installation-Importance | Means_SK  | 1-5  | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Programming

**Description:** Writing computer programs for various purposes

**Content Model Key:** II.B.3.e

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 3. Technical Skills
      - e. Programming*

| Variable   | Variable Description   | File Name | Field Values   | Scale, Ques Codes |
|------------|------------------------|-----------|--|-------------------|
| C19LV00M   | Programming-Level      | Means_SK  | 1-7, 0(NR)   | LV, C             |
| Left Label |                        | Value     | Right Label  |                   |
|            |                        | 6         | Writing expert system programs to analyze ground radar geological data for probable existence of mineral deposits. |                   |
|            |                        | 4         | Writing a statistical analysis program to analyze demographic data.  |                   |
|            |                        | 2         | Writing a program in BASIC to sort objects in a database.  |                   |
| C19IM00M   | Programming-Importance | Means_SK  | 1-5  | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Testing

**Description:** Conducting tests to determine whether equipment, software, or procedures are operating as expected

**Content Model Key:** II.B.3.f

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 3. Technical Skills
      - f. Testing*

| Variable   | Variable Description | File Name | Field Values  | Scale, Ques Codes |
|------------|----------------------|-----------|---|-------------------|
| C20LV00M   | Testing-Level        | Means_SK  | 1-7, 0(NR)  | LV, C             |
| Left Label |                      | Value     | Right Label   |                   |
|            |                      | 6         | Developing procedures to test a prototype of a new computer system.                 |                   |
|            |                      | 4         | Starting a machine to obtain first-run workpiece and verify dimensional tolerances. |                   |
|            |                      | 2         | Using a test station to assess whether a car meets emissions requirements.          |                   |
| C20IM00M   | Testing-Importance   | Means_SK  | 1-5   | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Operation Monitoring

**Description:** Watching gauges, dials, or other indicators to make sure a machine is working properly

**Content Model Key:** II.B.3.g

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 3. Technical Skills
      - g. Operation Monitoring*

| Variable   | Variable Description            | File Name | Field Values  | Scale, Ques Codes |
|------------|---------------------------------|-----------|---|-------------------|
| C21LV00M   | Operation Monitoring-Level      | Means_SK  | 1-7, 0(NR)  | LV, C             |
| Left Label |                                 | Value     | Right Label   |                   |
|            |                                 | 6         | Monitoring and integrating control feedback in a petrochemical processing facility to maintain production flow. |                   |
|            |                                 | 4         | Monitoring machine functions on an automated production line.   |                   |
|            |                                 | 2         | Monitoring completion times while running a computer program.   |                   |
| C21IM00M   | Operation Monitoring-Importance | Means_SK  | 1-5   | IM, C             |



## O\*NET Data Dictionary : Worker Requirements

**Element:** Operation and Control

**Description:** Controlling operations of equipment or systems

**Content Model Key:** II.B.3.h

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 3. Technical Skills
      - h. Operation and Control*

| Variable  | Variable Description             | File Name   | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |   |   |  |   |  |
|---|----------------------------------|---|--------------|-------------------|------------|-------|-------------|--|---|--|--|---|---|--|---|--|
| C22LV00M  | Operation and Control-Level      | Means_SK  | 1-7, 0(NR)   | LV, C             |            |       |             |  |   |  |  |   |   |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 50%;">Right Label</th> </tr> </thead> <tbody> <tr> <td></td> <td style="text-align: center;">6</td> <td>Controlling aircraft approach and landing at a large airport during a busy period.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Adjusting the speed of assembly line equipment based on the type of product being assembled .</td> </tr> <tr> <td></td> <td style="text-align: center;">2</td> <td>Adjusting the settings on a copy machine to make reduced size photocopies.</td> </tr> </tbody> </table> |                                  |   |              |                   | Left Label | Value | Right Label |  | 6 | Controlling aircraft approach and landing at a large airport during a busy period. |  | 4 | Adjusting the speed of assembly line equipment based on the type of product being assembled . |  | 2 | Adjusting the settings on a copy machine to make reduced size photocopies. |
| Left Label  | Value                            | Right Label   |              |                   |            |       |             |  |   |  |  |   |   |  |   |  |
|   | 6                                | Controlling aircraft approach and landing at a large airport during a busy period.            |              |                   |            |       |             |  |   |  |  |   |   |  |   |  |
|   | 4                                | Adjusting the speed of assembly line equipment based on the type of product being assembled . |              |                   |            |       |             |  |   |  |  |   |   |  |   |  |
|   | 2                                | Adjusting the settings on a copy machine to make reduced size photocopies.                    |              |                   |            |       |             |  |   |  |  |   |   |  |   |  |
| C22IM00M  | Operation and Control-Importance | Means_SK  | 1-5          | IM, C             |            |       |             |  |   |  |  |   |   |  |   |  |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Product Inspection

**Description:** Inspecting and evaluating the quality of products

**Content Model Key:** II.B.3.i

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 3. Technical Skills
      - i. Product Inspection*

| Variable   | Variable Description          | File Name | Field Values  | Scale, Ques Codes |
|------------|-------------------------------|-----------|---|-------------------|
| C23LV00M   | Product Inspection-Level      | Means_SK  | 1-7, 0(NR)  | LV, C             |
| Left Label |                               | Value     | Right Label   |                   |
|            |                               | 6         | Establishing and monitoring quality control procedures for a large manufacturing operation. |                   |
|            |                               | 4         | Measuring new part requisitions for tolerance to specifications.                            |                   |
|            |                               | 2         | Inspecting a draft of a memorandum for clerical errors.                                     |                   |
| C23IM00M   | Product Inspection-Importance | Means_SK  | 1-5   | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Equipment Maintenance

**Description:** Performing routine maintenance and determining when and what kind of maintenance is needed

**Content Model Key:** II.B.3.j

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 3. Technical Skills
      - j. Equipment Maintenance*

| Variable   | Variable Description             | File Name | Field Values  | Scale, Ques Codes |
|------------|----------------------------------|-----------|---|-------------------|
| C24LV00M   | Equipment Maintenance-Level      | Means_SK  | 1-7, 0(NR)  | LV, C             |
| Left Label |                                  | Value     | Right Label   |                   |
|            |                                  | 6         | Conducting maintenance checks on an experimental aircraft.        |                   |
|            |                                  | 4         | Clearing moving parts in production machinery.                    |                   |
|            |                                  | 2         | Adding oil to an engine as indicated by a gauge or warning light. |                   |
| C24IM00M   | Equipment Maintenance-Importance | Means_SK  | 1-5   | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Troubleshooting

**Description:** Determining what is causing an operating error and deciding what to do about it

**Content Model Key:** II.B.3.k

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 3. Technical Skills
      - k. Troubleshooting*

| Variable   | Variable Description       | File Name | Field Values  | Scale, Ques Codes |
|------------|----------------------------|-----------|---|-------------------|
| C25LV00M   | Troubleshooting-Level      | Means_SK  | 1-7, 0(NR)  | LV, C             |
| Left Label |                            | Value     | Right Label   |                   |
|            |                            | 6         | Directing the debugging of control code for a new operating system. |                   |
|            |                            | 4         | Identifying the circuit causing an electrical system to fail.       |                   |
|            |                            | 2         | Identifying the source of a leak by looking under a machine.        |                   |
| C25IM00M   | Troubleshooting-Importance | Means_SK  | 1-5   | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Repairing

**Description:** Repairing machines or systems using the needed tools

**Content Model Key:** II.B.3.1

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 3. Technical Skills
      - 1. Repairing*

| Variable   | Variable Description | File Name | Field Values   | Scale, Ques Codes |
|------------|----------------------|-----------|--|-------------------|
| C26LV00M   | Repairing-Level      | Means_SK  | 1-7, 0(NR)   | LV, C             |
| Left Label |                      | Value     | Right Label  |                   |
|            |                      | 6         | Repairing structural damage to a building following an earthquake. |                   |
|            |                      | 4         | Replacing a faulty hydraulic valve.                                |                   |
|            |                      | 2         | Tightening a screw to get a door to close properly.                |                   |
| C26IM00M   | Repairing-Importance | Means_SK  | 1-5  | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Visioning

**Description:** Developing an image of how a system should work under ideal conditions

**Content Model Key:** II.B.4.a

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 4. Systems Skills
      - a. *Visioning*

| Variable   | Variable Description | File Name | Field Values  | Scale, Ques Codes |
|------------|----------------------|-----------|---|-------------------|
| C27LV00M   | Visioning-Level      | Means_SK  | 1-7, 0(NR)  | LV, C             |
| Left Label |                      | Value     | Right Label   |                   |
|            |                      | 6         | Creating a new vision for a large manufacturing organization that lets the company respond to changes in the market and technology. |                   |
|            |                      | 4         | Preparing a presentation detailing the role of a work unit in relation to the organizational structure.                             |                   |
|            |                      | 2         | Understanding co-workers' roles in finishing a job.   |                   |
| C27IM00M   | Visioning-Importance | Means_SK  | 1-5   | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Systems Perception

**Description:** Determining when important changes have occurred in a system or are likely to occur

**Content Model Key:** II.B.4.b

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 4. Systems Skills
      - b. Systems Perception*

| Variable   | Variable Description          | File Name | Field Values   | Scale, Ques Codes |
|------------|-------------------------------|-----------|--|-------------------|
| C28LV00M   | Systems Perception-Level      | Means_SK  | 1-7, 0(NR)   | LV, C             |
| Left Label |                               | Value     | Right Label  |                   |
|            |                               | 6         | Identifying how changes in tax laws are likely to affect preferred sites for manufacturing operations in different industries.         |                   |
|            |                               | 4         | Observing conditions that may impede the flow of work on an assembly line and notifying personnel that corrective action is necessary. |                   |
|            |                               | 2         | Identifying how an argument among team members might affect the day's work.  |                   |
| C28IM00M   | Systems Perception-Importance | Means_SK  | 1-5  | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Identifying Downstream Consequences

**Description:** Determining the long-term outcomes of a change in operations

**Content Model Key:** II.B.4.c

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 4. Systems Skills
      - c. Identifying Downstream Consequences*

| Variable   | Variable Description                           | File Name  | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |   |  |  |   |  |
|--|--|--|--------------|-------------------|------------|-------|-------------|--|---|--|--|---|--|--|---|--|
| C29LV00M   | Identifying Downstream Consequences-Level      | Means_SK   | 1-7, 0(NR)   | LV, C             |            |       |             |  |   |  |  |   |  |  |   |  |
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| Left Label   | Value  | Right Label  |              |                   |            |       |             |  |   |  |  |   |  |  |   |  |
|  | 6  | Determining changes that might occur in an industry if a new piece of legislation is passed. |              |                   |            |       |             |  |   |  |  |   |  |  |   |  |
|  | 4  | Determining how the introduction of a new piece of equipment will affect production rates.   |              |                   |            |       |             |  |   |  |  |   |  |  |   |  |
|  | 2  | Determining how loss of a team member will affect the completion of a job.                   |              |                   |            |       |             |  |   |  |  |   |  |  |   |  |
| C29IM00M   | Identifying Downstream Consequences-Importance | Means_SK   | 1-5          | IM, C             |            |       |             |  |   |  |  |   |  |  |   |  |



## O\*NET Data Dictionary : Worker Requirements

**Element:** Identification of Key Causes

**Description:** Identifying the things that must be changed to achieve a goal

**Content Model Key:** II.B.4.d

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 4. Systems Skills
      - d. Identification of Key Causes*

| Variable   | Variable Description                    | File Name | Field Values   | Scale, Ques Codes |
|------------|---|-----------|--|-------------------|
| C30LV00M   | Identification of Key Causes-Level      | Means_SK  | 1-7, 0(NR)   | LV, C             |
| Left Label |   | Value     | Right Label  |                   |
|            |   | 6         | Identifying the changes in organizational policy needed to encourage research and development efforts. |                   |
|            |   | 4         | Identifying the major reasons why a client might be unhappy with a product.                            |                   |
|            |   | 2         | Determining which route to take to deliver a passenger to a destination quickly.                       |                   |
| C30IM00M   | Identification of Key Causes-Importance | Means_SK  | 1-5  | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Judgment and Decision Making

**Description:** Weighing the relative costs and benefits of a potential action

**Content Model Key:** II.B.4.e

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 4. Systems Skills
      - e. Judgment and Decision Making*

| Variable   | Variable Description                    | File Name | Field Values   | Scale, Ques Codes |
|------------|---|-----------|--|-------------------|
| C31LV00M   | Judgment and Decision Making-Level      | Means_SK  | 1-7, 0(NR)   | LV, C             |
| Left Label |   | Value     | Right Label  |                   |
|            |   | 6         | Deciding whether a manufacturing company should invest in new robotics technology. |                   |
|            |   | 4         | Evaluating a loan application for degree of risk.                                  |                   |
|            |   | 2         | Deciding how scheduling a break will affect work flow.                             |                   |
| C31IM00M   | Judgment and Decision Making-Importance | Means_SK  | 1-5  | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Systems Evaluation

**Description:** Looking at many indicators of system performance, taking into account their accuracy

**Content Model Key:** II.B.4.f

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 4. Systems Skills
      - f. Systems Evaluation*

| Variable   | Variable Description          | File Name | Field Values  | Scale, Ques Codes |
|------------|-------------------------------|-----------|---|-------------------|
| C32LV00M   | Systems Evaluation-Level      | Means_SK  | 1-7, 0(NR)  | LV, C             |
| Left Label |                               | Value     | Right Label   |                   |
|            |                               | 6         | Evaluating the long-term performance problem of a company.  |                   |
|            |                               | 4         | Determining why a manager has underestimated production costs.  |                   |
|            |                               | 2         | Determining why a co-worker has been overly optimistic about how long it would take to complete a task. |                   |
| C32IM00M   | Systems Evaluation-Importance | Means_SK  | 1-5   | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Time Management

**Description:** Managing one's own time and the time of others

**Content Model Key:** II.B.5.a

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 5. Resource Management Skills
      - a. *Time Management*

| Variable   | Variable Description       | File Name | Field Values   | Scale, Ques Codes |
|------------|----------------------------|-----------|--|-------------------|
| C33LV00M   | Time Management-Level      | Means_SK  | 1-7, 0(NR)   | LV, C             |
| Left Label |                            | Value     | Right Label  |                   |
|            |                            | 6         | Allocating the time of scientists to multiple research projects.     |                   |
|            |                            | 4         | Allocating the time of subordinates to projects for the coming week. |                   |
|            |                            | 2         | Keeping a monthly calendar of appointments.                          |                   |
| C33IM00M   | Time Management-Importance | Means_SK  | 1-5  | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Management of Financial Resources

**Description:** Determining how money will be spent to get the work done, and accounting for these expenditures

**Content Model Key:** II.B.5.b

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 5. Resource Management Skills
      - b. Management of Financial Resources*

| Variable   | Variable Description                         | File Name | Field Values  | Scale, Ques Codes |
|------------|--|-----------|---|-------------------|
| C34LV00M   | Management of Financial Resources-Level      | Means_SK  | 1-7, 0(NR)  | LV, C             |
| Left Label |  | Value     | Right Label   |                   |
|            |  | 6         | Developing and approving yearly budgets for a large corporation and obtaining financing as necessary. |                   |
|            |  | 4         | Preparing and managing a budget for a short-term project.   |                   |
|            |  | 2         | Taking money from petty cash to buy office supplies and recording the amount of the expenditure.      |                   |
| C34IM00M   | Management of Financial Resources-Importance | Means_SK  | 1-5   | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Management of Material Resources

**Description:** Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work

**Content Model Key:** II.B.5.c

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 5. Resource Management Skills
      - c. Management of Material Resources*

| Variable   | Variable Description                        | File Name | Field Values  | Scale, Ques Codes |
|------------|---|-----------|---|-------------------|
| C35LV00M   | Management of Material Resources-Level      | Means_SK  | 1-7, 0(NR)  | LV, C             |
| Left Label |   | Value     | Right Label   |                   |
|            |   | 6         | Determining the computer system needs of a large corporation and monitoring use of the equipment. |                   |
|            |   | 4         | Evaluating an annual uniform service contract for delivery drivers.                               |                   |
|            |   | 2         | Renting a meeting room for a management meeting.  |                   |
| C35IM00M   | Management of Material Resources-Importance | Means_SK  | 1-5   | IM, C             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Management of Personnel Resources

**Description:** Motivating, developing, and directing people as they work, identifying the best people for the job

**Content Model Key:** II.B.5.d

- II. Worker Requirements
  - B. Cross-Functional Skills
    - 5. Resource Management Skills
      - d. Management of Personnel Resources*

| Variable  | Variable Description                         | File Name   | Field Values | Scale, Ques Codes |            |       |             |  |   |   |  |   |   |  |   |   |
|---|--|---|--------------|-------------------|------------|-------|-------------|--|---|---|--|---|---|--|---|---|
| C36LV00M  | Management of Personnel Resources-Level      | Means_SK  | 1-7, 0(NR)   | LV, C             |            |       |             |  |   |   |  |   |   |  |   |   |
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| Left Label  | Value  | Right Label   |              |                   |            |       |             |  |   |   |  |   |   |  |   |   |
|   | 6  | Planning, implementing and managing recruitment, training, and incentive programs for a high performance company. |              |                   |            |       |             |  |   |   |  |   |   |  |   |   |
|   | 4  | Directing the activities of a road repair crew with minimal disruption of traffic flow.                           |              |                   |            |       |             |  |   |   |  |   |   |  |   |   |
|   | 2  | Encouraging a co-worker who is having difficulty finishing a piece of work.                                       |              |                   |            |       |             |  |   |   |  |   |   |  |   |   |
| C36IM00M  | Management of Personnel Resources-Importance | Means_SK  | 1-5          | IM, C             |            |       |             |  |   |   |  |   |   |  |   |   |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Administration and Management

**Description:** Knowledge of principles and processes involved in business and organizational planning, coordination, and execution. This includes strategic planning, resource allocation, manpower modeling, leadership techniques, and production methods

**Content Model Key:** II.C.1.a

- II. Worker Requirements
  - C. Knowledge
    - 1. Business and Management
      - a. *Administration and Management*

| Variable  | Variable Description   | File Name   | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |     |                                  |  |   |   |  |     |   |  |     |                                      |  |     |                        |   |   |  |
|---|--|---|--------------|-------------------|------------|-------|-------------|--|---|--|--|-----|----------------------------------|--|---|---|--|-----|---|--|-----|--------------------------------------|--|-----|------------------------|---|---|--|
| K01LV00M  | Administration and Management-Level  | Means_KN  | 1-7, 0(NR)   | LV, K             |            |       |             |  |   |  |  |     |                                  |  |   |   |  |     |   |  |     |                                      |  |     |                        |   |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Requires knowledge of high-level business and management principles and processes such as those required in large, multi-national organizations with diversified products or services.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">5.9</td> <td>Managing a \$10 million company.</td> </tr> <tr> <td></td> <td style="text-align: center;">5</td> <td>Administering a large retirement and nursing care facility.</td> </tr> <tr> <td></td> <td style="text-align: center;">4.3</td> <td>Monitoring progress of a project to ensure timely completion.</td> </tr> <tr> <td></td> <td style="text-align: center;">2.5</td> <td>Planning an effective staff meeting.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.8</td> <td>Signing a pay voucher.</td> </tr> <tr> <td>Requires knowledge of basic business and management principles and processes such as those required in small businesses with a single product or service.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |  |   |              |                   | Left Label | Value | Right Label | Requires knowledge of high-level business and management principles and processes such as those required in large, multi-national organizations with diversified products or services. | 7 |  |  | 5.9 | Managing a \$10 million company. |  | 5 | Administering a large retirement and nursing care facility. |  | 4.3 | Monitoring progress of a project to ensure timely completion. |  | 2.5 | Planning an effective staff meeting. |  | 1.8 | Signing a pay voucher. | Requires knowledge of basic business and management principles and processes such as those required in small businesses with a single product or service. | 1 |  |
| Left Label  | Value  | Right Label   |              |                   |            |       |             |  |   |  |  |     |                                  |  |   |   |  |     |   |  |     |                                      |  |     |                        |   |   |  |
| Requires knowledge of high-level business and management principles and processes such as those required in large, multi-national organizations with diversified products or services.  | 7  |   |              |                   |            |       |             |  |   |  |  |     |                                  |  |   |   |  |     |   |  |     |                                      |  |     |                        |   |   |  |
|   | 5.9  | Managing a \$10 million company.                              |              |                   |            |       |             |  |   |  |  |     |                                  |  |   |   |  |     |   |  |     |                                      |  |     |                        |   |   |  |
|   | 5  | Administering a large retirement and nursing care facility.   |              |                   |            |       |             |  |   |  |  |     |                                  |  |   |   |  |     |   |  |     |                                      |  |     |                        |   |   |  |
|   | 4.3  | Monitoring progress of a project to ensure timely completion. |              |                   |            |       |             |  |   |  |  |     |                                  |  |   |   |  |     |   |  |     |                                      |  |     |                        |   |   |  |
|   | 2.5  | Planning an effective staff meeting.                          |              |                   |            |       |             |  |   |  |  |     |                                  |  |   |   |  |     |   |  |     |                                      |  |     |                        |   |   |  |
|   | 1.8  | Signing a pay voucher.  |              |                   |            |       |             |  |   |  |  |     |                                  |  |   |   |  |     |   |  |     |                                      |  |     |                        |   |   |  |
| Requires knowledge of basic business and management principles and processes such as those required in small businesses with a single product or service.   | 1  |   |              |                   |            |       |             |  |   |  |  |     |                                  |  |   |   |  |     |   |  |     |                                      |  |     |                        |   |   |  |
| K01IM00M  | Administration and Management-Importance   | Means_KN  | 1-5          | IM, K             |            |       |             |  |   |  |  |     |                                  |  |   |   |  |     |   |  |     |                                      |  |     |                        |   |   |  |
| K01JS01P  | Administration and Management-Job Specialty<br>Business Administration   | Means_KJ  | 0-100%       | JS, K             |            |       |             |  |   |  |  |     |                                  |  |   |   |  |     |   |  |     |                                      |  |     |                        |   |   |  |
| K01JS02P  | Administration and Management-Job Specialty<br>Construction Management   | Means_KJ  | 0-100%       | JS, K             |            |       |             |  |   |  |  |     |                                  |  |   |   |  |     |   |  |     |                                      |  |     |                        |   |   |  |
| K01JS03P  | Administration and Management-Job Specialty<br>Engineering, Math, and Sciences Mgmt - Engineering, Mathematical, and Sciences Management | Means_KJ  | 0-100%       | JS, K             |            |       |             |  |   |  |  |     |                                  |  |   |   |  |     |   |  |     |                                      |  |     |                        |   |   |  |



## O\*NET Data Dictionary : Worker Requirements

**Element:** Administration and Management (Continued)

**Description:** Knowledge of principles and processes involved in business and organizational planning, coordination, and execution. This includes strategic planning, resource allocation, manpower modeling, leadership techniques, and production methods

**Content Model Key:** II.C.1.a

- II. Worker Requirements
  - C. Knowledge
    - 1. Business and Management
      - a. Administration and Management*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| K01JS04P | Administration and Management-Job Specialty<br>Food Service and Lodging Management     | Means_KJ  | 0-100%       | JS, K             |
| K01JS05P | Administration and Management-Job Specialty<br>Medical Service Management              | Means_KJ  | 0-100%       | JS, K             |
| K01JS06P | Administration and Management-Job Specialty<br>Personnel and Human Resource Management | Means_KJ  | 0-100%       | JS, K             |
| K01JS07P | Administration and Management-Job Specialty<br>Public Administration                   | Means_KJ  | 0-100%       | JS, K             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Clerical

**Description:** Knowledge of administrative and clerical procedures and systems such as word processing systems, filing and records management systems, stenography and transcription, forms design principles, and other office procedures and terminology

**Content Model Key:** II.C.1.b

- II. Worker Requirements
  - C. Knowledge
    - 1. Business and Management
      - b. Clerical*

| Variable   | Variable Description                               | File Name                                    | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |     |  |  |     |                             |  |     |                                |  |   |  |
|--|--|--|--------------|-------------------|------------|-------|-------------|---|---|--|--|-----|--|--|-----|-----------------------------|--|-----|--------------------------------|--|---|--|
| K02LV00M   | Clerical-Level                                     | Means_KN                                     | 1-7, 0(NR)   | LV, K             |            |       |             |   |   |  |  |     |  |  |     |                             |  |     |                                |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Requires knowledge of advanced clerical, stenographic, and word processing procedures and records management systems.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">5.2</td> <td>Organizing storage system for company forms.</td> </tr> <tr> <td></td> <td style="text-align: center;">3.1</td> <td>Typing 30 words per minute.</td> </tr> <tr> <td></td> <td style="text-align: center;">2.2</td> <td>Filing letters alphabetically.</td> </tr> <tr> <td>Requires knowledge of simple clerical and filing procedures.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |  |  |              |                   | Left Label | Value | Right Label | Requires knowledge of advanced clerical, stenographic, and word processing procedures and records management systems. | 7 |  |  | 5.2 | Organizing storage system for company forms. |  | 3.1 | Typing 30 words per minute. |  | 2.2 | Filing letters alphabetically. | Requires knowledge of simple clerical and filing procedures. | 1 |  |
| Left Label   | Value  | Right Label                                  |              |                   |            |       |             |   |   |  |  |     |  |  |     |                             |  |     |                                |  |   |  |
| Requires knowledge of advanced clerical, stenographic, and word processing procedures and records management systems.  | 7  |  |              |                   |            |       |             |   |   |  |  |     |  |  |     |                             |  |     |                                |  |   |  |
|  | 5.2  | Organizing storage system for company forms. |              |                   |            |       |             |   |   |  |  |     |  |  |     |                             |  |     |                                |  |   |  |
|  | 3.1  | Typing 30 words per minute.                  |              |                   |            |       |             |   |   |  |  |     |  |  |     |                             |  |     |                                |  |   |  |
|  | 2.2  | Filing letters alphabetically.               |              |                   |            |       |             |   |   |  |  |     |  |  |     |                             |  |     |                                |  |   |  |
| Requires knowledge of simple clerical and filing procedures.   | 1  |  |              |                   |            |       |             |   |   |  |  |     |  |  |     |                             |  |     |                                |  |   |  |
| K02IM00M   | Clerical-Importance                                | Means_KN                                     | 1-5          | IM, K             |            |       |             |   |   |  |  |     |  |  |     |                             |  |     |                                |  |   |  |
| K02JS01P   | Clerical-Job Specialty<br>Banking Support          | Means_KJ                                     | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |  |  |     |                             |  |     |                                |  |   |  |
| K02JS02P   | Clerical-Job Specialty<br>Bookkeeping              | Means_KJ                                     | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |  |  |     |                             |  |     |                                |  |   |  |
| K02JS03P   | Clerical-Job Specialty<br>Computer Operations      | Means_KJ                                     | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |  |  |     |                             |  |     |                                |  |   |  |
| K02JS04P   | Clerical-Job Specialty<br>Data Entry               | Means_KJ                                     | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |  |  |     |                             |  |     |                                |  |   |  |
| K02JS05P   | Clerical-Job Specialty<br>Health Unit Coordinating | Means_KJ                                     | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |  |  |     |                             |  |     |                                |  |   |  |
| K02JS06P   | Clerical-Job Specialty<br>Legal Secretarial        | Means_KJ                                     | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |  |  |     |                             |  |     |                                |  |   |  |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Clerical (Continued)

**Description:** Knowledge of administrative and clerical procedures and systems such as word processing systems, filing and records management systems, stenography and transcription, forms design principles, and other office procedures and terminology

**Content Model Key:** II.C.1.b

- II. Worker Requirements
  - C. Knowledge
    - 1. Business and Management
      - b. Clerical*

| <b>Variable</b> | <b>Variable Description</b>                     | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| K02JS07P        | Clerical-Job Specialty<br>Medical Secretarial   | Means_KJ         | 0-100%              | JS, K                    |
| K02JS08P        | Clerical-Job Specialty<br>Office Clerical       | Means_KJ         | 0-100%              | JS, K                    |
| K02JS09P        | Clerical-Job Specialty<br>Receptionist          | Means_KJ         | 0-100%              | JS, K                    |
| K02JS10P        | Clerical-Job Specialty<br>Stenography           | Means_KJ         | 0-100%              | JS, K                    |
| K02JS11P        | Clerical-Job Specialty<br>Stock and Warehousing | Means_KJ         | 0-100%              | JS, K                    |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Economics and Accounting

**Description:** Knowledge of economic and accounting principles and practices, the financial markets, banking, and the analysis and reporting of financial data

**Content Model Key:** II.C.1.c

- II. Worker Requirements
  - C. Knowledge
    - 1. Business and Management
      - c. *Economics and Accounting*

| Variable  | Variable Description   | File Name   | Field Values | Scale, Ques Codes |   |   |  |  |     |   |  |     |  |  |     |  |  |     |   |  |   |  |  |  |
|---|--|---|--------------|-------------------|---|---|--|--|-----|---|--|-----|--|--|-----|--|--|-----|---|--|---|--|--|--|
| K03LV00M  | Economics and Accounting-Level   | Means_KN  | 1-7, 0(NR)   | LV, K             |   |   |  |  |     |   |  |     |  |  |     |  |  |     |   |  |   |  |  |  |
|   | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%; text-align: left;">Left Label</th> <th style="width: 10%; text-align: center;">Value</th> <th style="width: 45%; text-align: left;">Right Label</th> </tr> </thead> <tbody> <tr> <td style="border: none;">Requires knowledge of complex financial operations, regulations, agencies, and advanced cost accounting procedures.</td> <td style="border: none; text-align: center;">7</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;"></td> <td style="border: none; text-align: center;">6.1</td> <td style="border: none;">Keeping a major corporation's financial records.<br/>Approving a multi-million dollar loan to a real estate developer.</td> </tr> <tr> <td style="border: none;"></td> <td style="border: none; text-align: center;">4.5</td> <td style="border: none;">Developing financial investment programs for individual clients.</td> </tr> <tr> <td style="border: none;"></td> <td style="border: none; text-align: center;">3.6</td> <td style="border: none;">Keeping financial records for a family business.</td> </tr> <tr> <td style="border: none;"></td> <td style="border: none; text-align: center;">2.2</td> <td style="border: none;">Answering billing questions from credit card customers.</td> </tr> <tr> <td style="border: none;">Requires knowledge of simple number and accounting procedures.</td> <td style="border: none; text-align: center;">1</td> <td style="border: none;"></td> </tr> </tbody> </table> | Left Label  | Value        | Right Label       | Requires knowledge of complex financial operations, regulations, agencies, and advanced cost accounting procedures. | 7 |  |  | 6.1 | Keeping a major corporation's financial records.<br>Approving a multi-million dollar loan to a real estate developer. |  | 4.5 | Developing financial investment programs for individual clients. |  | 3.6 | Keeping financial records for a family business. |  | 2.2 | Answering billing questions from credit card customers. | Requires knowledge of simple number and accounting procedures. | 1 |  |  |  |
| Left Label  | Value  | Right Label   |              |                   |   |   |  |  |     |   |  |     |  |  |     |  |  |     |   |  |   |  |  |  |
| Requires knowledge of complex financial operations, regulations, agencies, and advanced cost accounting procedures. | 7  |   |              |                   |   |   |  |  |     |   |  |     |  |  |     |  |  |     |   |  |   |  |  |  |
|   | 6.1  | Keeping a major corporation's financial records.<br>Approving a multi-million dollar loan to a real estate developer. |              |                   |   |   |  |  |     |   |  |     |  |  |     |  |  |     |   |  |   |  |  |  |
|   | 4.5  | Developing financial investment programs for individual clients.  |              |                   |   |   |  |  |     |   |  |     |  |  |     |  |  |     |   |  |   |  |  |  |
|   | 3.6  | Keeping financial records for a family business.  |              |                   |   |   |  |  |     |   |  |     |  |  |     |  |  |     |   |  |   |  |  |  |
|   | 2.2  | Answering billing questions from credit card customers.   |              |                   |   |   |  |  |     |   |  |     |  |  |     |  |  |     |   |  |   |  |  |  |
| Requires knowledge of simple number and accounting procedures.  | 1  |   |              |                   |   |   |  |  |     |   |  |     |  |  |     |  |  |     |   |  |   |  |  |  |
| K03IM00M  | Economics and Accounting-Importance  | Means_KN  | 1-5          | IM, K             |   |   |  |  |     |   |  |     |  |  |     |  |  |     |   |  |   |  |  |  |
| K03JS01P  | Economics and Accounting-Job Specialty Accounting  | Means_KJ  | 0-100%       | JS, K             |   |   |  |  |     |   |  |     |  |  |     |  |  |     |   |  |   |  |  |  |
| K03JS02P  | Economics and Accounting-Job Specialty Economics   | Means_KJ  | 0-100%       | JS, K             |   |   |  |  |     |   |  |     |  |  |     |  |  |     |   |  |   |  |  |  |
| K03JS03P  | Economics and Accounting-Job Specialty Financial Management  | Means_KJ  | 0-100%       | JS, K             |   |   |  |  |     |   |  |     |  |  |     |  |  |     |   |  |   |  |  |  |
| K03JS04P  | Economics and Accounting-Job Specialty Securities and Investments  | Means_KJ  | 0-100%       | JS, K             |   |   |  |  |     |   |  |     |  |  |     |  |  |     |   |  |   |  |  |  |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Sales and Marketing

**Description:** Knowledge of principles and methods involved in showing, promoting, and selling products or services. This includes marketing strategies and tactics, product demonstration and sales techniques, and sales control systems

**Content Model Key:** II.C.1.d

- II. Worker Requirements
  - C. Knowledge
    - 1. Business and Management
      - d. Sales and Marketing*

| Variable | Variable Description   | File Name | Field Values   | Scale, Ques Codes |
|----------|--|-----------|--|-------------------|
| K04LV00M | Sales and Marketing-Level  | Means_KN  | 1-7, 0(NR)   | LV, K             |
|          | Left Label   | Value     | Right Label  |                   |
|          | Requires knowledge of advanced marketing and sales principles and methods required to market and sell complex goods or services to new, large, or multiple clients with varying needs. | 7         |  |                   |
|          |  | 5.8       | Developing a marketing plan for a nationwide phone system.         |                   |
|          |  | 4         | Calling a list of clients to introduce them to a new product line. |                   |
|          |  | 1.7       | Selling cakes at a bake sale.                                      |                   |
|          | Requires knowledge of simple sales techniques required to sell simple items to existing customers.   | 1         |  |                   |
| K04IM00M | Sales and Marketing-Importance   | Means_KN  | 1-5  | IM, K             |
| K04JS01P | Sales and Marketing-Job Specialty Advertising and Public Relations   | Means_KJ  | 0-100%   | JS, K             |
| K04JS02P | Sales and Marketing-Job Specialty Fashion and Apparel  | Means_KJ  | 0-100%   | JS, K             |
| K04JS03P | Sales and Marketing-Job Specialty Food Marketing   | Means_KJ  | 0-100%   | JS, K             |
| K04JS04P | Sales and Marketing-Job Specialty Insurance  | Means_KJ  | 0-100%   | JS, K             |
| K04JS05P | Sales and Marketing-Job Specialty Purchasing   | Means_KJ  | 0-100%   | JS, K             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Sales and Marketing (Continued)

**Description:** Knowledge of principles and methods involved in showing, promoting, and selling products or services. This includes marketing strategies and tactics, product demonstration and sales techniques, and sales control systems

**Content Model Key:** II.C.1.d

- II. Worker Requirements
  - C. Knowledge
    - 1. Business and Management
      - d. Sales and Marketing*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| K04JS06P | Sales and Marketing-Job Specialty<br>Real Estate               | Means_KJ  | 0-100%       | JS, K             |
| K04JS07P | Sales and Marketing-Job Specialty<br>Retailing and Wholesaling | Means_KJ  | 0-100%       | JS, K             |
| K04JS08P | Sales and Marketing-Job Specialty<br>Vehicle Sales and Service | Means_KJ  | 0-100%       | JS, K             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Customer and Personal Service

**Description:** Knowledge of principles and processes for providing customer and personal services including needs assessment techniques, quality service standards, alternative delivery systems, and customer satisfaction evaluation techniques

**Content Model Key:** II.C.1.e

- II. Worker Requirements
  - C. Knowledge
    - 1. Business and Management
      - e. Customer and Personal Service*

| Variable | Variable Description   | File Name | Field Values   | Scale, Ques Codes |
|----------|--|-----------|--|-------------------|
| K05LV00M | Customer and Personal Service-Level  | Means_KN  | 1-7, 0(NR)   | LV, K             |
|          | Left Label   | Value     | Right Label  |                   |
|          | Requires knowledge of complex customer and personal service principles and processes for identifying and meeting complex demands of multiple clients with diverse needs. | 7         |  |                   |
|          |  | 6.5       | Responding to citizen's request for assistance after a major natural disaster.                   |                   |
|          |  | 5         | Catering a large wedding.  |                   |
|          |  | 4         | Working as a day care aide supervising ten children.<br>Running a hospital cleaning service.     |                   |
|          |  | 2         | Providing air flight arrival times over the phone.<br>Processing customer dry-cleaning drop-off. |                   |
|          | Requires knowledge of basic customer and personal service processes for meeting demands of single clients with simple needs.   | 1         |  |                   |
| K05IM00M | Customer and Personal Service-Importance   | Means_KN  | 1-5  | IM, K             |
| K05JS01P | Customer and Personal Service-Job Specialty<br>Barbering and Cosmetology   | Means_KJ  | 0-100%   | JS, K             |
| K05JS02P | Customer and Personal Service-Job Specialty<br>Bartending  | Means_KJ  | 0-100%   | JS, K             |
| K05JS03P | Customer and Personal Service-Job Specialty<br>Cashiering  | Means_KJ  | 0-100%   | JS, K             |
| K05JS04P | Customer and Personal Service-Job Specialty<br>Child Care and Home Management  | Means_KJ  | 0-100%   | JS, K             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Customer and Personal Service (Continued)

**Description:** Knowledge of principles and processes for providing customer and personal services including needs assessment techniques, quality service standards, alternative delivery systems, and customer satisfaction evaluation techniques

**Content Model Key:** II.C.1.e

- II. Worker Requirements
  - C. Knowledge
    - 1. Business and Management
      - e. Customer and Personal Service*

| <b>Variable</b> | <b>Variable Description</b>   | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| K05JS05P        | Customer and Personal Service-Job Specialty<br>Flight Attending           | Means_KJ         | 0-100%              | JS, K                    |
| K05JS06P        | Customer and Personal Service-Job Specialty<br>Food Preparation           | Means_KJ         | 0-100%              | JS, K                    |
| K05JS07P        | Customer and Personal Service-Job Specialty<br>Food Service               | Means_KJ         | 0-100%              | JS, K                    |
| K05JS08P        | Customer and Personal Service-Job Specialty<br>Hospitality Service        | Means_KJ         | 0-100%              | JS, K                    |
| K05JS09P        | Customer and Personal Service-Job Specialty<br>Housekeeping and Custodial | Means_KJ         | 0-100%              | JS, K                    |
| K05JS10P        | Customer and Personal Service-Job Specialty<br>Laundry and Dry Cleaning   | Means_KJ         | 0-100%              | JS, K                    |
| K05JS11P        | Customer and Personal Service-Job Specialty<br>Meatcutting and Butchering | Means_KJ         | 0-100%              | JS, K                    |
| K05JS12P        | Customer and Personal Service-Job Specialty<br>Travel Service             | Means_KJ         | 0-100%              | JS, K                    |



## O\*NET Data Dictionary : Worker Requirements

**Element:** Personnel and Human Resources

**Description:** Knowledge of policies and practices involved in personnel/human resource functions. This includes recruitment, selection, training, and promotion regulations and procedures; compensation and benefits packages; labor relations and negotiation strategies; and personnel information systems

**Content Model Key:** II.C.1.f

- II. Worker Requirements
  - C. Knowledge
    - 1. Business and Management
      - f. Personnel and Human Resources*

| Variable  | Variable Description  | File Name  | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |     |  |  |   |  |  |     |   |  |     |                                   |  |   |  |
|---|---|--|--------------|-------------------|------------|-------|-------------|---|---|--|--|-----|--|--|---|--|--|-----|---|--|-----|-----------------------------------|--|---|--|
| K06LV00M  | Personnel and Human Resources-Level                                   | Means_KN   | 1-7, 0(NR)   | LV, K             |            |       |             |   |   |  |  |     |  |  |   |  |  |     |   |  |     |                                   |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Requires knowledge of a broad range of employment and personnel practices, complex regulations, legal precedents, and labor negotiation principles.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.4</td> <td>Designing a new personnel selection and promotion system for the Army.</td> </tr> <tr> <td></td> <td style="text-align: center;">5</td> <td>Conducting negotiations between labor and management to settle a dispute over wages.</td> </tr> <tr> <td></td> <td style="text-align: center;">3.2</td> <td>Interviewing applicants for a secretarial position.</td> </tr> <tr> <td></td> <td style="text-align: center;">2.3</td> <td>Filling out a medical claim form.</td> </tr> <tr> <td>Requires knowledge of basic employment and personnel forms, practices, and procedures.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |   |  |              |                   | Left Label | Value | Right Label | Requires knowledge of a broad range of employment and personnel practices, complex regulations, legal precedents, and labor negotiation principles. | 7 |  |  | 6.4 | Designing a new personnel selection and promotion system for the Army. |  | 5 | Conducting negotiations between labor and management to settle a dispute over wages. |  | 3.2 | Interviewing applicants for a secretarial position. |  | 2.3 | Filling out a medical claim form. | Requires knowledge of basic employment and personnel forms, practices, and procedures. | 1 |  |
| Left Label  | Value   | Right Label  |              |                   |            |       |             |   |   |  |  |     |  |  |   |  |  |     |   |  |     |                                   |  |   |  |
| Requires knowledge of a broad range of employment and personnel practices, complex regulations, legal precedents, and labor negotiation principles.   | 7   |  |              |                   |            |       |             |   |   |  |  |     |  |  |   |  |  |     |   |  |     |                                   |  |   |  |
|   | 6.4   | Designing a new personnel selection and promotion system for the Army.               |              |                   |            |       |             |   |   |  |  |     |  |  |   |  |  |     |   |  |     |                                   |  |   |  |
|   | 5   | Conducting negotiations between labor and management to settle a dispute over wages. |              |                   |            |       |             |   |   |  |  |     |  |  |   |  |  |     |   |  |     |                                   |  |   |  |
|   | 3.2   | Interviewing applicants for a secretarial position.                                  |              |                   |            |       |             |   |   |  |  |     |  |  |   |  |  |     |   |  |     |                                   |  |   |  |
|   | 2.3   | Filling out a medical claim form.  |              |                   |            |       |             |   |   |  |  |     |  |  |   |  |  |     |   |  |     |                                   |  |   |  |
| Requires knowledge of basic employment and personnel forms, practices, and procedures.  | 1   |  |              |                   |            |       |             |   |   |  |  |     |  |  |   |  |  |     |   |  |     |                                   |  |   |  |
| K06IM00M  | Personnel and Human Resources-Importance                              | Means_KN   | 1-5          | IM, K             |            |       |             |   |   |  |  |     |  |  |   |  |  |     |   |  |     |                                   |  |   |  |
| K06JS01P  | Personnel and Human Resources-Job Specialty Human Resource Management | Means_KJ   | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |  |  |   |  |  |     |   |  |     |                                   |  |   |  |
| K06JS02P  | Personnel and Human Resources-Job Specialty Interviewing and Hiring   | Means_KJ   | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |  |  |   |  |  |     |   |  |     |                                   |  |   |  |
| K06JS03P  | Personnel and Human Resources-Job Specialty Labor Relations           | Means_KJ   | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |  |  |   |  |  |     |   |  |     |                                   |  |   |  |
| K06JS04P  | Personnel and Human Resources-Job Specialty Management Analysis       | Means_KJ   | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |  |  |   |  |  |     |   |  |     |                                   |  |   |  |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Personnel and Human Resources (Continued)

**Description:** Knowledge of policies and practices involved in personnel/human resource functions. This includes recruitment, selection, training, and promotion regulations and procedures; compensation and benefits packages; labor relations and negotiation strategies; and personnel information systems

**Content Model Key:** II.C.1.f

- II. Worker Requirements
  - C. Knowledge
    - 1. Business and Management
      - f. Personnel and Human Resources*

| <b>Variable</b> | <b>Variable Description</b>                                       | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| K06JS05P        | Personnel and Human Resources-Job Specialty<br>Personnel Research | Means_KJ         | 0-100%              | JS, K                    |
| K06JS06P        | Personnel and Human Resources-Job Specialty<br>Training           | Means_KJ         | 0-100%              | JS, K                    |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Production and Processing

**Description:** Knowledge of inputs, outputs, raw materials, waste, quality control, costs, and techniques for maximizing the manufacture and distribution of goods

**Content Model Key:** II.C.2.a

- II. Worker Requirements
  - C. Knowledge
    - 2. Manufacturing and Production
      - a. *Production and Processing*

| Variable  | Variable Description  | File Name  | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |   |  |  |     |   |  |     |  |  |     |   |   |   |  |
|---|---|--|--------------|-------------------|------------|-------|-------------|---|---|--|--|---|--|--|-----|---|--|-----|--|--|-----|---|---|---|--|
| K07LV00M  | Production and Processing-Level   | Means_KN   | 1-7, 0(NR)   | LV, K             |            |       |             |   |   |  |  |   |  |  |     |   |  |     |  |  |     |   |   |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Requires knowledge of advanced production, processing, and distribution techniques involved in large-scale manufacture and/or distribution of complex products.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6</td> <td>Managing a food processing plant.<br/>Managing an international shipping company distribution center.</td> </tr> <tr> <td></td> <td style="text-align: center;">4.5</td> <td>Supervising an appliance assembly line.</td> </tr> <tr> <td></td> <td style="text-align: center;">2.8</td> <td>Packing glassware to be shipped airmail.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Putting a computer back into its packing materials.</td> </tr> <tr> <td>Requires knowledge of simple production, processing, and distribution techniques involved in small-scale manufacture and /or distribution of simple products.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |   |  |              |                   | Left Label | Value | Right Label | Requires knowledge of advanced production, processing, and distribution techniques involved in large-scale manufacture and/or distribution of complex products. | 7 |  |  | 6 | Managing a food processing plant.<br>Managing an international shipping company distribution center. |  | 4.5 | Supervising an appliance assembly line. |  | 2.8 | Packing glassware to be shipped airmail. |  | 1.5 | Putting a computer back into its packing materials. | Requires knowledge of simple production, processing, and distribution techniques involved in small-scale manufacture and /or distribution of simple products. | 1 |  |
| Left Label  | Value   | Right Label  |              |                   |            |       |             |   |   |  |  |   |  |  |     |   |  |     |  |  |     |   |   |   |  |
| Requires knowledge of advanced production, processing, and distribution techniques involved in large-scale manufacture and/or distribution of complex products.   | 7   |  |              |                   |            |       |             |   |   |  |  |   |  |  |     |   |  |     |  |  |     |   |   |   |  |
|   | 6   | Managing a food processing plant.<br>Managing an international shipping company distribution center. |              |                   |            |       |             |   |   |  |  |   |  |  |     |   |  |     |  |  |     |   |   |   |  |
|   | 4.5   | Supervising an appliance assembly line.  |              |                   |            |       |             |   |   |  |  |   |  |  |     |   |  |     |  |  |     |   |   |   |  |
|   | 2.8   | Packing glassware to be shipped airmail.   |              |                   |            |       |             |   |   |  |  |   |  |  |     |   |  |     |  |  |     |   |   |   |  |
|   | 1.5   | Putting a computer back into its packing materials.  |              |                   |            |       |             |   |   |  |  |   |  |  |     |   |  |     |  |  |     |   |   |   |  |
| Requires knowledge of simple production, processing, and distribution techniques involved in small-scale manufacture and /or distribution of simple products.   | 1   |  |              |                   |            |       |             |   |   |  |  |   |  |  |     |   |  |     |  |  |     |   |   |   |  |
| K07IM00M  | Production and Processing-Importance                                      | Means_KN   | 1-5          | IM, K             |            |       |             |   |   |  |  |   |  |  |     |   |  |     |  |  |     |   |   |   |  |
| K07JS01P  | Production and Processing-Job Specialty<br>Clothing Production            | Means_KJ   | 0-100%       | JS, K             |            |       |             |   |   |  |  |   |  |  |     |   |  |     |  |  |     |   |   |   |  |
| K07JS02P  | Production and Processing-Job Specialty<br>Food Processing and Production | Means_KJ   | 0-100%       | JS, K             |            |       |             |   |   |  |  |   |  |  |     |   |  |     |  |  |     |   |   |   |  |
| K07JS03P  | Production and Processing-Job Specialty<br>Home Furnishing Production     | Means_KJ   | 0-100%       | JS, K             |            |       |             |   |   |  |  |   |  |  |     |   |  |     |  |  |     |   |   |   |  |
| K07JS04P  | Production and Processing-Job Specialty<br>Line Supervision               | Means_KJ   | 0-100%       | JS, K             |            |       |             |   |   |  |  |   |  |  |     |   |  |     |  |  |     |   |   |   |  |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Production and Processing (Continued)

**Description:** Knowledge of inputs, outputs, raw materials, waste, quality control, costs, and techniques for maximizing the manufacture and distribution of goods

**Content Model Key:** II.C.2.a

- II. Worker Requirements
  - C. Knowledge
    - 2. Manufacturing and Production
      - a. *Production and Processing*

| <b>Variable</b> | <b>Variable Description</b>  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| K07JS05P        | Production and Processing-Job Specialty<br>Metal Production and Processing | Means_KJ         | 0-100%              | JS, K                    |
| K07JS06P        | Production and Processing-Job Specialty<br>Printing and Publishing         | Means_KJ         | 0-100%              | JS, K                    |
| K07JS07P        | Production and Processing-Job Specialty<br>Quality Control and Inspection  | Means_KJ         | 0-100%              | JS, K                    |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Food Production

**Description:** Knowledge of techniques and equipment for planting, growing, and harvesting of food for consumption including crop rotation methods, animal husbandry, and food storage/handling techniques

**Content Model Key:** II.C.2.b

- II. Worker Requirements
  - C. Knowledge
    - 2. Manufacturing and Production
      - b. Food Production*

| Variable  | Variable Description  | File Name | Field Values                         | Scale, Ques Codes |
|---|---|-----------|--------------------------------------|-------------------|
| K08LV00M  | Food Production-Level   | Means_KN  | 1-7, 0(NR)                           | LV, K             |
| Left Label  |   | Value     | Right Label                          |                   |
| Requires knowledge of advanced techniques and equipment involved in the large-scale production of multiple food products. |   | 7         |                                      |                   |
|   |   | 6.4       | Running a 100,000 acre farm.         |                   |
|   |   | 4.8       | Operating a commercial fishing boat. |                   |
|   |   | 2.2       | Keeping an herb box in the kitchen.  |                   |
| Requires knowledge of simple techniques involved in the small-scale production of single food products.                   |   | 1         |                                      |                   |
| K08IM00M  | Food Production-Importance  | Means_KN  | 1-5                                  | IM, K             |
| K08JS01P  | Food Production-Job Specialty<br>Agricultural and Business Management | Means_KJ  | 0-100%                               | JS, K             |
| K08JS02P  | Food Production-Job Specialty<br>Agricultural Sciences                | Means_KJ  | 0-100%                               | JS, K             |
| K08JS03P  | Food Production-Job Specialty<br>Animal Husbandry and Production      | Means_KJ  | 0-100%                               | JS, K             |
| K08JS04P  | Food Production-Job Specialty<br>Animal Sciences                      | Means_KJ  | 0-100%                               | JS, K             |
| K08JS05P  | Food Production-Job Specialty<br>Crop Production                      | Means_KJ  | 0-100%                               | JS, K             |
| K08JS06P  | Food Production-Job Specialty<br>Fishing and Wildlife Management      | Means_KJ  | 0-100%                               | JS, K             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Food Production (Continued)

**Description:** Knowledge of techniques and equipment for planting, growing, and harvesting of food for consumption including crop rotation methods, animal husbandry, and food storage/handling techniques

**Content Model Key:** II.C.2.b

II. Worker Requirements

C. Knowledge

2. Manufacturing and Production

*b. Food Production*

| <b>Variable</b> | <b>Variable Description</b>                    | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| K08JS07P        | Food Production-Job Specialty<br>Food Sciences | Means_KJ         | 0-100%              | JS, K                    |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Computers and Electronics

**Description:** Knowledge of electric circuit boards, processors, chips, and computer hardware and software, including applications and programming

**Content Model Key:** II.C.3.a

- II. Worker Requirements
  - C. Knowledge
    - 3. Engineering and Technology
      - a. *Computers and Electronics*

| Variable   | Variable Description   | File Name | Field Values   | Scale, Ques Codes |
|--|--|-----------|--|-------------------|
| K09LV00M   | Computers and Electronics-Level  | Means_KN  | 1-7, 0(NR)   | LV, K             |
| Left Label   |  | Value     | Right Label  |                   |
| Requires knowledge of complex electronic principles and equipment. |  | 7         |  |                   |
|  |  | 6         | Creating a program to scan computer disks for viruses. |                   |
|  |  | 5         | Fixing a two-way radio in order to transmit a message. |                   |
|  |  | 3.3       | Using a word processor.                                |                   |
|  |  | 1.2       | Operating a VCR to watch a pre-recorded training tape. |                   |
| Requires knowledge of basic electronic equipment and its use.      |  | 1         |  |                   |
| K09IM00M   | Computers and Electronics-Importance   | Means_KN  | 1-5  | IM, K             |
| K09JS01P   | Computers and Electronics-Job Specialty<br>Computer Programming                  | Means_KJ  | 0-100%   | JS, K             |
| K09JS02P   | Computers and Electronics-Job Specialty<br>Computer Science                      | Means_KJ  | 0-100%   | JS, K             |
| K09JS03P   | Computers and Electronics-Job Specialty<br>Computer Technology                   | Means_KJ  | 0-100%   | JS, K             |
| K09JS04P   | Computers and Electronics-Job Specialty<br>Electrical and Electronics Technology | Means_KJ  | 0-100%   | JS, K             |
| K09JS05P   | Computers and Electronics-Job Specialty<br>Systems Analysis                      | Means_KJ  | 0-100%   | JS, K             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Engineering and Technology

**Description:** Knowledge of equipment, tools, mechanical devices, and their uses to produce motion, light, power, technology, and other applications

**Content Model Key:** II.C.3.b

- II. Worker Requirements
  - C. Knowledge
    - 3. Engineering and Technology
      - b. Engineering and Technology*

| Variable   | Variable Description  | File Name | Field Values  | Scale, Ques Codes |
|--|---|-----------|---|-------------------|
| K10LV00M   | Engineering and Technology-Level  | Means_KN  | 1-7, 0(NR)  | LV, K             |
| Left Label   |   | Value     | Right Label   |                   |
| Requires knowledge of complicated engineering principles, devices, and structures. |   | 7         |   |                   |
|  |   | 6.7       | Designing an efficient and clean power plant.             |                   |
|  |   | 5.8       | Planning for the impact of weather in designing a bridge. |                   |
|  |   | 3.8       | Designing a more stable grocery cart.                     |                   |
|  |   | 1.9       | Installing a door lock.                                   |                   |
| Requires knowledge of simple engineering devices.                                  |   | 1         |   |                   |
| K10IM00M   | Engineering and Technology-Importance   | Means_KN  | 1-5   | IM, K             |
| K10JS01P   | Engineering and Technology-Job Specialty<br>Aeronautical & Astronautical Engineering - Aeronautical and Astronautical Engineering | Means_KJ  | 0-100%  | JS, K             |
| K10JS02P   | Engineering and Technology-Job Specialty<br>Chemical Engineering  | Means_KJ  | 0-100%  | JS, K             |
| K10JS03P   | Engineering and Technology-Job Specialty<br>Civil Engineering   | Means_KJ  | 0-100%  | JS, K             |
| K10JS04P   | Engineering and Technology-Job Specialty<br>Electrical Engineering  | Means_KJ  | 0-100%  | JS, K             |
| K10JS05P   | Engineering and Technology-Job Specialty<br>Industrial Engineering  | Means_KJ  | 0-100%  | JS, K             |
| K10JS06P   | Engineering and Technology-Job Specialty<br>Materials Engineering   | Means_KJ  | 0-100%  | JS, K             |



## O\*NET Data Dictionary : Worker Requirements

**Element:** Engineering and Technology (Continued)

**Description:** Knowledge of equipment, tools, mechanical devices, and their uses to produce motion, light, power, technology, and other applications

**Content Model Key:** II.C.3.b

- II. Worker Requirements
  - C. Knowledge
    - 3. Engineering and Technology
      - b. Engineering and Technology*

| <b>Variable</b> | <b>Variable Description</b>   | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| K10JS07P        | Engineering and Technology-Job Specialty<br>Mechanical Engineering  | Means_KJ         | 0-100%              | JS, K                    |
| K10JS08P        | Engineering and Technology-Job Specialty<br>Mining, Petroleum, & Nuclear Engineering - Mining, Petroleum, and Nuclear Engineering | Means_KJ         | 0-100%              | JS, K                    |
| K10JS09P        | Engineering and Technology-Job Specialty<br>Surveying   | Means_KJ         | 0-100%              | JS, K                    |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Design

**Description:** Knowledge of design techniques, principles, tools and instruments involved in the production and use of precision technical plans, blueprints, drawings, and models

**Content Model Key:** II.C.3.c

- II. Worker Requirements
  - C. Knowledge
    - 3. Engineering and Technology
      - c. *Design*

| Variable   | Variable Description                             | File Name | Field Values   | Scale, Ques Codes |
|--|--|-----------|--|-------------------|
| K11LV00M   | Design-Level                                     | Means_KN  | 1-7, 0(NR)   | LV, K             |
| Left Label   |  | Value     | Right Label  |                   |
| Requires knowledge of specialized methods, tools, and devices to create precise, highly complex and detailed plans, blueprints, or drawings. |  | 7         |  |                   |
|  |  | 6.3       | Developing detailed design plans for a new high rise office complex. |                   |
|  |  | 5         | Understanding air conditioning and heating diagrams.                 |                   |
|  |  | 4.2       | Planning for the remodeling of a kitchen.                            |                   |
|  |  | 2.3       | Making furniture layouts for your home.                              |                   |
|  |  | 1.8       | Drawing a straight line 4 3/16 inches long.                          |                   |
| Requires knowledge of simple methods and tools to produce basic plans and drawings.  |  | 1         |  |                   |
| K11IM00M   | Design-Importance                                | Means_KN  | 1-5  | IM, K             |
| K11JS01P   | Design-Job Specialty<br>Architecture             | Means_KJ  | 0-100%   | JS, K             |
| K11JS02P   | Design-Job Specialty<br>Drafting                 | Means_KJ  | 0-100%   | JS, K             |
| K11JS03P   | Design-Job Specialty<br>Industrial Design        | Means_KJ  | 0-100%   | JS, K             |
| K11JS04P   | Design-Job Specialty<br>Interior Design          | Means_KJ  | 0-100%   | JS, K             |
| K11JS05P   | Design-Job Specialty<br>Technical Theater Design | Means_KJ  | 0-100%   | JS, K             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Building and Construction

**Description:** Knowledge of materials, methods, and the appropriate tools to construct objects, structures, and buildings

**Content Model Key:** II.C.3.d

- II. Worker Requirements
  - C. Knowledge
    - 3. Engineering and Technology
      - d. Building and Construction*

| Variable | Variable Description   | File Name | Field Values   | Scale, Ques Codes |
|----------|--|-----------|--|-------------------|
| K12LV00M | Building and Construction-Level  | Means_KN  | 1-7, 0(NR)   | LV, K             |
|          | Left Label   | Value     | Right Label  |                   |
|          | Requires knowledge of advanced construction techniques and materials required to build complicated objects, structures, and buildings. | 7         |  |                   |
|          |  | 6.5       | Building a high rise office tower.                               |                   |
|          |  | 5.2       | Estimating the cost of developing a housing project.             |                   |
|          |  | 4         | Fixing a plumbing leak in the ceiling.                           |                   |
|          |  | 2.5       | Choosing the proper type of wood for adding a deck onto a house. |                   |
|          |  | 1.2       | Sawing a board in half.  |                   |
|          | Requires knowledge of basic construction techniques and materials required to build simple objects.                                    | 1         |  |                   |
| K12IM00M | Building and Construction-Importance   | Means_KN  | 1-5  | IM, K             |
| K12JS01P | Building and Construction-Job Specialty<br>Bricklaying   | Means_KJ  | 0-100%   | JS, K             |
| K12JS02P | Building and Construction-Job Specialty<br>Carpentry   | Means_KJ  | 0-100%   | JS, K             |
| K12JS03P | Building and Construction-Job Specialty<br>Concrete  | Means_KJ  | 0-100%   | JS, K             |
| K12JS04P | Building and Construction-Job Specialty<br>Construction and Building Inspection  | Means_KJ  | 0-100%   | JS, K             |
| K12JS05P | Building and Construction-Job Specialty<br>Construction Equipment Operations   | Means_KJ  | 0-100%   | JS, K             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Building and Construction (Continued)

**Description:** Knowledge of materials, methods, and the appropriate tools to construct objects, structures, and buildings

**Content Model Key:** II.C.3.d

- II. Worker Requirements
  - C. Knowledge
    - 3. Engineering and Technology
      - d. Building and Construction*

| <b>Variable</b> | <b>Variable Description</b>  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| K12JS06P        | Building and Construction-Job Specialty<br>Drywall and Plaster       | Means_KJ         | 0-100%              | JS, K                    |
| K12JS07P        | Building and Construction-Job Specialty<br>Electrical Power          | Means_KJ         | 0-100%              | JS, K                    |
| K12JS08P        | Building and Construction-Job Specialty<br>Painting and Paperhanging | Means_KJ         | 0-100%              | JS, K                    |
| K12JS09P        | Building and Construction-Job Specialty<br>Plumbing                  | Means_KJ         | 0-100%              | JS, K                    |
| K12JS10P        | Building and Construction-Job Specialty<br>Structural Metal          | Means_KJ         | 0-100%              | JS, K                    |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Mechanical

**Description:** Knowledge of machines and tools, including their designs, uses, benefits, repair, and maintenance

**Content Model Key:** II.C.3.e

II. Worker Requirements  
 C. Knowledge  
 3. Engineering and Technology  
 e. *Mechanical*

| Variable  | Variable Description                               | File Name | Field Values                        | Scale, Ques Codes |
|---|--|-----------|-------------------------------------|-------------------|
| K13LV00M  | Mechanical-Level                                   | Means_KN  | 1-7, 0(NR)                          | LV, K             |
| Left Label  |  | Value     | Right Label                         |                   |
| Requires knowledge of use and maintenance of complex power tools and machinery. |  | 7         |                                     |                   |
|   |  | 6.5       | Overhauling an airplane jet engine. |                   |
|   |  | 4.7       | Replacing a valve on a steam pipe.  |                   |
|   |  | 2.5       | Fixing a leaky faucet.              |                   |
|   |  | 2         | Replacing the filters in a furnace. |                   |
| Requires knowledge of use and maintenance of simple hand tools.                 |  | 1         |                                     |                   |
| K13IM00M  | Mechanical-Importance                              | Means_KN  | 1-5                                 | IM, K             |
| K13JS01P  | Mechanical-Job Specialty<br>Agricultural Mechanics | Means_KJ  | 0-100%                              | JS, K             |
| K13JS02P  | Mechanical-Job Specialty<br>Aircraft Mechanics     | Means_KJ  | 0-100%                              | JS, K             |
| K13JS03P  | Mechanical-Job Specialty<br>Appliance Repair       | Means_KJ  | 0-100%                              | JS, K             |
| K13JS04P  | Mechanical-Job Specialty<br>Automobile Mechanics   | Means_KJ  | 0-100%                              | JS, K             |
| K13JS05P  | Mechanical-Job Specialty<br>Building Maintenance   | Means_KJ  | 0-100%                              | JS, K             |
| K13JS06P  | Mechanical-Job Specialty<br>Engine Repair          | Means_KJ  | 0-100%                              | JS, K             |
| K13JS07P  | Mechanical-Job Specialty<br>Heavy Equipment Repair | Means_KJ  | 0-100%                              | JS, K             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Mechanical (Continued)

**Description:** Knowledge of machines and tools, including their designs, uses, benefits, repair, and maintenance

**Content Model Key:** II.C.3.e

II. Worker Requirements  
C. Knowledge  
3. Engineering and Technology  
*e. Mechanical*

| <b>Variable</b> | <b>Variable Description</b>                         | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| K13JS08P        | Mechanical-Job Specialty<br>Instrument Repair       | Means_KJ         | 0-100%              | JS, K                    |
| K13JS09P        | Mechanical-Job Specialty<br>Light Instrument Repair | Means_KJ         | 0-100%              | JS, K                    |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Mathematics

**Description:** Knowledge of numbers, their operations, and interrelationships including arithmetic, algebra, geometry, calculus, statistics, and their applications

**Content Model Key:** II.C.4.a

- II. Worker Requirements
  - C. Knowledge
    - 4. Mathematics and Science
      - a. *Mathematics*

| Variable  | Variable Description  | File Name   | Field Values | Scale, Ques Codes |   |   |  |  |   |   |  |     |   |  |     |                     |   |   |  |  |  |
|---|---|---|--------------|-------------------|---|---|--|--|---|---|--|-----|---|--|-----|---------------------|---|---|--|--|--|
| K14LV00M  | Mathematics-Level   | Means_KN  | 1-7, 0(NR)   | LV, K             |   |   |  |  |   |   |  |     |   |  |     |                     |   |   |  |  |  |
|   | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%; text-align: left;">Left Label</th> <th style="width: 10%; text-align: center;">Value</th> <th style="width: 45%; text-align: left;">Right Label</th> </tr> </thead> <tbody> <tr> <td style="border: none;">Requires knowledge of advanced mathematical concepts and operations such as calculus, non-linear algebra, and statistics.</td> <td style="border: none; text-align: center;">7</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;"></td> <td style="border: none; text-align: center;">6</td> <td style="border: none;">Deriving a complex mathematical equation.</td> </tr> <tr> <td style="border: none;"></td> <td style="border: none; text-align: center;">4.2</td> <td style="border: none;">Analyzing data to determine areas with the highest sales.</td> </tr> <tr> <td style="border: none;"></td> <td style="border: none; text-align: center;">1.1</td> <td style="border: none;">Adding two numbers.</td> </tr> <tr> <td style="border: none;">Requires knowledge of basic mathematical operations such as multiplication , addition, and subtraction.</td> <td style="border: none; text-align: center;">1</td> <td style="border: none;"></td> </tr> </tbody> </table> | Left Label  | Value        | Right Label       | Requires knowledge of advanced mathematical concepts and operations such as calculus, non-linear algebra, and statistics. | 7 |  |  | 6 | Deriving a complex mathematical equation. |  | 4.2 | Analyzing data to determine areas with the highest sales. |  | 1.1 | Adding two numbers. | Requires knowledge of basic mathematical operations such as multiplication , addition, and subtraction. | 1 |  |  |  |
| Left Label  | Value   | Right Label   |              |                   |   |   |  |  |   |   |  |     |   |  |     |                     |   |   |  |  |  |
| Requires knowledge of advanced mathematical concepts and operations such as calculus, non-linear algebra, and statistics. | 7   |   |              |                   |   |   |  |  |   |   |  |     |   |  |     |                     |   |   |  |  |  |
|   | 6   | Deriving a complex mathematical equation.                 |              |                   |   |   |  |  |   |   |  |     |   |  |     |                     |   |   |  |  |  |
|   | 4.2   | Analyzing data to determine areas with the highest sales. |              |                   |   |   |  |  |   |   |  |     |   |  |     |                     |   |   |  |  |  |
|   | 1.1   | Adding two numbers.                                       |              |                   |   |   |  |  |   |   |  |     |   |  |     |                     |   |   |  |  |  |
| Requires knowledge of basic mathematical operations such as multiplication , addition, and subtraction.                   | 1   |   |              |                   |   |   |  |  |   |   |  |     |   |  |     |                     |   |   |  |  |  |
| K14IM00M  | Mathematics-Importance  | Means_KN  | 1-5          | IM, K             |   |   |  |  |   |   |  |     |   |  |     |                     |   |   |  |  |  |
| K14JS01P  | Mathematics-Job Specialty Accounting  | Means_KJ  | 0-100%       | JS, K             |   |   |  |  |   |   |  |     |   |  |     |                     |   |   |  |  |  |
| K14JS02P  | Mathematics-Job Specialty Actuarial Science   | Means_KJ  | 0-100%       | JS, K             |   |   |  |  |   |   |  |     |   |  |     |                     |   |   |  |  |  |
| K14JS03P  | Mathematics-Job Specialty Applied Mathematics   | Means_KJ  | 0-100%       | JS, K             |   |   |  |  |   |   |  |     |   |  |     |                     |   |   |  |  |  |
| K14JS04P  | Mathematics-Job Specialty Operations Research   | Means_KJ  | 0-100%       | JS, K             |   |   |  |  |   |   |  |     |   |  |     |                     |   |   |  |  |  |
| K14JS05P  | Mathematics-Job Specialty Statistics  | Means_KJ  | 0-100%       | JS, K             |   |   |  |  |   |   |  |     |   |  |     |                     |   |   |  |  |  |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Physics

**Description:** Knowledge and prediction of physical principles, laws, and applications including air, water, material dynamics, light, atomic principles, heat, electric theory, earth formations, and meteorological and related natural phenomena

**Content Model Key:** II.C.4.b

- II. Worker Requirements
  - C. Knowledge
    - 4. Mathematics and Science
      - b. Physics*

| Variable   | Variable Description  | File Name | Field Values                                 | Scale, Ques Codes |
|--|---|-----------|--|-------------------|
| K15LV00M   | Physics-Level   | Means_KN  | 1-7, 0(NR)                                   | LV, K             |
| Left Label   |   | Value     | Right Label                                  |                   |
| Requires knowledge of complex physical principles, laws, their applications, and interrelationships. |   | 7         |  |                   |
|  |   | 6.1       | Designing a cleaner burning gasoline engine. |                   |
|  |   | 3.8       | Calculating water pressure through a pipe.   |                   |
|  |   | 1.2       | Using a crowbar to pry open a box.           |                   |
| Requires knowledge of basic physical principles and their application.                               |   | 1         |  |                   |
| K15IM00M   | Physics-Importance  | Means_KN  | 1-5  | IM, K             |
| K15JS01P   | Physics-Job Specialty<br>Astronomy                            | Means_KJ  | 0-100%                                       | JS, K             |
| K15JS02P   | Physics-Job Specialty<br>Astrophysics                         | Means_KJ  | 0-100%                                       | JS, K             |
| K15JS03P   | Physics-Job Specialty<br>Atmospheric Sciences and Meteorology | Means_KJ  | 0-100%                                       | JS, K             |
| K15JS04P   | Physics-Job Specialty<br>Earth and Planetary Sciences         | Means_KJ  | 0-100%                                       | JS, K             |
| K15JS05P   | Physics-Job Specialty<br>General Physics                      | Means_KJ  | 0-100%                                       | JS, K             |
| K15JS06P   | Physics-Job Specialty<br>Geology                              | Means_KJ  | 0-100%                                       | JS, K             |



## O\*NET Data Dictionary : Worker Requirements

**Element:** Physics (Continued)

**Description:** Knowledge and prediction of physical principles, laws, and applications including air, water, material dynamics, light, atomic principles, heat, electric theory, earth formations, and meteorological and related natural phenomena

**Content Model Key:** II.C.4.b

- II. Worker Requirements
  - C. Knowledge
    - 4. Mathematics and Science
      - b. Physics*

| <b>Variable</b> | <b>Variable Description</b>                   | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| K15JS07P        | Physics-Job Specialty<br>Nuclear Physics      | Means_KJ         | 0-100%              | JS, K                    |
| K15JS08P        | Physics-Job Specialty<br>Oceanography         | Means_KJ         | 0-100%              | JS, K                    |
| K15JS09P        | Physics-Job Specialty<br>Optics and Acoustics | Means_KJ         | 0-100%              | JS, K                    |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Chemistry

**Description:** Knowledge of the composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods

**Content Model Key:** II.C.4.c

- II. Worker Requirements
  - C. Knowledge
    - 4. Mathematics and Science
      - c. Chemistry

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes  |
|----------|---|-----------|--------------|--|
| K16LV00M | Chemistry-Level   | Means_KN  | 1-7, 0(NR)   | LV, K  |
|          | Requires knowledge of complex chemicals, their properties, composition, structure, and possible interactions. |           |              |  |
|          |   |           | 7            |  |
|          |   |           | 6.3          | Developing a safe commercial cleaner.                            |
|          |   |           | 4            | Using proper concentration of chlorine to purify a water source. |
|          |   |           | 1.5          | Using a common household bug spray.                              |
|          | Requires knowledge of common-place chemicals and their use.   |           | 1            |  |
| K16IM00M | Chemistry-Importance  | Means_KN  | 1-5          | IM, K  |
| K16JS01P | Chemistry-Job Specialty Analytical Chemistry  | Means_KJ  | 0-100%       | JS, K  |
| K16JS02P | Chemistry-Job Specialty Biochemistry  | Means_KJ  | 0-100%       | JS, K  |
| K16JS03P | Chemistry-Job Specialty Inorganic Chemistry   | Means_KJ  | 0-100%       | JS, K  |
| K16JS04P | Chemistry-Job Specialty Medical and Pharmaceutical Chemistry  | Means_KJ  | 0-100%       | JS, K  |
| K16JS05P | Chemistry-Job Specialty Organic Chemistry   | Means_KJ  | 0-100%       | JS, K  |
| K16JS06P | Chemistry-Job Specialty Physical and Theoretical Chemistry  | Means_KJ  | 0-100%       | JS, K  |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Chemistry (Continued)

**Description:** Knowledge of the composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods

**Content Model Key:** II.C.4.c

- II. Worker Requirements
  - C. Knowledge
    - 4. Mathematics and Science
      - c. Chemistry*

| <b>Variable</b> | <b>Variable Description</b>                  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| K16JS07P        | Chemistry-Job Specialty<br>Polymer Chemistry | Means_KJ         | 0-100%              | JS, K                    |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Biology

**Description:** Knowledge of plant and animal living tissue, cells, organisms, and entities, including their functions, interdependencies, and interactions with each other and the environment

**Content Model Key:** II.C.4.d

- II. Worker Requirements
  - C. Knowledge
    - 4. Mathematics and Science
      - d. Biology*

| Variable  | Variable Description                                | File Name | Field Values   | Scale, Ques Codes |
|---|---|-----------|--|-------------------|
| K17LV00M  | Biology-Level                                       | Means_KN  | 1-7, 0(NR)   | LV, K             |
| Left Label  |   | Value     | Right Label  |                   |
| Requires knowledge of advanced biological, physiological, and ecological systems, their interactions, and management. |   | 7         |  |                   |
|   |   | 6.8       | Isolating and identifying a microscopic virus.                       |                   |
|   |   | 5.4       | Investigating the effects of pollution on marine plants and animals. |                   |
|   |   | 3         | Dissecting a frog.   |                   |
|   |   | 1.2       | Feeding domestic animals.  |                   |
| Requires knowledge of basic biological, physiological, and ecological principles.                                     |   | 1         |  |                   |
| K17IM00M  | Biology-Importance                                  | Means_KN  | 1-5  | IM, K             |
| K17JS01P  | Biology-Job Specialty<br>Biochemistry               | Means_KJ  | 0-100%   | JS, K             |
| K17JS02P  | Biology-Job Specialty<br>Botany                     | Means_KJ  | 0-100%   | JS, K             |
| K17JS03P  | Biology-Job Specialty<br>Cell and Molecular Biology | Means_KJ  | 0-100%   | JS, K             |
| K17JS04P  | Biology-Job Specialty<br>Ecology                    | Means_KJ  | 0-100%   | JS, K             |
| K17JS05P  | Biology-Job Specialty<br>Genetics                   | Means_KJ  | 0-100%   | JS, K             |
| K17JS06P  | Biology-Job Specialty<br>Marine and Aquatic Biology | Means_KJ  | 0-100%   | JS, K             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Biology (Continued)

**Description:** Knowledge of plant and animal living tissue, cells, organisms, and entities, including their functions, interdependencies, and interactions with each other and the environment

**Content Model Key:** II.C.4.d

II. Worker Requirements  
 C. Knowledge  
 4. Mathematics and Science  
*d. Biology*

| Variable | Variable Description                                   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| K17JS07P | Biology-Job Specialty<br>Microbiology and Bacteriology | Means_KJ  | 0-100%       | JS, K             |
| K17JS08P | Biology-Job Specialty<br>Nutritional Science           | Means_KJ  | 0-100%       | JS, K             |
| K17JS09P | Biology-Job Specialty<br>Physiology                    | Means_KJ  | 0-100%       | JS, K             |
| K17JS10P | Biology-Job Specialty<br>Zoology                       | Means_KJ  | 0-100%       | JS, K             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Psychology

**Description:** Knowledge of human behavior and performance, mental processes, psychological research methods, and the assessment and treatment of behavioral and affective disorders

**Content Model Key:** II.C.4.e

- II. Worker Requirements
  - C. Knowledge
    - 4. Mathematics and Science
      - e. Psychology*

| Variable   | Variable Description  | File Name   | Field Values | Scale, Ques Codes |  |   |  |  |     |   |  |     |  |  |     |   |  |     |                        |  |     |  |   |   |  |  |  |
|--|---|---|--------------|-------------------|--|---|--|--|-----|---|--|-----|--|--|-----|---|--|-----|------------------------|--|-----|--|---|---|--|--|--|
| K18LV00M   | Psychology-Level  | Means_KN  | 1-7, 0(NR)   | LV, K             |  |   |  |  |     |   |  |     |  |  |     |   |  |     |                        |  |     |  |   |   |  |  |  |
|  | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%; text-align: left;">Left Label</th> <th style="width: 10%; text-align: center;">Value</th> <th style="width: 50%; text-align: left;">Right Label</th> </tr> </thead> <tbody> <tr> <td style="border: none;">Requires knowledge of complex human behavior, advanced methods of psychological research, evaluation, and treatment.</td> <td style="border: none; text-align: center;">7</td> <td style="border: none;"></td> </tr> <tr> <td style="border: none;"></td> <td style="border: none; text-align: center;">6.4</td> <td style="border: none;">Treating a person with a severe mental illness.</td> </tr> <tr> <td style="border: none;"></td> <td style="border: none; text-align: center;">5.5</td> <td style="border: none;">Developing a job performance appraisal system.</td> </tr> <tr> <td style="border: none;"></td> <td style="border: none; text-align: center;">3.8</td> <td style="border: none;">Understanding the impact of alcohol on human responses.</td> </tr> <tr> <td style="border: none;"></td> <td style="border: none; text-align: center;">2.3</td> <td style="border: none;">Soothing a sad friend.</td> </tr> <tr> <td style="border: none;"></td> <td style="border: none; text-align: center;">1.8</td> <td style="border: none;">Monitoring several children on a playground.</td> </tr> <tr> <td style="border: none;">Requires knowledge of basic concepts of human behavior.</td> <td style="border: none; text-align: center;">1</td> <td style="border: none;"></td> </tr> </tbody> </table> | Left Label  | Value        | Right Label       | Requires knowledge of complex human behavior, advanced methods of psychological research, evaluation, and treatment. | 7 |  |  | 6.4 | Treating a person with a severe mental illness. |  | 5.5 | Developing a job performance appraisal system. |  | 3.8 | Understanding the impact of alcohol on human responses. |  | 2.3 | Soothing a sad friend. |  | 1.8 | Monitoring several children on a playground. | Requires knowledge of basic concepts of human behavior. | 1 |  |  |  |
| Left Label   | Value   | Right Label   |              |                   |  |   |  |  |     |   |  |     |  |  |     |   |  |     |                        |  |     |  |   |   |  |  |  |
| Requires knowledge of complex human behavior, advanced methods of psychological research, evaluation, and treatment. | 7   |   |              |                   |  |   |  |  |     |   |  |     |  |  |     |   |  |     |                        |  |     |  |   |   |  |  |  |
|  | 6.4   | Treating a person with a severe mental illness.         |              |                   |  |   |  |  |     |   |  |     |  |  |     |   |  |     |                        |  |     |  |   |   |  |  |  |
|  | 5.5   | Developing a job performance appraisal system.          |              |                   |  |   |  |  |     |   |  |     |  |  |     |   |  |     |                        |  |     |  |   |   |  |  |  |
|  | 3.8   | Understanding the impact of alcohol on human responses. |              |                   |  |   |  |  |     |   |  |     |  |  |     |   |  |     |                        |  |     |  |   |   |  |  |  |
|  | 2.3   | Soothing a sad friend.                                  |              |                   |  |   |  |  |     |   |  |     |  |  |     |   |  |     |                        |  |     |  |   |   |  |  |  |
|  | 1.8   | Monitoring several children on a playground.            |              |                   |  |   |  |  |     |   |  |     |  |  |     |   |  |     |                        |  |     |  |   |   |  |  |  |
| Requires knowledge of basic concepts of human behavior.  | 1   |   |              |                   |  |   |  |  |     |   |  |     |  |  |     |   |  |     |                        |  |     |  |   |   |  |  |  |
| K18IM00M   | Psychology-Importance   | Means_KN  | 1-5          | IM, K             |  |   |  |  |     |   |  |     |  |  |     |   |  |     |                        |  |     |  |   |   |  |  |  |
| K18JS01P   | Psychology-Job Specialty<br>Clinical Psychology   | Means_KJ  | 0-100%       | JS, K             |  |   |  |  |     |   |  |     |  |  |     |   |  |     |                        |  |     |  |   |   |  |  |  |
| K18JS02P   | Psychology-Job Specialty<br>Cognitive Psychology  | Means_KJ  | 0-100%       | JS, K             |  |   |  |  |     |   |  |     |  |  |     |   |  |     |                        |  |     |  |   |   |  |  |  |
| K18JS03P   | Psychology-Job Specialty<br>Community Psychology  | Means_KJ  | 0-100%       | JS, K             |  |   |  |  |     |   |  |     |  |  |     |   |  |     |                        |  |     |  |   |   |  |  |  |
| K18JS04P   | Psychology-Job Specialty<br>Counseling Psychology   | Means_KJ  | 0-100%       | JS, K             |  |   |  |  |     |   |  |     |  |  |     |   |  |     |                        |  |     |  |   |   |  |  |  |
| K18JS05P   | Psychology-Job Specialty<br>Developmental Psychology  | Means_KJ  | 0-100%       | JS, K             |  |   |  |  |     |   |  |     |  |  |     |   |  |     |                        |  |     |  |   |   |  |  |  |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Psychology (Continued)

**Description:** Knowledge of human behavior and performance, mental processes, psychological research methods, and the assessment and treatment of behavioral and affective disorders

**Content Model Key:** II.C.4.e

II. Worker Requirements  
C. Knowledge  
4. Mathematics and Science  
*e. Psychology*

| <b>Variable</b> | <b>Variable Description</b>                                      | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| K18JS06P        | Psychology-Job Specialty<br>Experimental Psychology              | Means_KJ         | 0-100%              | JS, K                    |
| K18JS07P        | Psychology-Job Specialty<br>Industrial/Organizational Psychology | Means_KJ         | 0-100%              | JS, K                    |
| K18JS08P        | Psychology-Job Specialty<br>Physiological/Biological Psychology  | Means_KJ         | 0-100%              | JS, K                    |
| K18JS09P        | Psychology-Job Specialty<br>Social Psychology                    | Means_KJ         | 0-100%              | JS, K                    |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Sociology and Anthropology

**Description:** Knowledge of group behavior and dynamics, societal trends and influences, cultures, their history, migrations, ethnicity, and origins

**Content Model Key:** II.C.4.f

- II. Worker Requirements
  - C. Knowledge
    - 4. Mathematics and Science
      - f. *Sociology and Anthropology*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes   |
|----------|---|-----------|--------------|---|
| K19LV00M | Sociology and Anthropology-Level  | Means_KN  | 1-7, 0(NR)   | LV, K   |
|          | Requires knowledge of sophisticated cultural and societal trends and development across multiple civilizations and extended time periods. |           | 7            |   |
|          |   |           | 6.5          | Developing a new theory about the development of early civilizations. |
|          |   |           | 4.8          | Writing a pamphlet about cultural differences.                        |
|          |   |           | 2.4          | Identifying two cultures in a story as being different.               |
|          | Requires knowledge of simple cultural and societal characteristics in single cultures over short time periods.                            |           | 1            |   |
| K19IM00M | Sociology and Anthropology-Importance   | Means_KN  | 1-5          | IM, K   |
| K19JS01P | Sociology and Anthropology-Job Specialty Anthropology   | Means_KJ  | 0-100%       | JS, K   |
| K19JS02P | Sociology and Anthropology-Job Specialty Archeology   | Means_KJ  | 0-100%       | JS, K   |
| K19JS03P | Sociology and Anthropology-Job Specialty Criminology  | Means_KJ  | 0-100%       | JS, K   |
| K19JS04P | Sociology and Anthropology-Job Specialty Demography and Population  | Means_KJ  | 0-100%       | JS, K   |
| K19JS05P | Sociology and Anthropology-Job Specialty Sociology  | Means_KJ  | 0-100%       | JS, K   |
| K19JS06P | Sociology and Anthropology-Job Specialty Urban Affairs  | Means_KJ  | 0-100%       | JS, K   |



## O\*NET Data Dictionary : Worker Requirements

**Element:** Geography

**Description:** Knowledge of various methods for describing the location and distribution of land, sea, and air masses including their physical locations, relationships, and characteristics

**Content Model Key:** II.C.4.g

- II. Worker Requirements
  - C. Knowledge
    - 4. Mathematics and Science
      - g. Geography*

| Variable  | Variable Description                   | File Name | Field Values  | Scale, Ques Codes |
|---|--|-----------|---|-------------------|
| K20LV00M  | Geography-Level                        | Means_KN  | 1-7, 0(NR)  | LV, K             |
| Left Label  |  | Value     | Right Label   |                   |
| Requires knowledge of the geographical location of a large number of places around the world. |  | 7         |   |                   |
|   |  | 6.5       | Developing a map of the world showing mountains, deserts, and rivers. |                   |
|   |  | 4         | Identifying Turkey on a world map.                                    |                   |
|   |  | 1.9       | Knowing the capital of the United States.                             |                   |
| Requires knowledge of a few local places, their names, and locations.                         |  | 1         |   |                   |
| K20IM00M  | Geography-Importance                   | Means_KN  | 1-5   | IM, K             |
| K20JS01P  | Geography-Job Specialty<br>Cartography | MeansKJ2  | 0-100%  | JS, K             |
| K20JS02P  | Geography-Job Specialty<br>Geography   | MeansKJ2  | 0-100%  | JS, K             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Medicine and Dentistry

**Description:** Knowledge of the information and techniques needed to diagnose and treat injuries, diseases, and deformities. This includes symptoms, treatment alternatives, drug properties and interactions, and preventive health-care measures

**Content Model Key:** II.C.5.a

- II. Worker Requirements
  - C. Knowledge
    - 5. Health Services
      - a. *Medicine and Dentistry*

| Variable   | Variable Description  | File Name  | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |     |                                |  |     |  |  |     |                         |  |     |                                   |  |     |                        |   |   |  |
|--|---|--|--------------|-------------------|------------|-------|-------------|---|---|--|--|-----|--------------------------------|--|-----|--|--|-----|-------------------------|--|-----|-----------------------------------|--|-----|------------------------|---|---|--|
| K21LV00M   | Medicine and Dentistry-Level                                      | Means_KN   | 1-7, 0(NR)   | LV, K             |            |       |             |   |   |  |  |     |                                |  |     |  |  |     |                         |  |     |                                   |  |     |                        |   |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Requires in-depth knowledge of human anatomy and physiology and methods for diagnosing and treating complicated medical symptoms or problems.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.9</td> <td>Performing open-heart surgery.</td> </tr> <tr> <td></td> <td style="text-align: center;">5.5</td> <td>Diagnosing appendicitis from a patient's symptoms.</td> </tr> <tr> <td></td> <td style="text-align: center;">4.5</td> <td>Filling a tooth cavity.</td> </tr> <tr> <td></td> <td style="text-align: center;">2.7</td> <td>Taking a person's blood pressure.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.1</td> <td>Using a small bandage.</td> </tr> <tr> <td>Requires general knowledge of the human body and methods for treating simple medical symptoms and problems.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |   |  |              |                   | Left Label | Value | Right Label | Requires in-depth knowledge of human anatomy and physiology and methods for diagnosing and treating complicated medical symptoms or problems. | 7 |  |  | 6.9 | Performing open-heart surgery. |  | 5.5 | Diagnosing appendicitis from a patient's symptoms. |  | 4.5 | Filling a tooth cavity. |  | 2.7 | Taking a person's blood pressure. |  | 1.1 | Using a small bandage. | Requires general knowledge of the human body and methods for treating simple medical symptoms and problems. | 1 |  |
| Left Label   | Value   | Right Label  |              |                   |            |       |             |   |   |  |  |     |                                |  |     |  |  |     |                         |  |     |                                   |  |     |                        |   |   |  |
| Requires in-depth knowledge of human anatomy and physiology and methods for diagnosing and treating complicated medical symptoms or problems.  | 7   |  |              |                   |            |       |             |   |   |  |  |     |                                |  |     |  |  |     |                         |  |     |                                   |  |     |                        |   |   |  |
|  | 6.9   | Performing open-heart surgery.                     |              |                   |            |       |             |   |   |  |  |     |                                |  |     |  |  |     |                         |  |     |                                   |  |     |                        |   |   |  |
|  | 5.5   | Diagnosing appendicitis from a patient's symptoms. |              |                   |            |       |             |   |   |  |  |     |                                |  |     |  |  |     |                         |  |     |                                   |  |     |                        |   |   |  |
|  | 4.5   | Filling a tooth cavity.                            |              |                   |            |       |             |   |   |  |  |     |                                |  |     |  |  |     |                         |  |     |                                   |  |     |                        |   |   |  |
|  | 2.7   | Taking a person's blood pressure.                  |              |                   |            |       |             |   |   |  |  |     |                                |  |     |  |  |     |                         |  |     |                                   |  |     |                        |   |   |  |
|  | 1.1   | Using a small bandage.                             |              |                   |            |       |             |   |   |  |  |     |                                |  |     |  |  |     |                         |  |     |                                   |  |     |                        |   |   |  |
| Requires general knowledge of the human body and methods for treating simple medical symptoms and problems.  | 1   |  |              |                   |            |       |             |   |   |  |  |     |                                |  |     |  |  |     |                         |  |     |                                   |  |     |                        |   |   |  |
| K21IM00M   | Medicine and Dentistry-Importance                                 | Means_KN   | 1-5          | IM, K             |            |       |             |   |   |  |  |     |                                |  |     |  |  |     |                         |  |     |                                   |  |     |                        |   |   |  |
| K21JS01P   | Medicine and Dentistry-Job Specialty<br>Chiropractic              | MeansKJ2   | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |                                |  |     |  |  |     |                         |  |     |                                   |  |     |                        |   |   |  |
| K21JS02P   | Medicine and Dentistry-Job Specialty<br>Community and Home Health | MeansKJ2   | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |                                |  |     |  |  |     |                         |  |     |                                   |  |     |                        |   |   |  |
| K21JS03P   | Medicine and Dentistry-Job Specialty<br>Dentistry                 | MeansKJ2   | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |                                |  |     |  |  |     |                         |  |     |                                   |  |     |                        |   |   |  |
| K21JS04P   | Medicine and Dentistry-Job Specialty<br>Medicine                  | MeansKJ2   | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |                                |  |     |  |  |     |                         |  |     |                                   |  |     |                        |   |   |  |
| K21JS05P   | Medicine and Dentistry-Job Specialty<br>Nursing                   | MeansKJ2   | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |                                |  |     |  |  |     |                         |  |     |                                   |  |     |                        |   |   |  |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Medicine and Dentistry (Continued)

**Description:** Knowledge of the information and techniques needed to diagnose and treat injuries, diseases, and deformities. This includes symptoms, treatment alternatives, drug properties and interactions, and preventive health-care measures

**Content Model Key:** II.C.5.a

II. Worker Requirements

C. Knowledge

5. Health Services

*a. Medicine and Dentistry*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| K21JS06P | Medicine and Dentistry-Job Specialty<br>Pharmacology                   | MeansKJ2  | 0-100%       | JS, K             |
| K21JS07P | Medicine and Dentistry-Job Specialty<br>Psychiatry                     | MeansKJ2  | 0-100%       | JS, K             |
| K21JS08P | Medicine and Dentistry-Job Specialty<br>Speech Pathology and Audiology | MeansKJ2  | 0-100%       | JS, K             |
| K21JS09P | Medicine and Dentistry-Job Specialty<br>Surgery                        | MeansKJ2  | 0-100%       | JS, K             |
| K21JS10P | Medicine and Dentistry-Job Specialty<br>Veterinary Medicine            | MeansKJ2  | 0-100%       | JS, K             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Therapy and Counseling

**Description:** Knowledge of information and techniques needed to rehabilitate physical and mental ailments and to provide career guidance including alternative treatments, rehabilitation equipment and its proper use, and methods to evaluate treatment effects

**Content Model Key:** II.C.5.b

- II. Worker Requirements
  - C. Knowledge
    - 5. Health Services
      - b. Therapy and Counseling*

| Variable   | Variable Description   | File Name   | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |   |   |  |     |   |  |     |                                  |  |   |  |
|--|--|---|--------------|-------------------|------------|-------|-------------|---|---|--|--|---|---|--|-----|---|--|-----|----------------------------------|--|---|--|
| K22LV00M   | Therapy and Counseling-Level   | Means_KN  | 1-7, 0(NR)   | LV, K             |            |       |             |   |   |  |  |   |   |  |     |   |  |     |                                  |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Requires knowledge of counseling and therapy for treating complicated or difficult mental, emotional, or physical conditions or situations.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6</td> <td>Counseling an abused child.<br/>Designing a physical therapy program to rehabilitate stroke victims.</td> </tr> <tr> <td></td> <td style="text-align: center;">4.2</td> <td>Providing job counseling to the unemployed.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.9</td> <td>Putting ice on a sprained ankle.</td> </tr> <tr> <td>Requires knowledge of basic counseling and therapy for treating simple mental, emotional, and physical conditions or situations.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |  |   |              |                   | Left Label | Value | Right Label | Requires knowledge of counseling and therapy for treating complicated or difficult mental, emotional, or physical conditions or situations. | 7 |  |  | 6 | Counseling an abused child.<br>Designing a physical therapy program to rehabilitate stroke victims. |  | 4.2 | Providing job counseling to the unemployed. |  | 1.9 | Putting ice on a sprained ankle. | Requires knowledge of basic counseling and therapy for treating simple mental, emotional, and physical conditions or situations. | 1 |  |
| Left Label   | Value  | Right Label   |              |                   |            |       |             |   |   |  |  |   |   |  |     |   |  |     |                                  |  |   |  |
| Requires knowledge of counseling and therapy for treating complicated or difficult mental, emotional, or physical conditions or situations.  | 7  |   |              |                   |            |       |             |   |   |  |  |   |   |  |     |   |  |     |                                  |  |   |  |
|  | 6  | Counseling an abused child.<br>Designing a physical therapy program to rehabilitate stroke victims. |              |                   |            |       |             |   |   |  |  |   |   |  |     |   |  |     |                                  |  |   |  |
|  | 4.2  | Providing job counseling to the unemployed.   |              |                   |            |       |             |   |   |  |  |   |   |  |     |   |  |     |                                  |  |   |  |
|  | 1.9  | Putting ice on a sprained ankle.  |              |                   |            |       |             |   |   |  |  |   |   |  |     |   |  |     |                                  |  |   |  |
| Requires knowledge of basic counseling and therapy for treating simple mental, emotional, and physical conditions or situations.   | 1  |   |              |                   |            |       |             |   |   |  |  |   |   |  |     |   |  |     |                                  |  |   |  |
| K22IM00M   | Therapy and Counseling-Importance  | Means_KN  | 1-5          | IM, K             |            |       |             |   |   |  |  |   |   |  |     |   |  |     |                                  |  |   |  |
| K22JS01P   | Therapy and Counseling-Job Specialty<br>Educational Counseling                   | MeansKJ2  | 0-100%       | JS, K             |            |       |             |   |   |  |  |   |   |  |     |   |  |     |                                  |  |   |  |
| K22JS02P   | Therapy and Counseling-Job Specialty<br>Occupational Therapy                     | MeansKJ2  | 0-100%       | JS, K             |            |       |             |   |   |  |  |   |   |  |     |   |  |     |                                  |  |   |  |
| K22JS03P   | Therapy and Counseling-Job Specialty<br>Physical Therapy                         | MeansKJ2  | 0-100%       | JS, K             |            |       |             |   |   |  |  |   |   |  |     |   |  |     |                                  |  |   |  |
| K22JS04P   | Therapy and Counseling-Job Specialty<br>Psychiatric and Mental Health Counseling | MeansKJ2  | 0-100%       | JS, K             |            |       |             |   |   |  |  |   |   |  |     |   |  |     |                                  |  |   |  |
| K22JS05P   | Therapy and Counseling-Job Specialty<br>Recreational Therapy                     | MeansKJ2  | 0-100%       | JS, K             |            |       |             |   |   |  |  |   |   |  |     |   |  |     |                                  |  |   |  |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Therapy and Counseling (Continued)

**Description:** Knowledge of information and techniques needed to rehabilitate physical and mental ailments and to provide career guidance including alternative treatments, rehabilitation equipment and its proper use, and methods to evaluate treatment effects

**Content Model Key:** II.C.5.b

II. Worker Requirements

C. Knowledge

5. Health Services

*b. Therapy and Counseling*

| <b>Variable</b> | <b>Variable Description</b>  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| K22JS06P        | Therapy and Counseling-Job Specialty<br>Speech Pathology and Audiology | MeansKJ2         | 0-100%              | JS, K                    |
| K22JS07P        | Therapy and Counseling-Job Specialty<br>Social Work                    | MeansKJ2         | 0-100%              | JS, K                    |
| K22JS08P        | Therapy and Counseling-Job Specialty<br>Vocational Counseling          | MeansKJ2         | 0-100%              | JS, K                    |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Education and Training

**Description:** Knowledge of instructional methods and training techniques including curriculum design principles, learning theory, group and individual teaching techniques, design of individual development plans, and test design principles

**Content Model Key:** II.C.6

II. Worker Requirements  
 C. Knowledge  
 6. Education and Training

| Variable  | Variable Description  | File Name                                       | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |     |                              |  |   |  |
|---|---|---|--------------|-------------------|------------|-------|-------------|---|---|--|--|-----|---|--|---|---|--|-----|--|--|-----|------------------------------|--|---|--|
| K23LV00M  | Education and Training-Level  | Means_KN  | 1-7, 0(NR)   | LV, K             |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |     |                              |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Requires in-depth knowledge of numerous relevant facts and multiple instructional techniques to teach experts in a given field.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">5.9</td> <td>Designing a training program for new employees.</td> </tr> <tr> <td></td> <td style="text-align: center;">5</td> <td>Teaching a high school general sciences course.</td> </tr> <tr> <td></td> <td style="text-align: center;">4.2</td> <td>Leading a quality improvement seminar.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.9</td> <td>Showing someone how to bowl.</td> </tr> <tr> <td>Requires knowledge of single instructional approaches to teach simple tasks to students.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |   |   |              |                   | Left Label | Value | Right Label | Requires in-depth knowledge of numerous relevant facts and multiple instructional techniques to teach experts in a given field. | 7 |  |  | 5.9 | Designing a training program for new employees. |  | 5 | Teaching a high school general sciences course. |  | 4.2 | Leading a quality improvement seminar. |  | 1.9 | Showing someone how to bowl. | Requires knowledge of single instructional approaches to teach simple tasks to students. | 1 |  |
| Left Label  | Value   | Right Label                                     |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |     |                              |  |   |  |
| Requires in-depth knowledge of numerous relevant facts and multiple instructional techniques to teach experts in a given field.   | 7   |   |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |     |                              |  |   |  |
|   | 5.9   | Designing a training program for new employees. |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |     |                              |  |   |  |
|   | 5   | Teaching a high school general sciences course. |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |     |                              |  |   |  |
|   | 4.2   | Leading a quality improvement seminar.          |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |     |                              |  |   |  |
|   | 1.9   | Showing someone how to bowl.                    |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |     |                              |  |   |  |
| Requires knowledge of single instructional approaches to teach simple tasks to students.  | 1   |   |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |     |                              |  |   |  |
| K23IM00M  | Education and Training-Importance                                       | Means_KN  | 1-5          | IM, K             |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |     |                              |  |   |  |
| K23JS01P  | Education and Training-Job Specialty Educational Administration         | MeansKJ2  | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |     |                              |  |   |  |
| K23JS02P  | Education and Training-Job Specialty Instructional Design               | MeansKJ2  | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |     |                              |  |   |  |
| K23JS03P  | Education and Training-Job Specialty Pre-School Education               | MeansKJ2  | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |     |                              |  |   |  |
| K23JS04P  | Education and Training-Job Specialty Elementary Education               | MeansKJ2  | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |     |                              |  |   |  |
| K23JS05P  | Education and Training-Job Specialty Secondary and Vocational Education | MeansKJ2  | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |     |                              |  |   |  |
| K23JS06P  | Education and Training-Job Specialty College and University Education   | MeansKJ2  | 0-100%       | JS, K             |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |     |                              |  |   |  |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Education and Training (Continued)

**Description:** Knowledge of instructional methods and training techniques including curriculum design principles, learning theory, group and individual teaching techniques, design of individual development plans, and test design principles

**Content Model Key:** II.C.6

II. Worker Requirements  
 C. Knowledge  
     6. *Education and Training*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| K23JS07P | Education and Training-Job Specialty<br>Special Education              | MeansKJ2  | 0-100%       | JS, K             |
| K23JS08P | Education and Training-Job Specialty<br>Adult and Continuing Education | MeansKJ2  | 0-100%       | JS, K             |
| K23JS09P | Education and Training-Job Specialty<br>Professional Training          | MeansKJ2  | 0-100%       | JS, K             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** English Language

**Description:** Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar

**Content Model Key:** II.C.7.a

- II. Worker Requirements
  - C. Knowledge
    - 7. Arts and Humanities
      - a. *English Language*

| Variable  | Variable Description  | File Name | Field Values                                    | Scale, Ques Codes |
|---|---|-----------|---|-------------------|
| K24LV00M  | English Language-Level  | Means_KN  | 1-7, 0(NR)                                      | LV, K             |
| Left Label  |   | Value     | Right Label                                     |                   |
| Requires fluent knowledge of advanced English vocabulary, complex grammatical rules, and pronunciation. |   | 7         |   |                   |
|   |   | 5.8       | Teaching a college English class.               |                   |
|   |   | 4.2       | Editing a feature article in a local newspaper. |                   |
|   |   | 3.5       | Reading a complicated historical novel.         |                   |
|   |   | 1.5       | Writing a thank-you note.                       |                   |
| Requires elementary knowledge of English vocabulary, grammar, and pronunciation.                        |   | 1         |   |                   |
| K24IM00M  | English Language-Importance                                   | Means_KN  | 1-5   | IM, K             |
| K24JS01P  | English Language-Job Specialty Editing                        | MeansKJ2  | 0-100%  | JS, K             |
| K24JS02P  | English Language-Job Specialty English Literature             | MeansKJ2  | 0-100%  | JS, K             |
| K24JS03P  | English Language-Job Specialty Creative Writing               | MeansKJ2  | 0-100%  | JS, K             |
| K24JS04P  | English Language-Job Specialty Journalistic Writing           | MeansKJ2  | 0-100%  | JS, K             |
| K24JS05P  | English Language-Job Specialty Linguistics                    | MeansKJ2  | 0-100%  | JS, K             |
| K24JS06P  | English Language-Job Specialty Technical and Business Writing | MeansKJ2  | 0-100%  | JS, K             |



## O\*NET Data Dictionary : Worker Requirements

**Element:** Foreign Language

**Description:** Knowledge of the structure and content of a foreign (non-English) language including the meaning and spelling of words, rules of composition and grammar, and pronunciation

**Content Model Key:** II.C.7.b

- II. Worker Requirements
  - C. Knowledge
    - 7. Arts and Humanities
      - b. Foreign Language*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|------------------------|-----------|--------------|-------------------|
| K25LV00M | Foreign Language-Level | Means_KN  | 1-7, 0(NR)   | LV, K             |

| Left Label   | Value | Right Label   |
|--|-------|---|
| Requires fluent knowledge of advanced foreign language (non-English) vocabulary, complex grammatical rules, and pronunciation. | 7     |   |
|  | 6.8   | Providing spoken translation of a political speech while listening to it at an international meeting. |
|  | 5.4   | Writing an English language review of a book written in a foreign language.                           |
|  | 3.8   | Using a foreign language dictionary to translate a business letter.                                   |
|  | 2.9   | Asking directions in a foreign city.  |
|  | 1.5   | Saying "please" and "thank you" in a foreign language.  |
| Requires elementary knowledge of vocabulary, grammar, and pronunciation in a foreign (non-English) language.                   | 1     |   |

|          |   |          |        |       |
|----------|---|----------|--------|-------|
| K25IM00M | Foreign Language-Importance                                       | Means_KN | 1-5    | IM, K |
| K25JS01P | Foreign Language-Job Specialty<br>Foreign Language Interpretation | MeansKJ2 | 0-100% | JS, K |
| K25JS02P | Foreign Language-Job Specialty<br>Foreign Language Literature     | MeansKJ2 | 0-100% | JS, K |
| K25JS03P | Foreign Language-Job Specialty<br>Foreign Language Translation    | MeansKJ2 | 0-100% | JS, K |
| K25JS04P | Foreign Language-Job Specialty<br>Linguistics                     | MeansKJ2 | 0-100% | JS, K |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Fine Arts

**Description:** Knowledge of theory and techniques required to produce, compose, and perform works of music, dance, visual arts, drama, and sculpture

**Content Model Key:** II.C.7.c

- II. Worker Requirements
  - C. Knowledge
    - 7. Arts and Humanities
      - c. *Fine Arts*

| Variable | Variable Description  | File Name | Field Values  | Scale, Ques Codes |
|----------|---|-----------|---|-------------------|
| K26LV00M | Fine Arts-Level   | Means_KN  | 1-7, 0(NR)  | LV, K             |
|          | Left Label  | Value     | Right Label   |                   |
|          | Requires in-depth knowledge of advanced artistic theory and techniques required to create, perform, or critique major works of art, music, dance, or drama. | 7         |   |                   |
|          |   | 6.8       | Composing a symphony.                                 |                   |
|          |   | 5         | Designing an artistic display for a major trade show. |                   |
|          |   | 3.1       | Playing a minor part in a local theater play.         |                   |
|          |   | 2         | Teaching students how to mix primary colors.          |                   |
|          |   | 1.1       | Attending a popular music concert.                    |                   |
|          | Requires general knowledge of simple artistic concepts required to observe and enjoy popular works of art, music, dance, or drama.                          | 1         |   |                   |
| K26IM00M | Fine Arts-Importance  | Means_KN  | 1-5   | IM, K             |
| K26JS01P | Fine Arts-Job Specialty<br>Arts and Crafts  | MeansKJ2  | 0-100%  | JS, K             |
| K26JS02P | Fine Arts-Job Specialty<br>Dance  | MeansKJ2  | 0-100%  | JS, K             |
| K26JS03P | Fine Arts-Job Specialty<br>Dramatic and Theatrical Arts   | MeansKJ2  | 0-100%  | JS, K             |
| K26JS04P | Fine Arts-Job Specialty<br>Film-Video Making and Cinematography   | MeansKJ2  | 0-100%  | JS, K             |
| K26JS05P | Fine Arts-Job Specialty<br>Music  | MeansKJ2  | 0-100%  | JS, K             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Fine Arts (Continued)

**Description:** Knowledge of theory and techniques required to produce, compose, and perform works of music, dance, visual arts, drama, and sculpture

**Content Model Key:** II.C.7.c

II. Worker Requirements

C. Knowledge

7. Arts and Humanities

c. *Fine Arts*

| <b>Variable</b> | <b>Variable Description</b>            | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| K26JS06P        | Fine Arts-Job Specialty<br>Photography | MeansKJ2         | 0-100%              | JS, K                    |

## O\*NET Data Dictionary : Worker Requirements

**Element:** History and Archeology

**Description:** Knowledge of past historical events and their causes, indicators, and impact on particular civilizations and cultures

**Content Model Key:** II.C.7.d

- II. Worker Requirements
  - C. Knowledge
    - 7. Arts and Humanities
      - d. *History and Archeology*

| Variable   | Variable Description                                  | File Name  | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |     |  |  |     |   |  |   |  |  |     |                                 |  |   |  |
|--|---|--|--------------|-------------------|------------|-------|-------------|--|---|--|--|-----|--|--|-----|---|--|---|--|--|-----|---------------------------------|--|---|--|
| K27LV00M   | History and Archeology-Level                          | Means_KN   | 1-7, 0(NR)   | LV, K             |            |       |             |  |   |  |  |     |  |  |     |   |  |   |  |  |     |                                 |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Requires knowledge of complex historical events and archeological records, their creation, interpretation, and impact on civilizations and cultures.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.2</td> <td>Determining the age of bones for placing them in the fossil history.</td> </tr> <tr> <td></td> <td style="text-align: center;">5.4</td> <td>Assessing the impact of the industrial revolution on manufacturing.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Teaching local history to school children.</td> </tr> <tr> <td></td> <td style="text-align: center;">2.7</td> <td>Taking a class in U.S. History.</td> </tr> <tr> <td>Requires knowledge of commonly-known historical events and archeological findings.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |   |  |              |                   | Left Label | Value | Right Label | Requires knowledge of complex historical events and archeological records, their creation, interpretation, and impact on civilizations and cultures. | 7 |  |  | 6.2 | Determining the age of bones for placing them in the fossil history. |  | 5.4 | Assessing the impact of the industrial revolution on manufacturing. |  | 4 | Teaching local history to school children. |  | 2.7 | Taking a class in U.S. History. | Requires knowledge of commonly-known historical events and archeological findings. | 1 |  |
| Left Label   | Value   | Right Label  |              |                   |            |       |             |  |   |  |  |     |  |  |     |   |  |   |  |  |     |                                 |  |   |  |
| Requires knowledge of complex historical events and archeological records, their creation, interpretation, and impact on civilizations and cultures.   | 7   |  |              |                   |            |       |             |  |   |  |  |     |  |  |     |   |  |   |  |  |     |                                 |  |   |  |
|  | 6.2   | Determining the age of bones for placing them in the fossil history. |              |                   |            |       |             |  |   |  |  |     |  |  |     |   |  |   |  |  |     |                                 |  |   |  |
|  | 5.4   | Assessing the impact of the industrial revolution on manufacturing.  |              |                   |            |       |             |  |   |  |  |     |  |  |     |   |  |   |  |  |     |                                 |  |   |  |
|  | 4   | Teaching local history to school children.                           |              |                   |            |       |             |  |   |  |  |     |  |  |     |   |  |   |  |  |     |                                 |  |   |  |
|  | 2.7   | Taking a class in U.S. History.                                      |              |                   |            |       |             |  |   |  |  |     |  |  |     |   |  |   |  |  |     |                                 |  |   |  |
| Requires knowledge of commonly-known historical events and archeological findings.   | 1   |  |              |                   |            |       |             |  |   |  |  |     |  |  |     |   |  |   |  |  |     |                                 |  |   |  |
| K27IM00M   | History and Archeology-Importance                     | Means_KN   | 1-5          | IM, K             |            |       |             |  |   |  |  |     |  |  |     |   |  |   |  |  |     |                                 |  |   |  |
| K27JS01P   | History and Archeology-Job Specialty African History  | MeansKJ2   | 0-100%       | JS, K             |            |       |             |  |   |  |  |     |  |  |     |   |  |   |  |  |     |                                 |  |   |  |
| K27JS02P   | History and Archeology-Job Specialty American History | MeansKJ2   | 0-100%       | JS, K             |            |       |             |  |   |  |  |     |  |  |     |   |  |   |  |  |     |                                 |  |   |  |
| K27JS03P   | History and Archeology-Job Specialty Archeology       | MeansKJ2   | 0-100%       | JS, K             |            |       |             |  |   |  |  |     |  |  |     |   |  |   |  |  |     |                                 |  |   |  |
| K27JS04P   | History and Archeology-Job Specialty Asian History    | MeansKJ2   | 0-100%       | JS, K             |            |       |             |  |   |  |  |     |  |  |     |   |  |   |  |  |     |                                 |  |   |  |
| K27JS05P   | History and Archeology-Job Specialty European History | MeansKJ2   | 0-100%       | JS, K             |            |       |             |  |   |  |  |     |  |  |     |   |  |   |  |  |     |                                 |  |   |  |
| K27JS06P   | History and Archeology-Job Specialty General History  | MeansKJ2   | 0-100%       | JS, K             |            |       |             |  |   |  |  |     |  |  |     |   |  |   |  |  |     |                                 |  |   |  |

## O\*NET Data Dictionary : Worker Requirements

**Element:** History and Archeology (Continued)

**Description:** Knowledge of past historical events and their causes, indicators, and impact on particular civilizations and cultures

**Content Model Key:** II.C.7.d

II. Worker Requirements  
C. Knowledge  
7. Arts and Humanities  
d. *History and Archeology*

| <b>Variable</b> | <b>Variable Description</b>   | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| K27JS07P        | History and Archeology-Job Specialty<br>History of Science and Technology | MeansKJ2         | 0-100%              | JS, K                    |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Philosophy and Theology

**Description:** Knowledge of different philosophical systems and religions, including their basic principles, values, ethics, ways of thinking, customs, and practices, and their impact on human culture

**Content Model Key:** II.C.7.e

- II. Worker Requirements
  - C. Knowledge
    - 7. Arts and Humanities
      - e. *Philosophy and Theology*

| Variable   | Variable Description  | File Name | Field Values   | Scale, Ques Codes |
|--|---|-----------|--|-------------------|
| K28LV00M   | Philosophy and Theology-Level   | Means_KN  | 1-7, 0(NR)   | LV, K             |
| Left Label   |   | Value     | Right Label  |                   |
| Requires knowledge of complex philosophical positions and their impact on culture and thought. |   | 7         |  |                   |
|  |   | 5.7       | Comparing the teachings of major philosophers.       |                   |
|  |   | 3.9       | Understanding another culture's religious practices. |                   |
|  |   | 1.8       | Watching a TV program on family values.              |                   |
| Requires knowledge of popular philosophical ideas and thought.                                 |   | 1         |  |                   |
| K28IM00M   | Philosophy and Theology-Importance                                    | Means_KN  | 1-5  | IM, K             |
| K28JS01P   | Philosophy and Theology-Job Specialty Ministry                        | MeansKJ2  | 0-100%   | JS, K             |
| K28JS02P   | Philosophy and Theology-Job Specialty Missions and Missionary Studies | MeansKJ2  | 0-100%   | JS, K             |
| K28JS03P   | Philosophy and Theology-Job Specialty Pastoral Counseling             | MeansKJ2  | 0-100%   | JS, K             |
| K28JS04P   | Philosophy and Theology-Job Specialty Philosophy                      | MeansKJ2  | 0-100%   | JS, K             |
| K28JS05P   | Philosophy and Theology-Job Specialty Religious Education             | MeansKJ2  | 0-100%   | JS, K             |
| K28JS06P   | Philosophy and Theology-Job Specialty Theology                        | MeansKJ2  | 0-100%   | JS, K             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Public Safety and Security

**Description:** Knowledge of weaponry, public safety, and security operations, rules, regulations, precautions, prevention, and the protection of people, data, and property

**Content Model Key:** II.C.8.a

- II. Worker Requirements
  - C. Knowledge
    - 8. Law and Public Safety
      - a. *Public Safety and Security*

| Variable  | Variable Description   | File Name   | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |     |                                  |  |   |                         |  |   |   |  |     |                                |  |     |                   |  |   |  |
|---|--|---|--------------|-------------------|------------|-------|-------------|--|---|--|--|-----|----------------------------------|--|---|-------------------------|--|---|---|--|-----|--------------------------------|--|-----|-------------------|--|---|--|
| K29LV00M  | Public Safety and Security-Level   | Means_KN  | 1-7, 0(NR)   | LV, K             |            |       |             |  |   |  |  |     |                                  |  |   |                         |  |   |   |  |     |                                |  |     |                   |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Requires knowledge of advanced safety rules and procedures, security needs and operations, and use of complicated weapons systems.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.2</td> <td>Commanding a military operation.</td> </tr> <tr> <td></td> <td style="text-align: center;">5</td> <td>Securing a crime scene.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Inspecting a building site for safety violations.</td> </tr> <tr> <td></td> <td style="text-align: center;">2.5</td> <td>Loading and shooting a weapon.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.1</td> <td>Using a seatbelt.</td> </tr> <tr> <td>Requires knowledge of basic safety rules and procedures, security operations, and use of simple weapons.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |  |   |              |                   | Left Label | Value | Right Label | Requires knowledge of advanced safety rules and procedures, security needs and operations, and use of complicated weapons systems. | 7 |  |  | 6.2 | Commanding a military operation. |  | 5 | Securing a crime scene. |  | 4 | Inspecting a building site for safety violations. |  | 2.5 | Loading and shooting a weapon. |  | 1.1 | Using a seatbelt. | Requires knowledge of basic safety rules and procedures, security operations, and use of simple weapons. | 1 |  |
| Left Label  | Value  | Right Label                                       |              |                   |            |       |             |  |   |  |  |     |                                  |  |   |                         |  |   |   |  |     |                                |  |     |                   |  |   |  |
| Requires knowledge of advanced safety rules and procedures, security needs and operations, and use of complicated weapons systems.  | 7  |   |              |                   |            |       |             |  |   |  |  |     |                                  |  |   |                         |  |   |   |  |     |                                |  |     |                   |  |   |  |
|   | 6.2  | Commanding a military operation.                  |              |                   |            |       |             |  |   |  |  |     |                                  |  |   |                         |  |   |   |  |     |                                |  |     |                   |  |   |  |
|   | 5  | Securing a crime scene.                           |              |                   |            |       |             |  |   |  |  |     |                                  |  |   |                         |  |   |   |  |     |                                |  |     |                   |  |   |  |
|   | 4  | Inspecting a building site for safety violations. |              |                   |            |       |             |  |   |  |  |     |                                  |  |   |                         |  |   |   |  |     |                                |  |     |                   |  |   |  |
|   | 2.5  | Loading and shooting a weapon.                    |              |                   |            |       |             |  |   |  |  |     |                                  |  |   |                         |  |   |   |  |     |                                |  |     |                   |  |   |  |
|   | 1.1  | Using a seatbelt.                                 |              |                   |            |       |             |  |   |  |  |     |                                  |  |   |                         |  |   |   |  |     |                                |  |     |                   |  |   |  |
| Requires knowledge of basic safety rules and procedures, security operations, and use of simple weapons.  | 1  |   |              |                   |            |       |             |  |   |  |  |     |                                  |  |   |                         |  |   |   |  |     |                                |  |     |                   |  |   |  |
| K29IM00M  | Public Safety and Security-Importance                                      | Means_KN  | 1-5          | IM, K             |            |       |             |  |   |  |  |     |                                  |  |   |                         |  |   |   |  |     |                                |  |     |                   |  |   |  |
| K29JS01P  | Public Safety and Security-Job Specialty Corrections                       | MeansKJ2  | 0-100%       | JS, K             |            |       |             |  |   |  |  |     |                                  |  |   |                         |  |   |   |  |     |                                |  |     |                   |  |   |  |
| K29JS02P  | Public Safety and Security-Job Specialty Criminal Investigation            | MeansKJ2  | 0-100%       | JS, K             |            |       |             |  |   |  |  |     |                                  |  |   |                         |  |   |   |  |     |                                |  |     |                   |  |   |  |
| K29JS03P  | Public Safety and Security-Job Specialty Fire Fighting                     | MeansKJ2  | 0-100%       | JS, K             |            |       |             |  |   |  |  |     |                                  |  |   |                         |  |   |   |  |     |                                |  |     |                   |  |   |  |
| K29JS04P  | Public Safety and Security-Job Specialty Fire Inspection and Investigation | MeansKJ2  | 0-100%       | JS, K             |            |       |             |  |   |  |  |     |                                  |  |   |                         |  |   |   |  |     |                                |  |     |                   |  |   |  |
| K29JS05P  | Public Safety and Security-Job Specialty Military Technologies             | MeansKJ2  | 0-100%       | JS, K             |            |       |             |  |   |  |  |     |                                  |  |   |                         |  |   |   |  |     |                                |  |     |                   |  |   |  |
| K29JS06P  | Public Safety and Security-Job Specialty Police Patrol                     | MeansKJ2  | 0-100%       | JS, K             |            |       |             |  |   |  |  |     |                                  |  |   |                         |  |   |   |  |     |                                |  |     |                   |  |   |  |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Public Safety and Security (Continued)

**Description:** Knowledge of weaponry, public safety, and security operations, rules, regulations, precautions, prevention, and the protection of people, data, and property

**Content Model Key:** II.C.8.a

- II. Worker Requirements
  - C. Knowledge
    - 8. Law and Public Safety
      - a. *Public Safety and Security*

| <b>Variable</b> | <b>Variable Description</b>                                | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| K29JS07P        | Public Safety and Security-Job Specialty Security Services | MeansKJ2         | 0-100%              | JS, K                    |



## O\*NET Data Dictionary : Worker Requirements

**Element:** Law, Government and Jurisprudence

**Description:** Knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process

**Content Model Key:** II.C.8.b

- II. Worker Requirements
  - C. Knowledge
    - 8. Law and Public Safety
      - b. Law, Government and Jurisprudence*

| Variable   | Variable Description  | File Name   | Field Values | Scale, Ques Codes |  |   |  |  |   |                                   |  |     |                                   |  |   |   |  |     |   |  |   |   |  |   |  |  |  |
|--|---|---|--------------|-------------------|--|---|--|--|---|-----------------------------------|--|-----|-----------------------------------|--|---|---|--|-----|---|--|---|---|--|---|--|--|--|
| K30LV00M   | Law, Government and Jurisprudence-Level   | Means_KN  | 1-7, 0(NR)   | LV, K             |  |   |  |  |   |                                   |  |     |                                   |  |   |   |  |     |   |  |   |   |  |   |  |  |  |
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| Left Label   | Value   | Right Label   |              |                   |  |   |  |  |   |                                   |  |     |                                   |  |   |   |  |     |   |  |   |   |  |   |  |  |  |
| Requires knowledge of complex federal, state, and local laws and government regulations; judiciary precedents and procedures; and political organizations and processes. | 7   |   |              |                   |  |   |  |  |   |                                   |  |     |                                   |  |   |   |  |     |   |  |   |   |  |   |  |  |  |
|  | 6   | Being a judge in a federal court.                                 |              |                   |  |   |  |  |   |                                   |  |     |                                   |  |   |   |  |     |   |  |   |   |  |   |  |  |  |
|  | 5.1   | Arguing a criminal case in court.                                 |              |                   |  |   |  |  |   |                                   |  |     |                                   |  |   |   |  |     |   |  |   |   |  |   |  |  |  |
|  | 4   | Lobbying for political support of a new bill.                     |              |                   |  |   |  |  |   |                                   |  |     |                                   |  |   |   |  |     |   |  |   |   |  |   |  |  |  |
|  | 3.7   | Preparing documents and title papers for the purchase of a house. |              |                   |  |   |  |  |   |                                   |  |     |                                   |  |   |   |  |     |   |  |   |   |  |   |  |  |  |
|  | 2   | Registering to vote in a national election.                       |              |                   |  |   |  |  |   |                                   |  |     |                                   |  |   |   |  |     |   |  |   |   |  |   |  |  |  |
| Requires knowledge of basic rights, laws, and political processes.   | 1   |   |              |                   |  |   |  |  |   |                                   |  |     |                                   |  |   |   |  |     |   |  |   |   |  |   |  |  |  |
| K30IM00M   | Law, Government and Jurisprudence-Importance  | Means_KN  | 1-5          | IM, K             |  |   |  |  |   |                                   |  |     |                                   |  |   |   |  |     |   |  |   |   |  |   |  |  |  |
| K30JS01P   | Law, Government and Jurisprudence-Job Specialty<br>Jurisprudence  | MeansKJ2  | 0-100%       | JS, K             |  |   |  |  |   |                                   |  |     |                                   |  |   |   |  |     |   |  |   |   |  |   |  |  |  |
| K30JS02P   | Law, Government and Jurisprudence-Job Specialty<br>Legal Representation   | MeansKJ2  | 0-100%       | JS, K             |  |   |  |  |   |                                   |  |     |                                   |  |   |   |  |     |   |  |   |   |  |   |  |  |  |
| K30JS03P   | Law, Government and Jurisprudence-Job Specialty<br>Paralegal and Legal Support Services   | MeansKJ2  | 0-100%       | JS, K             |  |   |  |  |   |                                   |  |     |                                   |  |   |   |  |     |   |  |   |   |  |   |  |  |  |
| K30JS04P   | Law, Government and Jurisprudence-Job Specialty<br>Political Science and Government   | MeansKJ2  | 0-100%       | JS, K             |  |   |  |  |   |                                   |  |     |                                   |  |   |   |  |     |   |  |   |   |  |   |  |  |  |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Telecommunications

**Description:** Knowledge of transmission, broadcasting, switching, control, and operation of telecommunications systems

**Content Model Key:** II.C.9.a

- II. Worker Requirements
  - C. Knowledge
    - 9. Communications
      - a. *Telecommunications*

| Variable | Variable Description  | File Name | Field Values   | Scale, Ques Codes |
|----------|---|-----------|--|-------------------|
| K31LV00M | Telecommunications-Level  | Means_KN  | 1-7, 0(NR)   | LV, K             |
|          | Left Label  | Value     | Right Label  |                   |
|          | Requires knowledge of complex high-tech, digital transmission and switching telecommunication systems.                      | 7         |  |                   |
|          |   | 6.8       | Developing a new, world-wide telecommunications network. |                   |
|          |   | 4.3       | Finding the cause of static on a line.                   |                   |
|          |   | 3.2       | Operating a television camera.                           |                   |
|          |   | 2.2       | Installing a satellite TV dish.                          |                   |
|          |   | 1.2       | Dialing a phone.   |                   |
|          | Requires knowledge of simple telecommunications equipment and their use.  | 1         |  |                   |
| K31IM00M | Telecommunications-Importance   | Means_KN  | 1-5  | IM, K             |
| K31JS01P | Telecommunications-Job Specialty<br>Central Office and Switches   | MeansKJ2  | 0-100%   | JS, K             |
| K31JS02P | Telecommunications-Job Specialty<br>Electrical and Electronics Engineering  | MeansKJ2  | 0-100%   | JS, K             |
| K31JS03P | Telecommunications-Job Specialty<br>Radio/Television Broadcasting Technology - Radio and Television Broadcasting Technology | MeansKJ2  | 0-100%   | JS, K             |
| K31JS04P | Telecommunications-Job Specialty<br>System Installation and Repair  | MeansKJ2  | 0-100%   | JS, K             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Communications and Media

**Description:** Knowledge of media production, communication, and dissemination techniques and methods including alternative ways to inform and entertain via written, oral, and visual media

**Content Model Key:** II.C.9.b

- II. Worker Requirements
  - C. Knowledge
    - 9. Communications
      - b. Communications and Media*

| Variable  | Variable Description   | File Name   | Field Values | Scale, Ques Codes |   |   |  |  |     |   |  |     |                  |  |     |                            |  |     |                           |   |   |  |  |  |
|---|--|---|--------------|-------------------|---|---|--|--|-----|---|--|-----|------------------|--|-----|----------------------------|--|-----|---------------------------|---|---|--|--|--|
| K32LV00M  | Communications and Media-Level   | Means_KN  | 1-7, 0(NR)   | LV, K             |   |   |  |  |     |   |  |     |                  |  |     |                            |  |     |                           |   |   |  |  |  |
|   | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Requires knowledge of complex multiple communications methods and media to inform and entertain different and varied audiences.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.4</td> <td>Producing a combined TV, radio, and newspaper campaign to inform the public about world hunger.</td> </tr> <tr> <td></td> <td style="text-align: center;">5.2</td> <td>Writing a novel.</td> </tr> <tr> <td></td> <td style="text-align: center;">3.8</td> <td>Being a radio disk jockey.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.8</td> <td>Writing a thank you note.</td> </tr> <tr> <td>Requires knowledge of how to use simple communications methods and media to inform or entertain a limited audience.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> | Left Label  | Value        | Right Label       | Requires knowledge of complex multiple communications methods and media to inform and entertain different and varied audiences. | 7 |  |  | 6.4 | Producing a combined TV, radio, and newspaper campaign to inform the public about world hunger. |  | 5.2 | Writing a novel. |  | 3.8 | Being a radio disk jockey. |  | 1.8 | Writing a thank you note. | Requires knowledge of how to use simple communications methods and media to inform or entertain a limited audience. | 1 |  |  |  |
| Left Label  | Value  | Right Label   |              |                   |   |   |  |  |     |   |  |     |                  |  |     |                            |  |     |                           |   |   |  |  |  |
| Requires knowledge of complex multiple communications methods and media to inform and entertain different and varied audiences. | 7  |   |              |                   |   |   |  |  |     |   |  |     |                  |  |     |                            |  |     |                           |   |   |  |  |  |
|   | 6.4  | Producing a combined TV, radio, and newspaper campaign to inform the public about world hunger. |              |                   |   |   |  |  |     |   |  |     |                  |  |     |                            |  |     |                           |   |   |  |  |  |
|   | 5.2  | Writing a novel.  |              |                   |   |   |  |  |     |   |  |     |                  |  |     |                            |  |     |                           |   |   |  |  |  |
|   | 3.8  | Being a radio disk jockey.  |              |                   |   |   |  |  |     |   |  |     |                  |  |     |                            |  |     |                           |   |   |  |  |  |
|   | 1.8  | Writing a thank you note.   |              |                   |   |   |  |  |     |   |  |     |                  |  |     |                            |  |     |                           |   |   |  |  |  |
| Requires knowledge of how to use simple communications methods and media to inform or entertain a limited audience.             | 1  |   |              |                   |   |   |  |  |     |   |  |     |                  |  |     |                            |  |     |                           |   |   |  |  |  |
| K32IM00M  | Communications and Media-Importance  | Means_KN  | 1-5          | IM, K             |   |   |  |  |     |   |  |     |                  |  |     |                            |  |     |                           |   |   |  |  |  |
| K32JS01P  | Communications and Media-Job Specialty<br>Archival Science   | MeansKJ2  | 0-100%       | JS, K             |   |   |  |  |     |   |  |     |                  |  |     |                            |  |     |                           |   |   |  |  |  |
| K32JS02P  | Communications and Media-Job Specialty<br>Creative Writing   | MeansKJ2  | 0-100%       | JS, K             |   |   |  |  |     |   |  |     |                  |  |     |                            |  |     |                           |   |   |  |  |  |
| K32JS03P  | Communications and Media-Job Specialty<br>Journalism   | MeansKJ2  | 0-100%       | JS, K             |   |   |  |  |     |   |  |     |                  |  |     |                            |  |     |                           |   |   |  |  |  |
| K32JS04P  | Communications and Media-Job Specialty<br>Library Science  | MeansKJ2  | 0-100%       | JS, K             |   |   |  |  |     |   |  |     |                  |  |     |                            |  |     |                           |   |   |  |  |  |
| K32JS05P  | Communications and Media-Job Specialty<br>Printing and Publishing  | MeansKJ2  | 0-100%       | JS, K             |   |   |  |  |     |   |  |     |                  |  |     |                            |  |     |                           |   |   |  |  |  |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Communications and Media (Continued)

**Description:** Knowledge of media production, communication, and dissemination techniques and methods including alternative ways to inform and entertain via written, oral, and visual media

**Content Model Key:** II.C.9.b

II. Worker Requirements  
 C. Knowledge  
 9. Communications  
*b. Communications and Media*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| K32JS06P | Communications and Media-Job Specialty<br>Radio and Television Broadcasting | MeansKJ2  | 0-100%       | JS, K             |
| K32JS07P | Communications and Media-Job Specialty<br>Technical and Business Writing    | MeansKJ2  | 0-100%       | JS, K             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Transportation

**Description:** Knowledge of principles and methods for moving people or goods by air, rail, sea, or road, including their relative costs, advantages, and limitations

**Content Model Key:** II.C.10

II. Worker Requirements  
 C. Knowledge  
 10. Transportation

| Variable   | Variable Description   | File Name   | Field Values | Scale, Ques Codes |  |   |  |  |   |   |  |   |   |  |   |   |  |     |                         |   |   |  |  |  |  |
|--|--|---|--------------|-------------------|--|---|--|--|---|---|--|---|---|--|---|---|--|-----|-------------------------|---|---|--|--|--|--|
| K33LV00M   | Transportation-Level   | Means_KN  | 1-7, 0(NR)   | LV, K             |  |   |  |  |   |   |  |   |   |  |   |   |  |     |                         |   |   |  |  |  |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td style="vertical-align: top;">Requires knowledge of complex transportation systems consisting of multiple methods for moving people or goods throughout the world.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6</td> <td>Controlling air traffic at a major airport.</td> </tr> <tr> <td></td> <td style="text-align: center;">5</td> <td>Steering a large freighter through a busy harbor.</td> </tr> <tr> <td></td> <td style="text-align: center;">3</td> <td>Selecting the best way to transport senior citizens to shopping areas.<br/>Arranging to transport a large crate from the US to Asia.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Taking a train to work.</td> </tr> <tr> <td style="vertical-align: top;">Requires knowledge of basic modes of transportation for moving people or goods within a local area.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |  | Left Label  | Value        | Right Label       | Requires knowledge of complex transportation systems consisting of multiple methods for moving people or goods throughout the world. | 7 |  |  | 6 | Controlling air traffic at a major airport. |  | 5 | Steering a large freighter through a busy harbor. |  | 3 | Selecting the best way to transport senior citizens to shopping areas.<br>Arranging to transport a large crate from the US to Asia. |  | 1.5 | Taking a train to work. | Requires knowledge of basic modes of transportation for moving people or goods within a local area. | 1 |  |  |  |  |
| Left Label   | Value  | Right Label   |              |                   |  |   |  |  |   |   |  |   |   |  |   |   |  |     |                         |   |   |  |  |  |  |
| Requires knowledge of complex transportation systems consisting of multiple methods for moving people or goods throughout the world.   | 7  |   |              |                   |  |   |  |  |   |   |  |   |   |  |   |   |  |     |                         |   |   |  |  |  |  |
|  | 6  | Controlling air traffic at a major airport.   |              |                   |  |   |  |  |   |   |  |   |   |  |   |   |  |     |                         |   |   |  |  |  |  |
|  | 5  | Steering a large freighter through a busy harbor.   |              |                   |  |   |  |  |   |   |  |   |   |  |   |   |  |     |                         |   |   |  |  |  |  |
|  | 3  | Selecting the best way to transport senior citizens to shopping areas.<br>Arranging to transport a large crate from the US to Asia. |              |                   |  |   |  |  |   |   |  |   |   |  |   |   |  |     |                         |   |   |  |  |  |  |
|  | 1.5  | Taking a train to work.   |              |                   |  |   |  |  |   |   |  |   |   |  |   |   |  |     |                         |   |   |  |  |  |  |
| Requires knowledge of basic modes of transportation for moving people or goods within a local area.  | 1  |   |              |                   |  |   |  |  |   |   |  |   |   |  |   |   |  |     |                         |   |   |  |  |  |  |
| K33IM00M   | Transportation-Importance                                    | Means_KN  | 1-5          | IM, K             |  |   |  |  |   |   |  |   |   |  |   |   |  |     |                         |   |   |  |  |  |  |
| K33JS01P   | Transportation-Job Specialty<br>Airplane piloting            | MeansKJ2  | 0-100%       | JS, K             |  |   |  |  |   |   |  |   |   |  |   |   |  |     |                         |   |   |  |  |  |  |
| K33JS02P   | Transportation-Job Specialty<br>Air Traffic Control          | MeansKJ2  | 0-100%       | JS, K             |  |   |  |  |   |   |  |   |   |  |   |   |  |     |                         |   |   |  |  |  |  |
| K33JS03P   | Transportation-Job Specialty<br>Railroad Operations          | MeansKJ2  | 0-100%       | JS, K             |  |   |  |  |   |   |  |   |   |  |   |   |  |     |                         |   |   |  |  |  |  |
| K33JS04P   | Transportation-Job Specialty<br>Truck and Bus Transportation | MeansKJ2  | 0-100%       | JS, K             |  |   |  |  |   |   |  |   |   |  |   |   |  |     |                         |   |   |  |  |  |  |
| K33JS05P   | Transportation-Job Specialty<br>Water Transportation         | MeansKJ2  | 0-100%       | JS, K             |  |   |  |  |   |   |  |   |   |  |   |   |  |     |                         |   |   |  |  |  |  |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Level of Education

**Description:** The level of education required to perform a job

**Content Model Key:** II.D.1

II. Worker Requirements

D. Education

*1. Level of Education*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| E01LE00I | Level of Education-Education Level Required: Median  | Means_MD  | 1-12         | LE                |
| E01CO01P | Level of Education-% Chosen<br>Less than a High School Diploma   | Means_ET  | 0-100%       | CO                |
| E01CO02P | Level of Education-% Chosen<br>High School Diploma - (or High School Equivalence Certificate)  | Means_ET  | 0-100%       | CO                |
| E01CO03P | Level of Education-% Chosen<br>Post-Secondary Certificate - awarded for training completed after high school (e.g., in Personal Services, Engineering-Related Technologies, Vocational Home Economics, Construction Trades, Mechanics and Repairers, Precision Production Trades)  | Means_ET  | 0-100%       | CO                |
| E01CO04P | Level of Education-% Chosen<br>Some College Courses  | Means_ET  | 0-100%       | CO                |
| E01CO05P | Level of Education-% Chosen<br>Associate's or other 2-year degree  | Means_ET  | 0-100%       | CO                |
| E01CO06P | Level of Education-% Chosen<br>Bachelor's Degree   | Means_ET  | 0-100%       | CO                |
| E01CO07P | Level of Education-% Chosen<br>Post-Baccalaureate Certificate - awarded for completion of an organized program of study requiring 30 credit hours beyond the Bachelor's degree; designed for persons who have completed a Baccalaureate degree, but do not meet the requirements of academic degrees carrying the title of Master. | Means_ET  | 0-100%       | CO                |
| E01CO08P | Level of Education-% Chosen<br>Master's Degree   | Means_ET  | 0-100%       | CO                |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Level of Education (Continued)

**Description:** The level of education required to perform a job

**Content Model Key:** II.D.1

II. Worker Requirements

D. Education

*1. Level of Education*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| E01CO09P | Level of Education-% Chosen<br>Post-Master's Certificate - awarded for completion of an organized program of study of 60 credit hours beyond the Master's degree, but does not meet the requirements of academic degrees at the Doctoral level.   | Means_ET  | 0-100%       | CO                |
| E01CO10P | Level of Education-% Chosen<br>First Professional Degree - awarded for completion of a program that:<br>- requires at least 2 years of college work before entrance into the program<br>- includes a total of at least 6 academic years of college work to complete and<br>- provides all remaining academic requirements to begin practice in a profession | Means_ET  | 0-100%       | CO                |
| E01CO11P | Level of Education-% Chosen<br>Doctoral Degree  | Means_ET  | 0-100%       | CO                |
| E01CO12P | Level of Education-% Chosen<br>Post-Doctoral Certificate  | Means_ET  | 0-100%       | CO                |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Instructional Program Required

**Description:** The instructional program required for this job

**Content Model Key:** II.D.2

II. Worker Requirements

D. Education

2. *Instructional Program Required*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| E02CA01P | Instructional Program Required-Check All that Apply<br>Agricultural Business and Production  | Means_ET  | 0-100%       | CA                |
| E02CA02P | Instructional Program Required-Check All that Apply<br>Agricultural Sciences   | Means_ET  | 0-100%       | CA                |
| E02CA03P | Instructional Program Required-Check All that Apply<br>Architecture and Related Programs   | Means_ET  | 0-100%       | CA                |
| E02CA04P | Instructional Program Required-Check All that Apply<br>Area, Ethnic, and Cultural Studies  | Means_ET  | 0-100%       | CA                |
| E02CA05P | Instructional Program Required-Check All that Apply<br>Biological Sciences/Life Sciences   | Means_ET  | 0-100%       | CA                |
| E02CA06P | Instructional Program Required-Check All that Apply<br>Business Management & Admin. Services - Business Management and Administrative Services   | Means_ET  | 0-100%       | CA                |
| E02CA07P | Instructional Program Required-Check All that Apply<br>Communications  | Means_ET  | 0-100%       | CA                |
| E02CA08P | Instructional Program Required-Check All that Apply<br>Communications Technologies - (Preparation to provide technical service in areas including educational/instructional media, photography, and radio/TV broadcasting) | Means_ET  | 0-100%       | CA                |



## O\*NET Data Dictionary : Worker Requirements

**Element:** Instructional Program Required (Continued)

**Description:** The instructional program required for this job

**Content Model Key:** II.D.2

II. Worker Requirements

D. Education

2. *Instructional Program Required*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| E02CA09P | Instructional Program Required-Check All that Apply<br>Computer and Information Sciences   | Means_ET  | 0-100%       | CA                |
| E02CA10P | Instructional Program Required-Check All that Apply<br>Conservation & Renewable Natural Resrce. - Conservation and Renewable Natural Resources | Means_ET  | 0-100%       | CA                |
| E02CA11P | Instructional Program Required-Check All that Apply<br>Construction Trades   | Means_ET  | 0-100%       | CA                |
| E02CA12P | Instructional Program Required-Check All that Apply<br>Education   | Means_ET  | 0-100%       | CA                |
| E02CA13P | Instructional Program Required-Check All that Apply<br>Engineering   | Means_ET  | 0-100%       | CA                |
| E02CA14P | Instructional Program Required-Check All that Apply<br>Engineering-Related Technologies  | Means_ET  | 0-100%       | CA                |
| E02CA15P | Instructional Program Required-Check All that Apply<br>English Language and Literature/Letters   | Means_ET  | 0-100%       | CA                |
| E02CA16P | Instructional Program Required-Check All that Apply<br>Foreign Languages and Literatures   | Means_ET  | 0-100%       | CA                |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Instructional Program Required (Continued)

**Description:** The instructional program required for this job

**Content Model Key:** II.D.2

II. Worker Requirements

D. Education

2. *Instructional Program Required*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| E02CA17P | Instructional Program Required-Check All that Apply<br>Health Professions and Related Sciences   | Means_ET  | 0-100%       | CA                |
| E02CA18P | Instructional Program Required-Check All that Apply<br>Home Economics, General   | Means_ET  | 0-100%       | CA                |
| E02CA19P | Instructional Program Required-Check All that Apply<br>Law and Legal Studies   | Means_ET  | 0-100%       | CA                |
| E02CA20P | Instructional Program Required-Check All that Apply<br>Liberal Arts and Sciences - Liberal Arts and Sciences, General Studies and Humanities | Means_ET  | 0-100%       | CA                |
| E02CA21P | Instructional Program Required-Check All that Apply<br>Library Science   | Means_ET  | 0-100%       | CA                |
| E02CA22P | Instructional Program Required-Check All that Apply<br>Marketing Operations - Marketing Operations/Marketing and Distribution                | Means_ET  | 0-100%       | CA                |
| E02CA23P | Instructional Program Required-Check All that Apply<br>Mathematics   | Means_ET  | 0-100%       | CA                |
| E02CA24P | Instructional Program Required-Check All that Apply<br>Mechanics and Repairers   | Means_ET  | 0-100%       | CA                |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Instructional Program Required (Continued)

**Description:** The instructional program required for this job

**Content Model Key:** II.D.2

II. Worker Requirements

D. Education

2. *Instructional Program Required*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| E02CA25P | Instructional Program Required-Check All that Apply<br>Military Technologies  | Means_ET  | 0-100%       | CA                |
| E02CA26P | Instructional Program Required-Check All that Apply<br>Multi/interdisciplinary Studies  | Means_ET  | 0-100%       | CA                |
| E02CA27P | Instructional Program Required-Check All that Apply<br>Parks,Recreation,Leisure,Fitness Studies - Parks, Recreation, Leisure, and Fitness Studies   | Means_ET  | 0-100%       | CA                |
| E02CA28P | Instructional Program Required-Check All that Apply<br>Personal and Miscellaneous Services - (preparation to provide services including gaming and sports officiating, funeral services/mortuary science, cosmetic services, and culinary arts) | Means_ET  | 0-100%       | CA                |
| E02CA29P | Instructional Program Required-Check All that Apply<br>Philosophy and Religion  | Means_ET  | 0-100%       | CA                |
| E02CA30P | Instructional Program Required-Check All that Apply<br>Physical Sciences  | Means_ET  | 0-100%       | CA                |
| E02CA31P | Instructional Program Required-Check All that Apply<br>Precision Production Trades  | Means_ET  | 0-100%       | CA                |
| E02CA32P | Instructional Program Required-Check All that Apply<br>Protective Services  | Means_ET  | 0-100%       | CA                |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Instructional Program Required (Continued)

**Description:** The instructional program required for this job

**Content Model Key:** II.D.2

II. Worker Requirements

D. Education

2. *Instructional Program Required*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| E02CA33P | Instructional Program Required-Check All that Apply<br>Psychology  | Means_ET  | 0-100%       | CA                |
| E02CA34P | Instructional Program Required-Check All that Apply<br>Public Administration and Services  | Means_ET  | 0-100%       | CA                |
| E02CA35P | Instructional Program Required-Check All that Apply<br>Reserve Officers' Training Corps (ROTC)   | Means_ET  | 0-100%       | CA                |
| E02CA36P | Instructional Program Required-Check All that Apply<br>Science Technologies - (preparation to provide technical service in the following technologies: biological, nuclear\industrial, and physical science) | Means_ET  | 0-100%       | CA                |
| E02CA37P | Instructional Program Required-Check All that Apply<br>Social Sciences and History   | Means_ET  | 0-100%       | CA                |
| E02CA38P | Instructional Program Required-Check All that Apply<br>Theological Studies & Religious Vocations - Theological Studies and Religious Vocations   | Means_ET  | 0-100%       | CA                |
| E02CA39P | Instructional Program Required-Check All that Apply<br>Transportation and Materials Moving   | Means_ET  | 0-100%       | CA                |
| E02CA40P | Instructional Program Required-Check All that Apply<br>Visual and Performing Arts  | Means_ET  | 0-100%       | CA                |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Instructional Program Required (Continued)

**Description:** The instructional program required for this job

**Content Model Key:** II.D.2

II. Worker Requirements

D. Education

2. *Instructional Program Required*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| E02CA41P | Instructional Program Required-Check All that Apply<br>Vocational Home Economics - (preparation to provide services related to child care, clothing apparel/textiles, institutional food, home furnishings, and custodial/housekeeping) | Means_ET  | 0-100%       | CA                |
| E02CA99P | Instructional Program Required-Check All that Apply<br>No specific major required or preferred - No specific course major is required or preferred.   | Means_ET  | 0-100%       | CA                |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Technical Vocational

**Description:** Courses focus on non-business technical skills, such as Agriculture, Industrial Arts, Automobile and Shop, and Electronics

**Content Model Key:** II.D.3.a

- II. Worker Requirements
  - D. Education
    - 3. Education Level in Specific Subjects
      - a. *Technical Vocational*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| E03ER00I | Technical Vocational-Educational Level Required: Median  | Means_MD  | 0-4          | ER, E             |
| E03CO01P | Technical Vocational-% Chosen not required   | Means_ET  | 0-100%       | CO, E             |
| E03CO02P | Technical Vocational-% Chosen high school  | Means_ET  | 0-100%       | CO, E             |
| E03CO03P | Technical Vocational-% Chosen post-secondary technical training  | Means_ET  | 0-100%       | CO, E             |
| E03CO04P | Technical Vocational-% Chosen college  | Means_ET  | 0-100%       | CO, E             |
| E03CO05P | Technical Vocational-% Chosen graduate school or other post undergrad - graduate school or other post undergraduate training | Means_ET  | 0-100%       | CO, E             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Business Vocational

**Description:** Courses focus on basic business skills, such as Word Processing, Filing, Bookkeeping/Basic Accounting

**Content Model Key:** II.D.3.b

- II. Worker Requirements
  - D. Education
    - 3. Education Level in Specific Subjects
      - b. Business Vocational*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| E04ER00I | Business Vocational-Educational Level Required: Median  | Means_MD  | 0-4          | ER, E             |
| E04CO01P | Business Vocational-% Chosen not required   | Means_ET  | 0-100%       | CO, E             |
| E04CO02P | Business Vocational-% Chosen high school  | Means_ET  | 0-100%       | CO, E             |
| E04CO03P | Business Vocational-% Chosen post-secondary technical training  | Means_ET  | 0-100%       | CO, E             |
| E04CO04P | Business Vocational-% Chosen college  | Means_ET  | 0-100%       | CO, E             |
| E04CO05P | Business Vocational-% Chosen graduate school or other post undergrad - graduate school or other post undergraduate training | Means_ET  | 0-100%       | CO, E             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** English/Language Arts

**Description:** Courses focus on reading, interpretation, and writing, such as Literature, Composition, Journalism, and Creative Writing

**Content Model Key:** II.D.3.c

- II. Worker Requirements
  - D. Education
    - 3. Education Level in Specific Subjects
      - c. English/Language Arts*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| E05ER00I | English/Language Arts-Educational Level Required: Median  | Means_MD  | 0-4          | ER, E             |
| E05CO01P | English/Language Arts-% Chosen not required   | Means_ET  | 0-100%       | CO, E             |
| E05CO02P | English/Language Arts-% Chosen high school  | Means_ET  | 0-100%       | CO, E             |
| E05CO03P | English/Language Arts-% Chosen post-secondary technical training  | Means_ET  | 0-100%       | CO, E             |
| E05CO04P | English/Language Arts-% Chosen college  | Means_ET  | 0-100%       | CO, E             |
| E05CO05P | English/Language Arts-% Chosen graduate school or other post undergrad - graduate school or other post undergraduate training | Means_ET  | 0-100%       | CO, E             |



## O\*NET Data Dictionary : Worker Requirements

**Element:** Oral Communication

**Description:** Courses focus on oral communication and speech, such as Oral Communication, Speech, and Interpersonal Communication

**Content Model Key:** II.D.3.d

- II. Worker Requirements
  - D. Education
    - 3. Education Level in Specific Subjects
      - d. Oral Communication*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| E06ER00I | Oral Communication-Educational Level Required: Median  | Means_MD  | 0-4          | ER, E             |
| E06CO01P | Oral Communication-% Chosen not required   | Means_ET  | 0-100%       | CO, E             |
| E06CO02P | Oral Communication-% Chosen high school  | Means_ET  | 0-100%       | CO, E             |
| E06CO03P | Oral Communication-% Chosen post-secondary technical training  | Means_ET  | 0-100%       | CO, E             |
| E06CO04P | Oral Communication-% Chosen college  | Means_ET  | 0-100%       | CO, E             |
| E06CO05P | Oral Communication-% Chosen graduate school or other post undergrad - graduate school or other post undergraduate training | Means_ET  | 0-100%       | CO, E             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Languages

**Description:** Courses focus on reading, writing, and/or speaking languages other than English, such as French, Chinese, German, Japanese, Latin, Russian, and Spanish

**Content Model Key:** II.D.3.e

II. Worker Requirements  
 D. Education  
 3. Education Level in Specific Subjects  
*e. Languages*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| E07ER00I | Languages-Educational Level Required: Median  | Means_MD  | 0-4          | ER, E             |
| E07CO01P | Languages-% Chosen not required   | Means_ET  | 0-100%       | CO, E             |
| E07CO02P | Languages-% Chosen high school  | Means_ET  | 0-100%       | CO, E             |
| E07CO03P | Languages-% Chosen post-secondary technical training  | Means_ET  | 0-100%       | CO, E             |
| E07CO04P | Languages-% Chosen college  | Means_ET  | 0-100%       | CO, E             |
| E07CO05P | Languages-% Chosen graduate school or other post undergrad - graduate school or other post undergraduate training | Means_ET  | 0-100%       | CO, E             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Basic Math

**Description:** Courses focus on basic and applied math, such as General Math and Business Math

**Content Model Key:** II.D.3.f

II. Worker Requirements  
 D. Education  
 3. Education Level in Specific Subjects  
 f. *Basic Math*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| E08ER00I | Basic Math-Educational Level Required: Median  | Means_MD  | 0-4          | ER, E             |
| E08CO01P | Basic Math-% Chosen not required   | Means_ET  | 0-100%       | CO, E             |
| E08CO02P | Basic Math-% Chosen high school  | Means_ET  | 0-100%       | CO, E             |
| E08CO03P | Basic Math-% Chosen post-secondary technical training  | Means_ET  | 0-100%       | CO, E             |
| E08CO04P | Basic Math-% Chosen college  | Means_ET  | 0-100%       | CO, E             |
| E08CO05P | Basic Math-% Chosen graduate school or other post undergrad - graduate school or other post undergraduate training | Means_ET  | 0-100%       | CO, E             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Advanced Math

**Description:** Courses focus on advanced topics in math, such as Algebra, Geometry, Calculus, and Statistics

**Content Model Key:** II.D.3.g

- II. Worker Requirements
  - D. Education
    - 3. Education Level in Specific Subjects
      - g. Advanced Math*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| E09ER00I | Advanced Math-Educational Level Required: Median  | Means_MD  | 0-4          | ER, E             |
| E09CO01P | Advanced Math-% Chosen not required   | Means_ET  | 0-100%       | CO, E             |
| E09CO02P | Advanced Math-% Chosen high school  | Means_ET  | 0-100%       | CO, E             |
| E09CO03P | Advanced Math-% Chosen post-secondary technical training  | Means_ET  | 0-100%       | CO, E             |
| E09CO04P | Advanced Math-% Chosen college  | Means_ET  | 0-100%       | CO, E             |
| E09CO05P | Advanced Math-% Chosen graduate school or other post undergrad - graduate school or other post undergraduate training | Means_ET  | 0-100%       | CO, E             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Physical Science

**Description:** Courses focus on the study of matter and/or energy, such as Physics, Chemistry, and Astronomy

**Content Model Key:** II.D.3.h

II. Worker Requirements  
 D. Education  
 3. Education Level in Specific Subjects  
*h. Physical Science*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| E10ER00I | Physical Science-Educational Level Required: Median  | Means_MD  | 0-4          | ER, E             |
| E10CO01P | Physical Science-% Chosen not required   | Means_ET  | 0-100%       | CO, E             |
| E10CO02P | Physical Science-% Chosen high school  | Means_ET  | 0-100%       | CO, E             |
| E10CO03P | Physical Science-% Chosen post-secondary technical training  | Means_ET  | 0-100%       | CO, E             |
| E10CO04P | Physical Science-% Chosen college  | Means_ET  | 0-100%       | CO, E             |
| E10CO05P | Physical Science-% Chosen graduate school or other post undergrad - graduate school or other post undergraduate training | Means_ET  | 0-100%       | CO, E             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Computer Science

**Description:** Courses focus on computers and their uses, such as Programming, Information Systems Management, and Software Applications

**Content Model Key:** II.D.3.i

- II. Worker Requirements
  - D. Education
    - 3. Education Level in Specific Subjects
      - i. Computer Science*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| E11ER00I | Computer Science-Educational Level Required: Median  | Means_MD  | 0-4          | ER, E             |
| E11CO01P | Computer Science-% Chosen not required   | Means_ET  | 0-100%       | CO, E             |
| E11CO02P | Computer Science-% Chosen high school  | Means_ET  | 0-100%       | CO, E             |
| E11CO03P | Computer Science-% Chosen post-secondary technical training  | Means_ET  | 0-100%       | CO, E             |
| E11CO04P | Computer Science-% Chosen college  | Means_ET  | 0-100%       | CO, E             |
| E11CO05P | Computer Science-% Chosen graduate school or other post undergrad - graduate school or other post undergraduate training | Means_ET  | 0-100%       | CO, E             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Biological Science

**Description:** Courses focus on the study of life and living beings, such as life science, biology, anatomy and physiology

**Content Model Key:** II.D.3.j

II. Worker Requirements  
 D. Education  
 3. Education Level in Specific Subjects  
 j. *Biological Science*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| E12ER00I | Biological Science-Educational Level Required: Median  | Means_MD  | 0-4          | ER, E             |
| E12CO01P | Biological Science-% Chosen not required   | Means_ET  | 0-100%       | CO, E             |
| E12CO02P | Biological Science-% Chosen high school  | Means_ET  | 0-100%       | CO, E             |
| E12CO03P | Biological Science-% Chosen post-secondary technical training  | Means_ET  | 0-100%       | CO, E             |
| E12CO04P | Biological Science-% Chosen college  | Means_ET  | 0-100%       | CO, E             |
| E12CO05P | Biological Science-% Chosen graduate school or other post undergrad - graduate school or other post undergraduate training | Means_ET  | 0-100%       | CO, E             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Applied Science

**Description:** Courses focus on the application of science, such as Engineering, Health, and Medicine

**Content Model Key:** II.D.3.k

II. Worker Requirements  
 D. Education  
 3. Education Level in Specific Subjects  
*k. Applied Science*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| E13ER00I | Applied Science-Educational Level Required: Median  | Means_MD  | 0-4          | ER, E             |
| E13CO01P | Applied Science-% Chosen not required   | Means_ET  | 0-100%       | CO, E             |
| E13CO02P | Applied Science-% Chosen high school  | Means_ET  | 0-100%       | CO, E             |
| E13CO03P | Applied Science-% Chosen post-secondary technical training  | Means_ET  | 0-100%       | CO, E             |
| E13CO04P | Applied Science-% Chosen college  | Means_ET  | 0-100%       | CO, E             |
| E13CO05P | Applied Science-% Chosen graduate school or other post undergrad - graduate school or other post undergraduate training | Means_ET  | 0-100%       | CO, E             |



## O\*NET Data Dictionary : Worker Requirements

**Element:** Social Science

**Description:** Courses focus on the behavioral sciences, such as Social Studies, Economics, History, Psychology, and Sociology

**Content Model Key:** II.D.3.1

- II. Worker Requirements
  - D. Education
    - 3. Education Level in Specific Subjects
      - 1. *Social Science*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| E14ER00I | Social Science-Educational Level Required: Median  | Means_MD  | 0-4          | ER, E             |
| E14CO01P | Social Science-% Chosen not required   | Means_ET  | 0-100%       | CO, E             |
| E14CO02P | Social Science-% Chosen high school  | Means_ET  | 0-100%       | CO, E             |
| E14CO03P | Social Science-% Chosen post-secondary technical training  | Means_ET  | 0-100%       | CO, E             |
| E14CO04P | Social Science-% Chosen college  | Means_ET  | 0-100%       | CO, E             |
| E14CO05P | Social Science-% Chosen graduate school or other post undergrad - graduate school or other post undergraduate training | Means_ET  | 0-100%       | CO, E             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Arts

**Description:** Courses focus on visual and performing arts, such as Arts and Crafts, Music, Painting, Sculpture, Theater, and Voice

**Content Model Key:** II.D.3.m

II. Worker Requirements  
 D. Education  
 3. Education Level in Specific Subjects  
*m. Arts*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| E15ER00I | Arts-Educational Level Required: Median  | Means_MD  | 0-4          | ER, E             |
| E15CO01P | Arts-% Chosen not required   | Means_ET  | 0-100%       | CO, E             |
| E15CO02P | Arts-% Chosen high school  | Means_ET  | 0-100%       | CO, E             |
| E15CO03P | Arts-% Chosen post-secondary technical training  | Means_ET  | 0-100%       | CO, E             |
| E15CO04P | Arts-% Chosen college  | Means_ET  | 0-100%       | CO, E             |
| E15CO05P | Arts-% Chosen graduate school or other post undergrad - graduate school or other post undergraduate training | Means_ET  | 0-100%       | CO, E             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Humanities

**Description:** Courses focus on cultural and philosophical aspects of humans, such as Minority Studies, Philosophy, and Religion

**Content Model Key:** II.D.3.n

II. Worker Requirements  
 D. Education  
 3. Education Level in Specific Subjects  
 n. *Humanities*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| E16ER00I | Humanities-Educational Level Required: Median  | Means_MD  | 0-4          | ER, E             |
| E16CO01P | Humanities-% Chosen not required   | Means_ET  | 0-100%       | CO, E             |
| E16CO02P | Humanities-% Chosen high school  | Means_ET  | 0-100%       | CO, E             |
| E16CO03P | Humanities-% Chosen post-secondary technical training  | Means_ET  | 0-100%       | CO, E             |
| E16CO04P | Humanities-% Chosen college  | Means_ET  | 0-100%       | CO, E             |
| E16CO05P | Humanities-% Chosen graduate school or other post undergrad - graduate school or other post undergraduate training | Means_ET  | 0-100%       | CO, E             |

## O\*NET Data Dictionary : Worker Requirements

**Element:** Physical Education

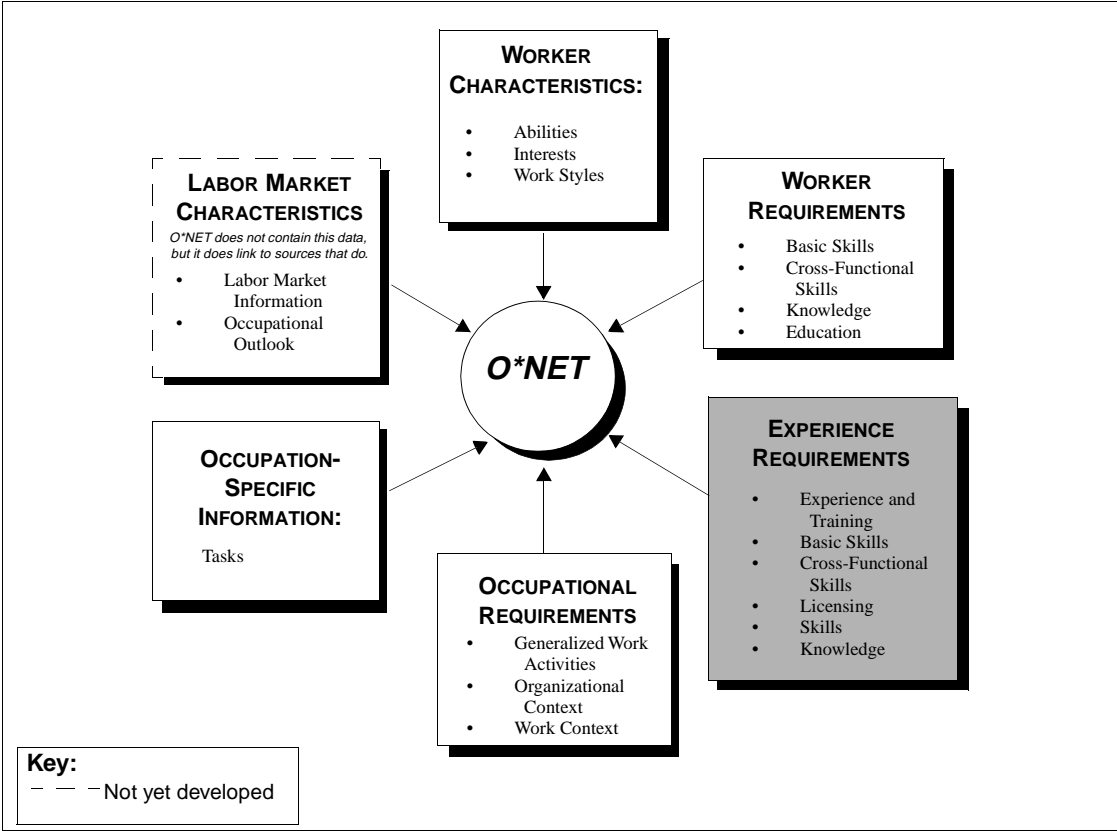
**Description:** Courses focus on physical fitness and sports, such as Aerobics, Jogging, Weight Lifting, and Specific Sports

**Content Model Key:** II.D.3.o

- II. Worker Requirements
  - D. Education
    - 3. Education Level in Specific Subjects
      - o. Physical Education*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| E17ER00I | Physical Education-Educational Level Required: Median  | Means_MD  | 0-4          | ER, E             |
| E17CO01P | Physical Education-% Chosen not required   | Means_ET  | 0-100%       | CO, E             |
| E17CO02P | Physical Education-% Chosen high school  | Means_ET  | 0-100%       | CO, E             |
| E17CO03P | Physical Education-% Chosen post-secondary technical training  | Means_ET  | 0-100%       | CO, E             |
| E17CO04P | Physical Education-% Chosen college  | Means_ET  | 0-100%       | CO, E             |
| E17CO05P | Physical Education-% Chosen graduate school or other post undergrad - graduate school or other post undergraduate training | Means_ET  | 0-100%       | CO, E             |

# Experience Requirements



## O\*NET Data Dictionary : Experience Requirements

|                                   |  |
|-----------------------------------|--|
| III. Experience Requirements      | Experience Requirements  |
| A. Experience and Training        | If someone were being hired to perform this job, how much of the following would be required?                |
| 1. Related Work Experience        |  |
| 2. On-Site or In-Plant Training   |  |
| 3. On-the-Job Training            |  |
| 4. Apprenticeship                 |  |
| B. Basic Skills                   | Developed capacities that facilitate learning or the more rapid acquisition of knowledge                     |
| 1. Content                        | Background structures needed to work with and acquire more specific skills in a variety of different domains |
| a. Reading Comprehension          |  |
| b. Active Listening               |  |
| c. Writing                        |  |
| d. Speaking                       |  |
| e. Mathematics                    |  |
| f. Science                        |  |
| 2. Process                        | Procedures that contribute to the more rapid acquisition of knowledge and skill across a variety of domains  |
| a. Critical Thinking              |  |
| b. Active Learning                |  |
| c. Learning Strategies            |  |
| d. Monitoring                     |  |
| C. Cross-Functional Skills        | Developed capacities that facilitate performance of activities that occur across jobs                        |
| 1. Social Skills                  | Developed capacities used to work with people to achieve goals   |
| a. Social Perceptiveness          |  |
| b. Coordination                   |  |
| c. Persuasion                     |  |
| d. Negotiation                    |  |
| e. Instructing                    |  |
| f. Service Orientation            |  |
| 2. Complex Problem Solving Skills | Developed capacities used to solve novel, ill-defined problems in complex, real-world settings               |
| a. Problem Identification         |  |

## O\*NET Data Dictionary : Experience Requirements

- b. Information Gathering
  - c. Information Organization
  - d. Synthesis/Reorganization
  - e. Idea Generation
  - f. Idea Evaluation
  - g. Implementation Planning
  - h. Solution Appraisal
3. Technical Skills
- Developed capacities used to design, set-up, operate, and correct malfunctions involving application of machines or technological systems
- a. Operations Analysis
  - b. Technology Design
  - c. Equipment Selection
  - d. Installation
  - e. Programming
  - f. Testing
  - g. Operation Monitoring
  - h. Operation and Control
  - i. Product Inspection
  - j. Equipment Maintenance
  - k. Troubleshooting
  - l. Repairing
4. Systems Skills
- Developed capacities used to understand, monitor, and improve socio-technical systems
- a. Visioning
  - b. Systems Perception
  - c. Identifying Downstream Consequences
  - d. Identification of Key Causes
  - e. Judgment and Decision Making
  - f. System Evaluation
5. Resource Management Skills
- Developed capacities used to allocate resources efficiently
- a. Time Management
  - b. Management of Financial Resources
  - c. Management of Material Resources
  - d. Management of Personnel Resources
- D. Licensing
- Licenses, certificates, or registrations that are awarded to show that a job holder has gained certain skills. This includes requirements for obtaining these credentials, and the organization or agency requiring their possession.
- 1. License, Certificate or Reg. Required

## O\*NET Data Dictionary : Experience Requirements

- |   |  |
|---|--|
| 2. Specific License or Cert. Required   | Specific education, training, examination, or other requirements for obtaining the licenses, certificates, or registration needed to perform in this job |
| <br>                                    |  |
| a. Post-Secondary Degree                |  |
| b. Graduate Degree                      |  |
| c. On-the-Job Training                  |  |
| d. Examination                          |  |
| e. Character References                 |  |
| <br>                                    |  |
| 4. Additional Education and Training    |  |
| 5. Organization and Agency Requirements | Organizations or agencies requiring the specific licenses, certificates, or registration needed to perform in a job                                      |
| <br>                                    |  |
| a. Legal Requirement                    |  |
| b. Employer Requirement                 |  |
| c. Union, Guild, or Professional Assoc. |  |



## O\*NET Data Dictionary : Experience Requirements

**Element:** Related Work Experience

**Description:** Related work experience (other jobs that prepared you for this job)

**Content Model Key:** III.A.1

III. Experience Requirements  
 A. Experience and Training  
 1. *Related Work Experience*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| X01AM00I | Related Work Experience-Required Amount of Experience: Median              | Means_MD  | 0-10         | AM, X             |
| X01CO01P | Related Work Experience-% Chosen not applicable or none                    | Means_XL  | 0-100%       | CO, X             |
| X01CO02P | Related Work Experience-% Chosen up to and including 1 month               | Means_XL  | 0-100%       | CO, X             |
| X01CO03P | Related Work Experience-% Chosen over 1 month, up to & including 3 months  | Means_XL  | 0-100%       | CO, X             |
| X01CO04P | Related Work Experience-% Chosen over 3 months, up to & including 6 months | Means_XL  | 0-100%       | CO, X             |
| X01CO05P | Related Work Experience-% Chosen over 6 months, up to & including 1 year   | Means_XL  | 0-100%       | CO, X             |
| X01CO06P | Related Work Experience-% Chosen over 1 year, up to & including 2 years    | Means_XL  | 0-100%       | CO, X             |
| X01CO07P | Related Work Experience-% Chosen over 2 years, up to & including 4 years   | Means_XL  | 0-100%       | CO, X             |
| X01CO08P | Related Work Experience-% Chosen over 4 years, up to & including 6 years   | Means_XL  | 0-100%       | CO, X             |
| X01CO09P | Related Work Experience-% Chosen over 6 years, up to & including 8 years   | Means_XL  | 0-100%       | CO, X             |
| X01CO10P | Related Work Experience-% Chosen over 8 years, up to & including 10 years  | Means_XL  | 0-100%       | CO, X             |
| X01CO11P | Related Work Experience-% Chosen over 10 years                             | Means_XL  | 0-100%       | CO, X             |

## O\*NET Data Dictionary : Experience Requirements

**Element:** On-Site or In-Plant Training

**Description:** On-site or in-plant training (organized classroom study provided by the employer)

**Content Model Key:** III.A.2

III. Experience Requirements  
 A. Experience and Training  
 2. *On-Site or In-Plant Training*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| X02AM00I | On-Site or In-Plant Training-Required Amount of Experience: Median              | Means_MD  | 0-10         | AM, X             |
| X02CO01P | On-Site or In-Plant Training-% Chosen not applicable or none                    | Means_XL  | 0-100%       | CO, X             |
| X02CO02P | On-Site or In-Plant Training-% Chosen up to and including 1 month               | Means_XL  | 0-100%       | CO, X             |
| X02CO03P | On-Site or In-Plant Training-% Chosen over 1 month, up to & including 3 months  | Means_XL  | 0-100%       | CO, X             |
| X02CO04P | On-Site or In-Plant Training-% Chosen over 3 months, up to & including 6 months | Means_XL  | 0-100%       | CO, X             |
| X02CO05P | On-Site or In-Plant Training-% Chosen over 6 months, up to & including 1 year   | Means_XL  | 0-100%       | CO, X             |
| X02CO06P | On-Site or In-Plant Training-% Chosen over 1 year, up to & including 2 years    | Means_XL  | 0-100%       | CO, X             |
| X02CO07P | On-Site or In-Plant Training-% Chosen over 2 years, up to & including 4 years   | Means_XL  | 0-100%       | CO, X             |
| X02CO08P | On-Site or In-Plant Training-% Chosen over 4 years, up to & including 6 years   | Means_XL  | 0-100%       | CO, X             |
| X02CO09P | On-Site or In-Plant Training-% Chosen over 6 years, up to & including 8 years   | Means_XL  | 0-100%       | CO, X             |
| X02CO10P | On-Site or In-Plant Training-% Chosen over 8 years, up to & including 10 years  | Means_XL  | 0-100%       | CO, X             |
| X02CO11P | On-Site or In-Plant Training-% Chosen over 10 years                             | Means_XL  | 0-100%       | CO, X             |

## O\*NET Data Dictionary : Experience Requirements

**Element:** On-the-Job Training

**Description:** On-the-job training (OJT; serving as a learner or trainee on the job under the instruction of a more experienced worker)

**Content Model Key:** III.A.3

III. Experience Requirements

A. Experience and Training

3. *On-the-Job Training*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| X03AM00I | On-the-Job Training-Required Amount of Experience: Median              | Means_MD  | 0-10         | AM, X             |
| X03CO01P | On-the-Job Training-% Chosen not applicable or none                    | Means_XL  | 0-100%       | CO, X             |
| X03CO02P | On-the-Job Training-% Chosen up to and including 1 month               | Means_XL  | 0-100%       | CO, X             |
| X03CO03P | On-the-Job Training-% Chosen over 1 month, up to & including 3 months  | Means_XL  | 0-100%       | CO, X             |
| X03CO04P | On-the-Job Training-% Chosen over 3 months, up to & including 6 months | Means_XL  | 0-100%       | CO, X             |
| X03CO05P | On-the-Job Training-% Chosen over 6 months, up to & including 1 year   | Means_XL  | 0-100%       | CO, X             |
| X03CO06P | On-the-Job Training-% Chosen over 1 year, up to & including 2 years    | Means_XL  | 0-100%       | CO, X             |
| X03CO07P | On-the-Job Training-% Chosen over 2 years, up to & including 4 years   | Means_XL  | 0-100%       | CO, X             |
| X03CO08P | On-the-Job Training-% Chosen over 4 years, up to & including 6 years   | Means_XL  | 0-100%       | CO, X             |
| X03CO09P | On-the-Job Training-% Chosen over 6 years, up to & including 8 years   | Means_XL  | 0-100%       | CO, X             |
| X03CO10P | On-the-Job Training-% Chosen over 8 years, up to & including 10 years  | Means_XL  | 0-100%       | CO, X             |
| X03CO11P | On-the-Job Training-% Chosen over 10 years                             | Means_XL  | 0-100%       | CO, X             |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Apprenticeship

**Description:** Apprenticeship (having served in a registered US Department of Labor apprenticeship program and received a certificate of completion)

**Content Model Key:** III.A.4

III. Experience Requirements

A. Experience and Training

4. Apprenticeship

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| X04AM00I | Apprenticeship-Required Amount of Experience: Median              | Means_MD  | 0-10         | AM, X             |
| X04CO01P | Apprenticeship-% Chosen not applicable or none                    | Means_XL  | 0-100%       | CO, X             |
| X04CO02P | Apprenticeship-% Chosen up to and including 1 month               | Means_XL  | 0-100%       | CO, X             |
| X04CO03P | Apprenticeship-% Chosen over 1 month, up to & including 3 months  | Means_XL  | 0-100%       | CO, X             |
| X04CO04P | Apprenticeship-% Chosen over 3 months, up to & including 6 months | Means_XL  | 0-100%       | CO, X             |
| X04CO05P | Apprenticeship-% Chosen over 6 months, up to & including 1 year   | Means_XL  | 0-100%       | CO, X             |
| X04CO06P | Apprenticeship-% Chosen over 1 year, up to & including 2 years    | Means_XL  | 0-100%       | CO, X             |
| X04CO07P | Apprenticeship-% Chosen over 2 years, up to & including 4 years   | Means_XL  | 0-100%       | CO, X             |
| X04CO08P | Apprenticeship-% Chosen over 4 years, up to & including 6 years   | Means_XL  | 0-100%       | CO, X             |
| X04CO09P | Apprenticeship-% Chosen over 6 years, up to & including 8 years   | Means_XL  | 0-100%       | CO, X             |
| X04CO10P | Apprenticeship-% Chosen over 8 years, up to & including 10 years  | Means_XL  | 0-100%       | CO, X             |
| X04CO11P | Apprenticeship-% Chosen over 10 years                             | Means_XL  | 0-100%       | CO, X             |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Reading Comprehension

**Description:** Understanding written sentences and paragraphs in work related documents

**Content Model Key:** III.B.1.a

III. Experience Requirements

B. Basic Skills

1. Content

*a. Reading Comprehension*

| <b>Variable</b> | <b>Variable Description</b>                    | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| B01JE00P        | Reading Comprehension-% Required for Job Entry | Means_SK         | 0-100%              | JE, B                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Active Listening

**Description:** Listening to what other people are saying and asking questions as appropriate

**Content Model Key:** III.B.1.b

III. Experience Requirements

B. Basic Skills

1. Content

*b. Active Listening*

| <b>Variable</b> | <b>Variable Description</b>               | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| B02JE00P        | Active Listening-% Required for Job Entry | Means_SK         | 0-100%              | JE, B                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Writing

**Description:** Communicating effectively with others in writing as indicated by the needs of the audience

**Content Model Key:** III.B.1.c

III. Experience Requirements

B. Basic Skills

1. Content

*c. Writing*

| <b>Variable</b> | <b>Variable Description</b>      | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|----------------------------------|------------------|---------------------|--------------------------|
| B03JE00P        | Writing-% Required for Job Entry | Means_SK         | 0-100%              | JE, B                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Speaking

**Description:** Talking to others to effectively convey information

**Content Model Key:** III.B.1.d

III. Experience Requirements

B. Basic Skills

1. Content

*d. Speaking*

| <b>Variable</b> | <b>Variable Description</b>       | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------------|------------------|---------------------|--------------------------|
| B04JE00P        | Speaking-% Required for Job Entry | Means_SK         | 0-100%              | JE, B                    |



## O\*NET Data Dictionary : Experience Requirements

**Element:** Mathematics

**Description:** Using mathematics to solve problems

**Content Model Key:** III.B.1.e

III. Experience Requirements

B. Basic Skills

1. Content

*e. Mathematics*

| <b>Variable</b> | <b>Variable Description</b>          | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--------------------------------------|------------------|---------------------|--------------------------|
| B05JE00P        | Mathematics-% Required for Job Entry | Means_SK         | 0-100%              | JE, B                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Science

**Description:** Using scientific methods to solve problems

**Content Model Key:** III.B.1.f

III. Experience Requirements

B. Basic Skills

1. Content

*f. Science*

| <b>Variable</b> | <b>Variable Description</b>      | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|----------------------------------|------------------|---------------------|--------------------------|
| B06JE00P        | Science-% Required for Job Entry | Means_SK         | 0-100%              | JE, B                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Critical Thinking

**Description:** Using logic and analysis to identify the strengths and weaknesses in different approaches

**Content Model Key:** III.B.2.a

III. Experience Requirements

B. Basic Skills

2. Process

a. *Critical Thinking*

| <b>Variable</b> | <b>Variable Description</b>                | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| B07JE00P        | Critical Thinking-% Required for Job Entry | Means_SK         | 0-100%              | JE, B                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Active Learning

**Description:** Working with new material or information to grasp its implications

**Content Model Key:** III.B.2.b

III. Experience Requirements

B. Basic Skills

2. Process

*b. Active Learning*

| <b>Variable</b> | <b>Variable Description</b>              | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| B08JE00P        | Active Learning-% Required for Job Entry | Means_SK         | 0-100%              | JE, B                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Learning Strategies

**Description:** Using multiple approaches when learning or teaching new things

**Content Model Key:** III.B.2.c

III. Experience Requirements

B. Basic Skills

2. Process

*c. Learning Strategies*

| <b>Variable</b> | <b>Variable Description</b>                  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| B09JE00P        | Learning Strategies-% Required for Job Entry | Means_SK         | 0-100%              | JE, B                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Monitoring

**Description:** Assessing how well one is doing when learning or doing something

**Content Model Key:** III.B.2.d

III. Experience Requirements

B. Basic Skills

2. Process

*d. Monitoring*

| <b>Variable</b> | <b>Variable Description</b>         | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-------------------------------------|------------------|---------------------|--------------------------|
| B10JE00P        | Monitoring-% Required for Job Entry | Means_SK         | 0-100%              | JE, B                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Social Perceptiveness

**Description:** Being aware of others' reactions and understanding why they react the way they do

**Content Model Key:** III.C.1.a

III. Experience Requirements

C. Cross-Functional Skills

1. Social Skills

*a. Social Perceptiveness*

| <b>Variable</b> | <b>Variable Description</b>                    | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| C01JE00P        | Social Perceptiveness-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Coordination

**Description:** Adjusting actions in relation to others' actions

**Content Model Key:** III.C.1.b

III. Experience Requirements

C. Cross-Functional Skills

1. Social Skills

*b. Coordination*

| <b>Variable</b> | <b>Variable Description</b>           | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---------------------------------------|------------------|---------------------|--------------------------|
| C02JE00P        | Coordination-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |



## O\*NET Data Dictionary : Experience Requirements

**Element:** Persuasion

**Description:** Persuading others to approach things differently

**Content Model Key:** III.C.1.c

III. Experience Requirements

C. Cross-Functional Skills

1. Social Skills

*c. Persuasion*

| <b>Variable</b> | <b>Variable Description</b>         | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-------------------------------------|------------------|---------------------|--------------------------|
| C03JE00P        | Persuasion-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Negotiation

**Description:** Bring others together and trying to reconcile differences

**Content Model Key:** III.C.1.d

III. Experience Requirements

C. Cross-Functional Skills

1. Social Skills

*d. Negotiation*

| <b>Variable</b> | <b>Variable Description</b>          | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--------------------------------------|------------------|---------------------|--------------------------|
| C04JE00P        | Negotiation-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Instructing

**Description:** Teaching others how to do something

**Content Model Key:** III.C.1.e

III. Experience Requirements

C. Cross-Functional Skills

1. Social Skills

*e. Instructing*

| <b>Variable</b> | <b>Variable Description</b>          | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--------------------------------------|------------------|---------------------|--------------------------|
| C05JE00P        | Instructing-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Service Orientation

**Description:** Actively looking for ways to help people

**Content Model Key:** III.C.1.f

III. Experience Requirements

C. Cross-Functional Skills

1. Social Skills

*f. Service Orientation*

| <b>Variable</b> | <b>Variable Description</b>                  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| C06JE00P        | Service Orientation-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Problem Identification

**Description:** Identifying the nature of problems

**Content Model Key:** III.C.2.a

- III. Experience Requirements
  - C. Cross-Functional Skills
    - 2. Complex Problem Solving Skills
      - a. *Problem Identification*

| <b>Variable</b> | <b>Variable Description</b>                     | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| C07JE00P        | Problem Identification-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Information Gathering

**Description:** Knowing how to find information and identifying essential information

**Content Model Key:** III.C.2.b

III. Experience Requirements  
C. Cross-Functional Skills  
2. Complex Problem Solving Skills  
*b. Information Gathering*

| <b>Variable</b> | <b>Variable Description</b>                    | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| C08JE00P        | Information Gathering-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Information Organization

**Description:** Finding ways to structure or classify multiple pieces of information

**Content Model Key:** III.C.2.c

- III. Experience Requirements
  - C. Cross-Functional Skills
    - 2. Complex Problem Solving Skills
      - c. Information Organization*

| <b>Variable</b> | <b>Variable Description</b>                       | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| C09JE00P        | Information Organization-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Synthesis/Reorganization

**Description:** Reorganizing information to get a better approach to problems or tasks

**Content Model Key:** III.C.2.d

- III. Experience Requirements
  - C. Cross-Functional Skills
    - 2. Complex Problem Solving Skills
      - d. Synthesis/Reorganization*

| <b>Variable</b> | <b>Variable Description</b>                       | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| C10JE00P        | Synthesis/Reorganization-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |



## O\*NET Data Dictionary : Experience Requirements

**Element:** Idea Generation

**Description:** Generating a number of different approaches to problems

**Content Model Key:** III.C.2.e

III. Experience Requirements  
C. Cross-Functional Skills  
2. Complex Problem Solving Skills  
*e. Idea Generation*

| <b>Variable</b> | <b>Variable Description</b>              | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| C11JE00P        | Idea Generation-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Idea Evaluation

**Description:** Evaluating the likely success of an idea in relation to the demands of the situation

**Content Model Key:** III.C.2.f

III. Experience Requirements  
C. Cross-Functional Skills  
2. Complex Problem Solving Skills  
*f. Idea Evaluation*

| <b>Variable</b> | <b>Variable Description</b>              | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| C12JE00P        | Idea Evaluation-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Implementation Planning

**Description:** Developing approaches for implementing an idea

**Content Model Key:** III.C.2.g

III. Experience Requirements

C. Cross-Functional Skills

2. Complex Problem Solving Skills

*g. Implementation Planning*

| <b>Variable</b> | <b>Variable Description</b>                      | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| C13JE00P        | Implementation Planning-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Solution Appraisal

**Description:** Observing and evaluating the outcomes of a problem solution to identify lessons learned or redirect efforts

**Content Model Key:** III.C.2.h

III. Experience Requirements  
C. Cross-Functional Skills  
2. Complex Problem Solving Skills  
*h. Solution Appraisal*

| <b>Variable</b> | <b>Variable Description</b>                 | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| C14JE00P        | Solution Appraisal-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Operations Analysis

**Description:** Analyzing needs and product requirements to create a design

**Content Model Key:** III.C.3.a

III. Experience Requirements

C. Cross-Functional Skills

3. Technical Skills

*a. Operations Analysis*

| <b>Variable</b> | <b>Variable Description</b>                  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| C15JE00P        | Operations Analysis-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Technology Design

**Description:** Generating or adapting equipment and technology to serve user needs

**Content Model Key:** III.C.3.b

III. Experience Requirements

C. Cross-Functional Skills

3. Technical Skills

*b. Technology Design*

| <b>Variable</b> | <b>Variable Description</b>                | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| C16JE00P        | Technology Design-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Equipment Selection

**Description:** Determining the kind of tools and equipment needed to do a job

**Content Model Key:** III.C.3.c

III. Experience Requirements

C. Cross-Functional Skills

3. Technical Skills

*c. Equipment Selection*

| <b>Variable</b> | <b>Variable Description</b>                  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| C17JE00P        | Equipment Selection-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Installation

**Description:** Installing equipment, machines, wiring, or programs to meet specifications

**Content Model Key:** III.C.3.d

III. Experience Requirements

C. Cross-Functional Skills

3. Technical Skills

*d. Installation*

| <b>Variable</b> | <b>Variable Description</b>           | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---------------------------------------|------------------|---------------------|--------------------------|
| C18JE00P        | Installation-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |



## O\*NET Data Dictionary : Experience Requirements

**Element:** Programming

**Description:** Writing computer programs for various purposes

**Content Model Key:** III.C.3.e

III. Experience Requirements

C. Cross-Functional Skills

3. Technical Skills

*e. Programming*

| <b>Variable</b> | <b>Variable Description</b>          | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--------------------------------------|------------------|---------------------|--------------------------|
| C19JE00P        | Programming-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Testing

**Description:** Conducting tests to determine whether equipment, software, or procedures are operating as expected

**Content Model Key:** III.C.3.f

III. Experience Requirements

C. Cross-Functional Skills

3. Technical Skills

*f. Testing*

| <b>Variable</b> | <b>Variable Description</b>      | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|----------------------------------|------------------|---------------------|--------------------------|
| C20JE00P        | Testing-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Operation Monitoring

**Description:** Watching gauges, dials, or other indicators to make sure a machine is working properly

**Content Model Key:** III.C.3.g

III. Experience Requirements

C. Cross-Functional Skills

3. Technical Skills

*g. Operation Monitoring*

| <b>Variable</b> | <b>Variable Description</b>                   | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| C21JE00P        | Operation Monitoring-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Operation and Control

**Description:** Controlling operations of equipment or systems

**Content Model Key:** III.C.3.h

III. Experience Requirements

C. Cross-Functional Skills

3. Technical Skills

*h. Operation and Control*

| <b>Variable</b> | <b>Variable Description</b>                    | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| C22JE00P        | Operation and Control-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Product Inspection

**Description:** Inspecting and evaluating the quality of products

**Content Model Key:** III.C.3.i

III. Experience Requirements

C. Cross-Functional Skills

3. Technical Skills

*i. Product Inspection*

| <b>Variable</b> | <b>Variable Description</b>                 | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| C23JE00P        | Product Inspection-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Equipment Maintenance

**Description:** Performing routine maintenance and determining when and what kind of maintenance is needed

**Content Model Key:** III.C.3.j

III. Experience Requirements  
C. Cross-Functional Skills  
3. Technical Skills  
*j. Equipment Maintenance*

| <b>Variable</b> | <b>Variable Description</b>                    | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| C24JE00P        | Equipment Maintenance-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Troubleshooting

**Description:** Determining what is causing an operating error and deciding what to do about it

**Content Model Key:** III.C.3.k

III. Experience Requirements

C. Cross-Functional Skills

3. Technical Skills

*k. Troubleshooting*

| <b>Variable</b> | <b>Variable Description</b>              | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| C25JE00P        | Troubleshooting-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Repairing

**Description:** Repairing machines or systems using the needed tools

**Content Model Key:** III.C.3.1

III. Experience Requirements

C. Cross-Functional Skills

3. Technical Skills

*1. Repairing*

| <b>Variable</b> | <b>Variable Description</b>        | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|------------------------------------|------------------|---------------------|--------------------------|
| C26JE00P        | Repairing-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |



## O\*NET Data Dictionary : Experience Requirements

**Element:** Visioning

**Description:** Developing an image of how a system should work under ideal conditions

**Content Model Key:** III.C.4.a

III. Experience Requirements

C. Cross-Functional Skills

4. Systems Skills

a. *Visioning*

| <b>Variable</b> | <b>Variable Description</b>        | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|------------------------------------|------------------|---------------------|--------------------------|
| C27JE00P        | Visioning-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Systems Perception

**Description:** Determining when important changes have occurred in a system or are likely to occur

**Content Model Key:** III.C.4.b

III. Experience Requirements

C. Cross-Functional Skills

4. Systems Skills

*b. Systems Perception*

| <b>Variable</b> | <b>Variable Description</b>                 | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| C28JE00P        | Systems Perception-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Identifying Downstream Consequences

**Description:** Determining the long-term outcomes of a change in operations

**Content Model Key:** III.C.4.c

III. Experience Requirements

C. Cross-Functional Skills

4. Systems Skills

*c. Identifying Downstream Consequences*

| <b>Variable</b> | <b>Variable Description</b>                                  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| C29JE00P        | Identifying Downstream Consequences-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Identification of Key Causes

**Description:** Identifying the things that must be changed to achieve a goal

**Content Model Key:** III.C.4.d

III. Experience Requirements  
C. Cross-Functional Skills  
4. Systems Skills  
*d. Identification of Key Causes*

| <b>Variable</b> | <b>Variable Description</b>                           | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| C30JE00P        | Identification of Key Causes-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Judgment and Decision Making

**Description:** Weighing the relative costs and benefits of a potential action

**Content Model Key:** III.C.4.e

III. Experience Requirements

C. Cross-Functional Skills

4. Systems Skills

*e. Judgment and Decision Making*

| <b>Variable</b> | <b>Variable Description</b>                           | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| C31JE00P        | Judgment and Decision Making-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** System Evaluation

**Description:** Looking at many indicators of system performance, taking into account their accuracy

**Content Model Key:** III.C.4.f

III. Experience Requirements

C. Cross-Functional Skills

4. Systems Skills

*f. System Evaluation*

| <b>Variable</b> | <b>Variable Description</b>                | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| C32JE00P        | System Evaluation-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Time Management

**Description:** Managing one's own time and the time of others

**Content Model Key:** III.C.5.a

III. Experience Requirements  
C. Cross-Functional Skills  
5. Resource Management Skills  
*a. Time Management*

| <b>Variable</b> | <b>Variable Description</b>              | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| C33JE00P        | Time Management-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Management of Financial Resources

**Description:** Determining how money will be spent to get the work done, and accounting for these expenditures

**Content Model Key:** III.C.5.b

III. Experience Requirements

C. Cross-Functional Skills

5. Resource Management Skills

*b. Management of Financial Resources*

| <b>Variable</b> | <b>Variable Description</b>                                | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| C34JE00P        | Management of Financial Resources-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |



## O\*NET Data Dictionary : Experience Requirements

**Element:** Management of Material Resources

**Description:** Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work

**Content Model Key:** III.C.5.c

III. Experience Requirements

C. Cross-Functional Skills

5. Resource Management Skills

*c. Management of Material Resources*

| <b>Variable</b> | <b>Variable Description</b>                               | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| C35JE00P        | Management of Material Resources-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Management of Personnel Resources

**Description:** Motivating, developing, and directing people as they work, identifying the best people for the job

**Content Model Key:** III.C.5.d

III. Experience Requirements

C. Cross-Functional Skills

5. Resource Management Skills

*d. Management of Personnel Resources*

| <b>Variable</b> | <b>Variable Description</b>                                | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| C36JE00P        | Management of Personnel Resources-% Required for Job Entry | Means_SK         | 0-100%              | JE, C                    |

## O\*NET Data Dictionary : Experience Requirements

**Element:** License, Certificate or Reg. Required

**Description:** At least one license, certificate, or registration is required to perform in this job, including a driver's or vehicle operator's license. The specific license(s), certificate(s), or registration(s) are listed.

**Content Model Key:** III.D.1

III. Experience Requirements

D. Licensing

*1. License, Certificate or Reg. Required*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| L01CY01P | License, Certificate or Reg. Required-% Yes<br>Commercial vehicle license required - Is a commercial vehicle operator's license required to perform this job?  | Means_XL  | 0-100%       | CY, L11           |
| L01CY02P | License, Certificate or Reg. Required-% Yes<br>Non-vehicle license required - Is a license, certificate, or registration (other than a driver's or vehicle operator's license) required to perform this job? | Means_XL  | 0-100%       | CY, L12           |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Post-Secondary Degree

**Description:** Obtaining the licenses, certificates, or registration needed to perform in this job requires a post-secondary degree, for example an Associate's or Bachelor's degree.

**Content Model Key:** III.D.2.a

III. Experience Requirements

D. Licensing

2. Specific License or Cert. Required

*a. Post-Secondary Degree*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| L02CY00P        | Post-Secondary Degree-% Yes | Means_XL         | 0-100%              | CY, L04                  |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Graduate Degree

**Description:** Obtaining the licenses, certificates, or registration needed to perform in this job requires a graduate degree, for example, a Master's or Doctoral degree.

**Content Model Key:** III.D.2.b

III. Experience Requirements

D. Licensing

2. Specific License or Cert. Required

*b. Graduate Degree*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| L03CY00P        | Graduate Degree-% Yes       | Means_XL         | 0-100%              | CY, L04                  |

## O\*NET Data Dictionary : Experience Requirements

**Element:** On-the-Job Training

**Description:** Obtaining the licenses, certificates, or registration needed to perform in this job requires on-the-job training, including apprenticeships, internships, and other supervised experiences.

**Content Model Key:** III.D.2.c

III. Experience Requirements

D. Licensing

2. Specific License or Cert. Required

c. *On-the-Job Training*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| L04CY00M        | On-the-Job Training-% Yes   | Means_XL         | 0-100%              | CY, L04                  |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Examination

**Description:** Obtaining the licenses, certificates, or registration needed to perform in this job requires an examination, for example, written, oral, or performance assessments.

**Content Model Key:** III.D.2.d

III. Experience Requirements

D. Licensing

2. Specific License or Cert. Required

*d. Examination*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| L05CY00M        | Examination-% Yes           | Means_XL         | 0-100%              | CY, L04                  |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Character References

**Description:** Obtaining the licenses, certificates, or registration needed to perform in this job requires one or more character references from other individuals.

**Content Model Key:** III.D.2.e

III. Experience Requirements

D. Licensing

2. Specific License or Cert. Required

*e. Character References*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| L06CY00M        | Character References-% Yes  | Means_XL         | 0-100%              | CY, L04                  |



## O\*NET Data Dictionary : Experience Requirements

**Element:** Additional Education and Training

**Description:** Retaining the licenses, certificates, or registration needed to perform in this job requires additional course work.

**Content Model Key:** III.D.4

III. Experience Requirements

D. Licensing

4. *Additional Education and Training*

| <b>Variable</b> | <b>Variable Description</b>             | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| L07CY00M        | Additional Education and Training-% Yes | Means_XL         | 0-100%              | CY, L07                  |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Legal Requirement

**Description:** Federal, state, or local law requires possessing specific licenses, certificates, or registration for performance in this job.

**Content Model Key:** III.D.5.a

III. Experience Requirements

D. Licensing

5. Organization and Agency Requirements

*a. Legal Requirement*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| L08CY00M        | Legal Requirement-% Yes     | Means_XL         | 0-100%              | CY, L08                  |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Employer Requirement

**Description:** Employers require possessing specific licenses, certificates, or registration for performance in this job.

**Content Model Key:** III.D.5.b

III. Experience Requirements

D. Licensing

5. Organization and Agency Requirements

*b. Employer Requirement*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| L09CY00M        | Employer Requirement-% Yes  | Means_XL         | 0-100%              | CY, L09                  |

## O\*NET Data Dictionary : Experience Requirements

**Element:** Union, Guild, or Professional Assoc.

**Description:** A union or professional association requires possessing specific licenses, certificates, or registration for performance in this job.

**Content Model Key:** III.D.5.c

III. Experience Requirements

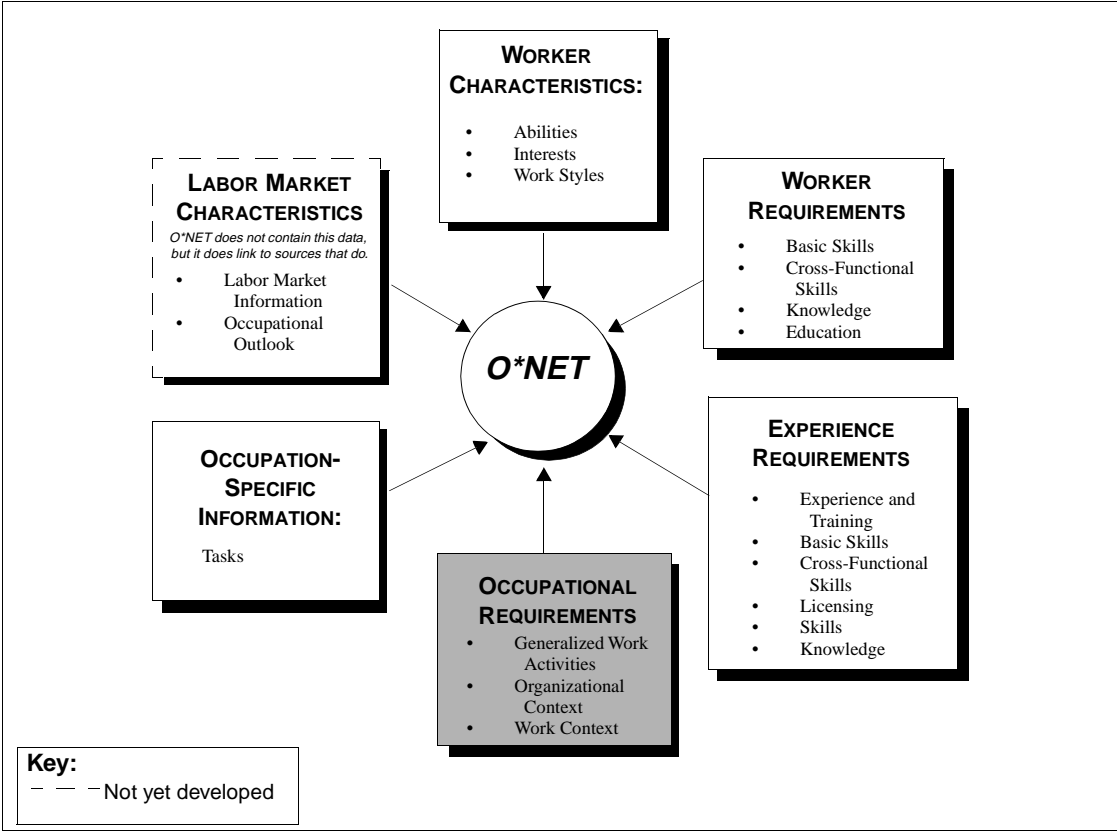
D. Licensing

5. Organization and Agency Requirements

*c. Union, Guild, or Professional Assoc.*

| <b>Variable</b> | <b>Variable Description</b>                | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| L10CY00P        | Union, Guild, or Professional Assoc.-% Yes | Means_XL         | 0-100%              | CY, L10                  |

# Occupational Requirements



## O\*NET Data Dictionary : Occupational Requirements

|   |   |
|---|---|
| A. Generalized Work Activities                | General types of job behaviors occurring on multiple jobs   |
| 1. Information Input                          | Where and how are the information and data gained that are needed to perform this job?  |
| a. Looking for/Receiving Job-Related Info.    | How is information obtained to perform this job?  |
| 1. Getting Information Needed to Do the Job   |   |
| 2. Monitor Processes, Material,Surroundings   |   |
| b. Identify/Evaluating Job-Relevant Info.     | How is information interpreted to perform this job?   |
| 1. Identifying Objects, Actions, and Events   |   |
| 2. Inspecting Equipment,Structures,Material   |   |
| 3. Estimating Needed Characteristics          |   |
| 2. Mental Processes                           | What processing, planning, problem-solving, decision-making, and innovating activities are performed with job-relevant information?                                 |
| a. Information/Data Processing                | How is information processed to perform this job?   |
| 1. Judging Qualities of Things, Srvc., People |   |
| 2. Processing Information                     |   |
| 3. Evaluating Info. Against Standards         |   |
| 4. Analyzing Data or Information              |   |
| b. Reasoning/Decision Making                  | What decisions are made and problems solved in performing this job?   |
| 1. Making Decisions and Solving Problems      |   |
| 2. Thinking Creatively                        |   |
| 3. Updating & Using Job-Relevant Knowledge    |   |
| 4. Developing Objectives and Strategies       |   |
| 5. Scheduling Work and Activities             |   |
| 6. Organizing, Planning, and Prioritizing     |   |
| 3. Work Output                                | What physical activities are performed, what equipment and vehicles are operated/controlled, and what complex/technical activities are accomplished as job outputs? |
| a. Performing Physical & Manual Work Activ.   | What activities using the body and hands are done to perform this job?  |
| 1. Performing General Physical Activities     |   |
| 2. Handling and Moving Objects                |   |

## O\*NET Data Dictionary : Occupational Requirements

3. Controlling Machines and Processes
  4. Operating Vehicles or Equipment
- b. Performing Complex/Technical Activities
- What skilled activities using coordinated movements are done to perform this job?
1. Interacting With Computers
  2. Drafting & Specifying Tech. Devices,etc.
  3. Implementing Ideas, Programs, etc.
  4. Repairing & Maintaining Mech. Equip.
  5. Repairing & Maintaining Elect. Equip.
  6. Documenting/Recording Information
4. Interacting With Others
- What interactions with other persons or supervisory activities occur while performing this job?
- a. Communicating/Interacting
- What interactions with other people occur while performing this job?
1. Interpreting Meaning of Info. to Others
  2. Communicating With Other Workers
  3. Communicating With Persons Outside Org.
  4. Establishing & Maintaining Relationships
  5. Assisting and Caring for Others
  6. Selling or Influencing Others
  7. Resolving Conflict,Negotiating w/ Others
  8. Performing for/Working With Public
- b. Coordinating/Developing/Managing/Advising
- What coordinating, managerial, or advisory activities are done while performing this job?
1. Coordinating Work & Activities of Others
  2. Developing and Building Teams
  3. Teaching Others
  4. Guiding, Directing & Motivating Subord.
  5. Coaching and Developing Others
  6. Provide Consultation & Advice to Others
- c. Administering
- What administrative, staffing, monitoring, or controlling activities are done while performing this job?
1. Performing Administrative Activities
  2. Staffing Organizational Units
  3. Monitoring and Controlling Resources
- B. Organizational Context
- Characteristics of the organization that influence how people do their work

## O\*NET Data Dictionary : Occupational Requirements

1. Structural Characteristics
  - a. Organizational Structure
    - 1. Decision Making System
      - a. Decentralization & Employee Empowerment
        - i. Have Control Over Unit/Department
        - ii. Have Influence Over Decisions
        - iii. Monitor Data on Quality/Costs/Waste/etc.
        - iv. Determine Work Flow/Order of Tasks
        - v. Invest in New Equipment and Technology
        - vi. Develop New Products, Services, etc.
      - b. Individual versus Team Structure
        - i. Percent of Time in Intact Team
2. Job Characteristics
  - a. Skill Variety
    - i. Job Variety
    - ii. Complex or High Level Skills Required
    - iii. Variety of Tasks Required
  - b. Task Significance
    - i. Significance or Importance of Job
    - ii. Job Quality Affects Lots of People
    - iii. Job Itself Is Very Significant

A functional subsystem of organization structure subsuming constructs of (a) organizational structure, and (b) human resources systems and practices

The architecture or anatomy of an organization, affecting the behavior of organizational members as well as the ability of organizations to adapt effectively to their environments. Elements of organizational structure include the hierarchy of the organization, the degree of centralization, and the nature of work groups used to accomplish organizational objectives

The amount of autonomy and involvement in decision making that employees have

Indicates the degree to which employees are provided with different types of information and participate in decision-making

Identifies the extent to which employees work in intact teams

Indicates the level of skill variety, task significance, task identity, autonomy, and feedback in this job

The variety of skills required of people in this job

The importance or significance of the tasks performed on this job, as reflected by its effect on the lives or well-being of others



## O\*NET Data Dictionary : Occupational Requirements

- c. Task Identity
  - The extent to which tasks performed on this job can be perceived as contributing to the final product
  
- i. Job Involves "Whole" Piece of Work
  - ii. Can Do Entire Piece of Work
  - iii. Can Finish What You Start
  
- d. Autonomy
  - The amount of freedom in the job, as reflected in a person being able to exercise personal initiative and judgment in task performance
  
- i. Autonomy and Freedom in Job
  - ii. Chance for Initiative and Judgment
  - iii. Opportunity for Independence/Freedom
  
- e. Feedback
  - The extent to which this job provides information about how well one is performing
  
- i. Extent of Feedback From Doing Job Itself
  - ii. Doing Job Provides Chances for Feedback
  - iii. After Finishing Job, Know Own Performance
  
- 3. Job Stability and Rotation
  - The amount of stability in the job and the extent of job rotation
  
- a. Number of Supervisors in Past Year
  - b. Number of Work Teams in Past Year
  - c. Number of Work Group Reorgs. in Past Year
  - d. No. of Times Nature of Job Changed
  - e. Job Rotation Practices
  
- b. Human Resources Systems and Practices
  - Organizational practices and policies designed to ensure that an organization has employees who are capable of meeting its goals
  
- 1. Recruitment and Selection
  - Organizational practices, decisions, and processes that affect (a) the capability of an organization to make hiring, promotion, and other personnel decisions, and (b) the number or types of individuals who are willing to apply for or accept a given vacancy
  
- a. Recruitment Operations
    - Activities involved in implementing recruitment plans (e.g., selecting sources, realistic job preview)
  
  - i. Sources of People for Current Job
  
  - b. Selection Assessment Methods Used
    - The methods used for selection or promotion of employees

## O\*NET Data Dictionary : Occupational Requirements

- i. Assessment Methods Used to Select for Job
- 2. Training and Development
  - The systematic acquisition of attitudes, concepts, knowledge, roles, or skills that result in improved performance at work
  - a. Training Methods
    - The methods used in training programs
    - i. Training Methods Used in Company
  - b. Training Topics/Content
    - What trainers intend to teach trainees through training programs
    - i. Areas of Recent Formal Training
  - c. Extent/Support of Training Activities
    - The extent to which an organization makes training available to its employees and provides financial support for training activities
    - i. Recent Technical Skill Training
- 3. Reward System
  - Monetary compensation and monetary and non-monetary benefits organizations provide to their employees
  - a. Basis of Compensation
    - The extent to which organizations reward individuals based on: (a) their knowledge, skills, and performance, (b) seniority, (c) team performance, (d) organizational performance, and (e) job attributes
    - i. Compensation Package Components
    - b. Benefits
      - The extent to which employees' compensation includes benefits such as pensions, insurance, paid leave, awards and bonuses, pay for time not worked, etc.
      - i. Benefit Components
- 2. Social Processes
  - A functional subsystem of organization structure subsuming processes linking people (employees) to their work and to each other and includes elements such as values, goals, leadership, and roles
  - a. Goals
    - Individual goal setting.
    - 1. Individual Goal Characteristics
      - The extent to which an individual's goal is made explicit, and the probability that an individual can attain the goal
      - a. Achieve Most Important Individ. Goal

## O\*NET Data Dictionary : Occupational Requirements

- b. How Many Quantitative Individual Goals
- 2. Goal Feedback
  - The extent to which an individual is given periodic feedback regarding his or her progress against a goal
  - a. How Many Specific Individual Goals
  - b. When Get Info. on Individual Goals
  - c. Informal, Job-Relevant Feedback
  - d. Meet 1-on-1 With Supervisor on Goals, etc.
- b. Roles
  - Characteristics of job incumbents' roles, such as the extent to which they involve conflict and overload
  - 1. Role Conflict
    - The extent to which an individual has to deal with conflicting demands
    - a. Often Receive Conflicting Requests
    - b. Work With Groups With Different Focuses
    - c. You and Your Supervisor Agree About Job
    - d. Supervisor Makes Conflicting Requests
  - 2. Role Negotiability
    - the extent to which an individual can negotiate his/her role in an organization
    - a. Negotiate Changes in Role w/Supervisor
    - b. Significant Input Into Way You Do Job
  - 3. Role Overload
    - A discrepancy between the job's demands and one's ability to meet those demands
    - a. Get Assignments w/o Adequate Resources
    - b. Given Enough Time to Do Work
    - c. Too Much for One Person to Do
- c. Culture
  - Patterns of behaviors and social relationships reflecting the assumptions, values, norms, and artifacts shared by members of the organization
  - 1. Organizational Values
    - Indicates the importance of different organizational values such as tradition, stability, innovation, and collaboration
    - a. Guiding Principles of Organization
      - How important are each of the following concepts, or values, as a guiding principle for your organization as a whole.
      - i. Taking Chances; Going Out on a Limb
      - ii. Fairness; Justice
      - iii. Precision
      - iv. Stability

## O\*NET Data Dictionary : Occupational Requirements

- v. Getting Things Done
- vi. Caring About Employees
- vii. Innovation
- viii. Aggressiveness
- ix. Valuing Customers
- x. Providing High Quality Products
- xi. Openness and Honesty
- xii. Flexibility, Adapting to Change

### d. Supervisor Role

The nature of supervisory leadership

- 1. Supervisor Friendly and Supportive
- 2. Supervisor Takes Active Role
- 3. Supervisor Provides Clear Vision
- 4. Supervisor Solves Problems

### C. Work Context

Physical and social factors that influence the nature of work

#### 1. Interpersonal Relationships

This category describes the context of the job in terms of human interaction processes

##### a. Communication

Types and frequency of interactions with other people that are required as part of this job.

- 1. Formality of Communication
- 2. Communication Methods

How frequently does this job require the use of the following communication methods?

- a. Face-to-Face With Individuals
- b. Face-to-Face With Groups
- c. Public speaking
- d. Video conference
- e. Voice mail
- f. Telephone
- g. Interactive
- h. Electronic Mail
- i. Handwritten Notes or Messages
- j. Letters and Memos
- k. Written Reports

- 3. Objective or Subjective Information
- 4. Job-Required Social Interaction
- 5. Privacy of Communications

##### b. Role Relationships

Importance of different types of interactions with others both inside and outside the organization

## O\*NET Data Dictionary : Occupational Requirements

1. Job Interactions
  - a. Supervise, Coach, Train Others
  - b. Persuade Someone to a Course of Action
  - c. Provide a Service to Others
  - d. Take a Position Opposed to Others
  - e. Work With Work Group or Team
  - f. Deal With External Customers
  - g. Coordinate or Lead Others
  
- c. Responsibility for Others
  - 1. Responsible for Others' Health & Safety
  - 2. Responsibility for Outcomes and Results
  
- d. Conflictual Contact
  - 1. Frequency in Conflict Situations
  - 2. Deal With Unpleasant/Angry People
  - 3. Deal With Physically Aggressive People
  
2. Physical Work Conditions
  - a. Work Setting
    - 1. Frequency Required to Work:
      - a. Indoors, Environmentally Controlled
      - b. Indoors, Not Environmentally Controlled
      - c. Outdoors, Exposed to Weather
      - d. Outdoors, Under Cover
      - e. In an Open Vehicle or Equipment
      - f. In an Enclosed Vehicle or Equipment
      - g. Indoors
      - h. Outdoors
    - 2. Privacy of Work Area
    - 3. Physical Proximity
  
  - b. Environmental Conditions

How important are interactions requiring the worker to:

Amount of responsibility the worker has for other workers as a part of this job

Amount of conflict that the worker will encounter as part of this job

This category describes the work context as it relates to the interactions between the worker and the physical job environment

Description of physical surroundings that the worker will face as part of this job

How frequently does this job require the worker to work:

Description of extreme environmental conditions the worker will be placed in as part of this job

## O\*NET Data Dictionary : Occupational Requirements

1. Environmental Conditions

How often during a usual work period is the worker exposed to the following conditions:

  - a. Sounds, Noise Levels Are Distracting, etc.
  - b. Very Hot
  - c. Extremely Bright or Inadequate Lighting
  - d. Contaminants
  - e. Cramped Work Space, Awkward Positions
  - f. Whole Body Vibration
  
- c. Job Hazards

Descriptions of types of hazardous conditions the worker could be exposed to as part of this job. This includes the frequency of exposure, and the likelihood and degree of injury if exposed.

  1. Frequency of Exposure to Job Hazards

How often does this job require the worker to be exposed to the following hazards?

    - a. Radiation
    - b. Diseases/Infections
    - c. High Places
    - d. Hazardous Conditions
    - e. Hazardous Equipment
    - f. Hazardous Situations
  
  2. Likelihood of Injury From Job Hazards

What is the likelihood that the worker would be injured as a result of being exposed to the following hazards while performing this job?

    - a. Radiation
    - b. Diseases/Infections
    - c. High Places
    - d. Hazardous Conditions
    - e. Hazardous Equipment
    - f. Hazardous Situations
  
  3. Degree of Injury

If injury, due to exposure to the following hazards, were to occur while performing this job, how serious would be the likely outcome?

    - a. Radiation
    - b. Diseases/Infections
    - c. High Places
    - d. Hazardous Conditions
    - e. Hazardous Equipment
    - f. Hazardous Situations
  
- d. Body Positioning

Amount of time the worker will spend in a variety of physical positions on this job

## O\*NET Data Dictionary : Occupational Requirements

1. Body Positioning
  - a. Sitting
  - b. Standing
  - c. Climbing Ladders, Scaffolds, Poles, etc.
  - d. Walking or Running
  - e. Kneeling, Crouching or Crawling
  - f. Keeping or Regaining Balance
  - g. Using Hands on Objects, Tools, Controls
  - h. Bending or Twisting the Body
  - i. Making Repetitive Motions
  
- e. Work Attire
  - 1. Work Attire
    - a. Business Clothes
    - b. Special Uniform
    - c. Work Clothing
    - d. Common Protective or Safety Attire
    - e. Specialized Protective or Safety Attire
  
3. Structural Job Characteristics
  - a. Criticality of Position
    - 1. Consequence of Error
    - 2. Impact of Decisions
      - a. Level
      - b. Frequency
    - 3. Responsibility/Accountability
    - 4. Decision Latitude
  - b. Routine versus Challenging Work
    - 1. Frustrating Circumstances
    - 2. Degree of Automation
    - 3. Task Clarity
    - 4. Importance of Being Exact or Accurate
    - 5. Importance of Being Sure All Is Done
    - 6. Importance of Being Aware of New Events

## O\*NET Data Dictionary : Occupational Requirements

7. Importance of Repeating Same Tasks
8. Structured versus Unstructured Work

c. Level of Competition

Amount of competition that the worker will face as part of this job

1. Level of Competition

d. Pace and Scheduling

Description of the role that time plays in the way the worker performs the tasks required by this job

1. Time Pressure
2. Work Under Frequent Distractions
3. Pace Determined by Speed of Equipment
4. Work Schedules
5. Work Shift
6. Work Shift Duration
7. Type of Overtime (if any)
8. Duration of Typical Work Week
9. Work Cycle
10. Length of Work Cycle



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Getting Information Needed to Do the Job

**Description:** Observing, receiving, and otherwise obtaining information from all relevant sources.

**Content Model Key:** IV.A.1.a.1

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 1. Information Input
      - a. Looking for/Receiving Job-Related Info.
        - 1. *Getting Information Needed to Do the Job*

| Variable | Variable Description                           | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| G01LV00M | Getting Information Needed to Do the Job-Level | Means_GW  | 1-7, 0(NR)   | LV, G             |

| Left Label   | Value | Right Label   |
|--|-------|---|
| Getting new information from many sources, often by actively interacting with the sources. | 7     |   |
|  | 6.5   | Studying international tax laws.<br>Reviewing the results of a large financial audit.<br>Grading the performance of college students.         |
|  | 4     | Following a wiring diagram. Reviewing a budget.<br>Interviewing witnesses at a crime scene.   |
|  | 1.5   | Feeling the smoothness of a sanded surface.<br>Following a standard blueprint.<br>Reading instructions to install clothes washers and dryers. |
| Making regular use of the same types of information from a single source.                  | 1     |   |

|           |   |          |     |       |
|-----------|---|----------|-----|-------|
| G01IM00M  | Getting Information Needed to Do the Job-Importance | Means_GW | 1-5 | IM, G |
| G01FR00M  | Getting Information Needed to Do the Job-Frequency  | Means_GW | 1-7 | FR, G |
| *G01FG00M | Getting Information Needed to Do the Job-Frequency  | Means_GW | 1-4 | FG, G |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Monitor Processes, Material,Surroundings

**Description:** Monitoring and reviewing information from materials, events, or the environment, often to detect problems or to find out when things are finished.

**Content Model Key:** IV.A.1.a.2

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 1. Information Input
      - a. Looking for/Receiving Job-Related Info.
        - 2. *Monitor Processes, Material,Surroundings*

| Variable | Variable Description                           | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| G03LV00M | Monitor Processes, Material,Surroundings-Level | Means_GW  | 1-7, 0(NR)   | LV, G             |

| Left Label   | Value | Right Label  |
|--|-------|--|
| Monitoring very complex processes, events, or circumstances.         | 7     |  |
|  | 6.5   | Watching aircraft instruments.<br>Checking the status of a patient in critical medical care. |
|  | 4     | Watching chemical reactions in laboratory test tubes.<br>Testing electrical circuits.        |
|  | 1.5   | Checking to see if baking bread is done.<br>Watching progress in digging a ditch.            |
| Monitoring processes, events, or circumstances that are not complex. | 1     |  |

|           |   |          |     |       |
|-----------|---|----------|-----|-------|
| G03IM00M  | Monitor Processes, Material,Surroundings-Importance | Means_GW | 1-5 | IM, G |
| G03FR00M  | Monitor Processes, Material,Surroundings-Frequency  | Means_GW | 1-7 | FR, G |
| *G03FG00M | Monitor Processes, Material,Surroundings-Frequency  | Means_GW | 1-4 | FG, G |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Identifying Objects, Actions, and Events

**Description:** Identifying information received by making estimates or categorizations, recognizing differences or similarities, or sensing changes in circumstances or events.

**Content Model Key:** IV.A.1.b.1

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 1. Information Input
      - b. Identify/Evaluating Job-Relevant Info.
        - 1. *Identifying Objects, Actions, and Events*

| Variable  | Variable Description                                | File Name   | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |  |   |  |
|---|---|---|--------------|-------------------|------------|-------|-------------|---|---|--|--|-----|---|--|---|---|--|-----|---|--|---|--|
| G02LV00M  | Identifying Objects, Actions, and Events-Level      | Means_GW  | 1-7, 0(NR)   | LV, G             |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |  |   |  |
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| Left Label  | Value   | Right Label   |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |  |   |  |
| Making extremely difficult identifications based on very complex information.   | 7   |   |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |  |   |  |
|   | 6.5   | Evaluating investments for a mutual fund.<br>Determining the reaction of a virus to a new drug. |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |  |   |  |
|   | 4   | Making currency exchanges.<br>Judging the acceptability of food products.                       |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |  |   |  |
|   | 1.5   | Testing an automobile transmission.<br>Soliciting information over the telephone.               |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |  |   |  |
| Making easy identification based on information that is not complex.  | 1   |   |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |  |   |  |
| G02IM00M  | Identifying Objects, Actions, and Events-Importance | Means_GW  | 1-5          | IM, G             |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |  |   |  |
| G02FR00M  | Identifying Objects, Actions, and Events-Frequency  | Means_GW  | 1-7          | FR, G             |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |  |   |  |
| *G02FG00M   | Identifying Objects, Actions, and Events-Frequency  | Means_GW  | 1-4          | FG, G             |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |  |   |  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Inspecting Equipment,Structures,Material

**Description:** Inspecting or diagnosing equipment, structures, or materials to identify the causes of errors or other problems or defects.

**Content Model Key:** IV.A.1.b.2

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 1. Information Input
      - b. Identify/Evaluating Job-Relevant Info.
        - 2. *Inspecting Equipment,Structures,Material*

| Variable | Variable Description                           | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| G04LV00M | Inspecting Equipment,Structures,Material-Level | Means_GW  | 1-7, 0(NR)   | LV, G             |

| Left Label   | Value | Right Label   |
|--|-------|---|
| Making inspections or diagnoses of a complex system that may have many interrelated parts, and determining whether conditions exist within a range of acceptable limits. | 7     |   |
|  | 6.5   | Inspecting a nuclear reactor.<br>Testing a space shuttle prior to takeoff.                |
|  | 4     | Testing computer circuits.<br>Inspecting equipment in a chemical processing plant.        |
|  | 1.5   | Inspecting the production of paper cups.<br>Checking that doors to a building are locked. |
| Making inspections of very simple components, machines, or structures, where indications of problems or defects are easily found.  | 1     |   |

|           |   |          |     |       |
|-----------|---|----------|-----|-------|
| G04IM00M  | Inspecting Equipment,Structures,Material-Importance | Means_GW | 1-5 | IM, G |
| G04FR00M  | Inspecting Equipment,Structures,Material-Frequency  | Means_GW | 1-7 | FR, G |
| *G04FG00M | Inspecting Equipment,Structures,Material-Frequency  | Means_GW | 1-4 | FG, G |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Estimating Needed Characteristics

**Description:** Estimating the Characteristics of Materials, Products, Events, or Information: Estimating sizes, distances, and quantities, or determining time, costs, resources, or materials needed to perform a work activity.

**Content Model Key:** IV.A.1.b.3

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 1. Information Input
      - b. Identify/Evaluating Job-Relevant Info.
        - 3. *Estimating Needed Characteristics*

| Variable | Variable Description                    | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| G05LV00M | Estimating Needed Characteristics-Level | Means_GW  | 1-7, 0(NR)   | LV, G             |

| Left Label   | Value | Right Label   |
|--|-------|---|
| Making very difficult estimates of characteristics, time, or resources where there is limited guidance or supporting information.        | 7     |   |
|  | 6.5   | Estimating the amount of natural resources that lie beneath the world's oceans.   |
|  | 4     | Estimating the time required to evacuate a sizable city in the event of a major disaster.                               |
|  | 1.5   | Estimating the size of household furnishings to be crated.<br>Determining the arrival time of cargo ships at a seaport. |
| Making straightforward estimates of characteristics, time, or resources where there is considerable guidance and supporting information. | 1     |   |

G05IM00M Estimating Needed Characteristics-Importance Means\_GW 1-5 IM, G

G05FR00M Estimating Needed Characteristics-Frequency Means\_GW 1-7 FR, G

\*G05FG00M Estimating Needed Characteristics-Frequency Means\_GW 1-4 FG, G

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Judging Qualities of Things, Srvc., People

**Description:** Making judgments about or assessing the value, importance, or quality of things or people.

**Content Model Key:** IV.A.2.a.1

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 2. Mental Processes
      - a. Information/Data Processing
        - 1. *Judging Qualities of Things, Srvc., People*

| Variable | Variable Description                             | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| G06LV00M | Judging Qualities of Things, Srvc., People-Level | Means_GW  | 1-7, 0(NR)   | LV, G             |

| Left Label   | Value | Right Label  |
|--|-------|--|
| Making very difficult judgments about the quality or importance of things or people for which there is limited guidance or supporting information. | 7     |  |
|  | 6.5   | Trying to establish the value of a recently discovered ancient art work.<br>Determining the importance of a new mental health delivery program to the residents of a major city. |
|  | 4     | Determining the value of property lost in a fire.<br>Judging the importance of a news story and where it should be located in a newspaper.                                       |
|  | 1.5   | Determining whether to remove a tree that has been damaged.<br>Judging the quality of writing paper.   |
| Making easy judgments about the quality or importance of things or people when there are a lot of guidelines.                                      | 1     |  |

|           |   |          |     |       |
|-----------|---|----------|-----|-------|
| G06IM00M  | Judging Qualities of Things, Srvc., People-Importance | Means_GW | 1-5 | IM, G |
| G06FR00M  | Judging Qualities of Things, Srvc., People-Frequency  | Means_GW | 1-7 | FR, G |
| *G06FG00M | Judging Qualities of Things, Srvc., People-Frequency  | Means_GW | 1-4 | FG, G |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Processing Information

**Description:** Compiling, coding, categorizing, calculating, tabulating, auditing, verifying, or processing information or data.

**Content Model Key:** IV.A.2.a.2

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 2. Mental Processes
      - a. Information/Data Processing
        - 2. *Processing Information*

| Variable  | Variable Description              | File Name  | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |
|---|-----------------------------------|--|--------------|-------------------|------------|-------|-------------|---|---|--|--|-----|--|--|---|--|--|-----|--|---|---|--|
| G08LV00M  | Processing Information-Level      | Means_GW   | 1-7, 0(NR)   | LV, G             |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |
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| Left Label  | Value                             | Right Label  |              |                   |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |
| Processing very different and complicated data information, where there are several ways in which the information can be processed.   | 7                                 |  |              |                   |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |
|   | 6.5                               | Making a cost analysis for a nuclear power plant.<br>Compiling data for a complex scientific report.           |              |                   |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |
|   | 4                                 | Calculating the adjustments for insurance claims.<br>Auditing quality control records for a drug manufacturer. |              |                   |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |
|   | 1.5                               | Coding dental hygiene records.<br>Tabulating costs of parcel deliveries.                                       |              |                   |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |
| Processing data or information that is standardized and easy to understand, where there is only one way to process the information.   | 1                                 |  |              |                   |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |
| G08IM00M  | Processing Information-Importance | Means_GW   | 1-5          | IM, G             |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |
| G08FR00M  | Processing Information-Frequency  | Means_GW   | 1-7          | FR, G             |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |
| *G08FG00M   | Processing Information-Frequency  | Means_GW   | 1-4          | FG, G             |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Evaluating Info. Against Standards

**Description:** Evaluating information against a set of standards and verifying that it is correct.

**Content Model Key:** IV.A.2.a.3

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 2. Mental Processes
      - a. Information/Data Processing
        - 3. *Evaluating Info. Against Standards*

| Variable   | Variable Description                          | File Name   | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
|--|---|---|--------------|-------------------|------------|-------|-------------|---|---|--|--|-----|--|--|---|---|--|-----|---|--|---|--|
| G07LV00M   | Evaluating Info. Against Standards-Level      | Means_GW  | 1-7, 0(NR)   | LV, G             |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Evaluating complex information for compliance with regulations, laws, or technical criteria, where compliance decisions require significant interpretation or judgment.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.5</td> <td>Making a ruling in a court on a very complicated motion.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Evaluating a fairly complicated insurance claim for compliance with the insurance policy terms.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Proofreading typing.<br/>Reviewing forms for completeness.</td> </tr> <tr> <td>Evaluating information against a simple criterion.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |   |   |              |                   | Left Label | Value | Right Label | Evaluating complex information for compliance with regulations, laws, or technical criteria, where compliance decisions require significant interpretation or judgment. | 7 |  |  | 6.5 | Making a ruling in a court on a very complicated motion. |  | 4 | Evaluating a fairly complicated insurance claim for compliance with the insurance policy terms. |  | 1.5 | Proofreading typing.<br>Reviewing forms for completeness. | Evaluating information against a simple criterion. | 1 |  |
| Left Label   | Value   | Right Label   |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
| Evaluating complex information for compliance with regulations, laws, or technical criteria, where compliance decisions require significant interpretation or judgment.  | 7   |   |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
|  | 6.5   | Making a ruling in a court on a very complicated motion.  |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
|  | 4   | Evaluating a fairly complicated insurance claim for compliance with the insurance policy terms. |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
|  | 1.5   | Proofreading typing.<br>Reviewing forms for completeness.                                       |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
| Evaluating information against a simple criterion.   | 1   |   |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
| G07IM00M   | Evaluating Info. Against Standards-Importance | Means_GW  | 1-5          | IM, G             |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
| G07FR00M   | Evaluating Info. Against Standards-Frequency  | Means_GW  | 1-7          | FR, G             |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
| *G07FG00M  | Evaluating Info. Against Standards-Frequency  | Means_GW  | 1-4          | FG, G             |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Analyzing Data or Information

**Description:** Identifying underlying principles, reasons, or facts by breaking down information or data into separate parts.

**Content Model Key:** IV.A.2.a.4

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 2. Mental Processes
      - a. Information/Data Processing
        - 4. *Analyzing Data or Information*

| Variable   | Variable Description                     | File Name   | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |   |   |  |
|--|--|---|--------------|-------------------|------------|-------|-------------|--|---|--|--|-----|---|--|---|---|--|-----|--|---|---|--|
| G09LV00M   | Analyzing Data or Information-Level      | Means_GW  | 1-7, 0(NR)   | LV, G             |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |   |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Analyzing very different and complicated data or information that can be used for making critical decisions.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.5</td> <td>Analyzing the statistical results for a scientific study of diseases.<br/>Analyzing the cost of medical care services for all hospitals in a county.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Determining the interest costs for financing a new building.<br/>Determining the reasons for a loss in a retail store.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Selecting the correct optical power for a pair of contact lenses.<br/>Determining the location of a lost order.</td> </tr> <tr> <td>Analyzing data or information that is easy to understand.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |  |   |              |                   | Left Label | Value | Right Label | Analyzing very different and complicated data or information that can be used for making critical decisions. | 7 |  |  | 6.5 | Analyzing the statistical results for a scientific study of diseases.<br>Analyzing the cost of medical care services for all hospitals in a county. |  | 4 | Determining the interest costs for financing a new building.<br>Determining the reasons for a loss in a retail store. |  | 1.5 | Selecting the correct optical power for a pair of contact lenses.<br>Determining the location of a lost order. | Analyzing data or information that is easy to understand. | 1 |  |
| Left Label   | Value                                    | Right Label   |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |   |   |  |
| Analyzing very different and complicated data or information that can be used for making critical decisions.   | 7  |   |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |   |   |  |
|  | 6.5                                      | Analyzing the statistical results for a scientific study of diseases.<br>Analyzing the cost of medical care services for all hospitals in a county. |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |   |   |  |
|  | 4  | Determining the interest costs for financing a new building.<br>Determining the reasons for a loss in a retail store.                               |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |   |   |  |
|  | 1.5                                      | Selecting the correct optical power for a pair of contact lenses.<br>Determining the location of a lost order.                                      |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |   |   |  |
| Analyzing data or information that is easy to understand.  | 1  |   |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |   |   |  |
| G09IM00M   | Analyzing Data or Information-Importance | Means_GW  | 1-5          | IM, G             |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |   |   |  |
| G09FR00M   | Analyzing Data or Information-Frequency  | Means_GW  | 1-7          | FR, G             |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |   |   |  |
| *G09FG00M  | Analyzing Data or Information-Frequency  | Means_GW  | 1-4          | FG, G             |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |   |   |  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Making Decisions and Solving Problems

**Description:** Combining, evaluating, and reasoning with information and data to make decisions and solve problems. These processes involve making decisions about the relative importance of information and choosing the best solution.

**Content Model Key:** IV.A.2.b.1

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 2. Mental Processes
      - b. Reasoning/Decision Making
        - 1. *Making Decisions and Solving Problems*

| Variable | Variable Description                        | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| G10LV00M | Making Decisions and Solving Problems-Level | Means_GW  | 1-7, 0(NR)   | LV, G             |

| Left Label   | Value | Right Label  |
|--|-------|--|
| Reaching conclusions after considering a large number of choices that are often ambiguous or abstract, where there are competing viewpoints and alternatives that must be considered before reaching final decisions and the solutions decided upon will have very significant impact. | 7     |  |
|  | 6.5   | Making the final decisions about a company's five-year strategic plan.<br>Determining the best way to perform brain surgery. |
|  | 4     | Deciding how to settle a moderate sized insurance claim.<br>Selecting the location for a major department store.             |
|  | 1.5   | Routing truck deliveries.<br>Determining the meal selection for a cafeteria.   |
| Reaching conclusions after considering a few choices that are usually well defined, where there are a limited number of possible actions, and the decisions or solutions will have minor impact.   | 1     |  |

|          |  |          |     |  |       |
|----------|--|----------|-----|--|-------|
| G10IM00M | Making Decisions and Solving Problems-Importance | Means_GW | 1-5 |  | IM, G |
|----------|--|----------|-----|--|-------|

|          |   |          |     |  |       |
|----------|---|----------|-----|--|-------|
| G10FR00M | Making Decisions and Solving Problems-Frequency | Means_GW | 1-7 |  | FR, G |
|----------|---|----------|-----|--|-------|

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Making Decisions and Solving Problems (Continued)

**Description:** Combining, evaluating, and reasoning with information and data to make decisions and solve problems. These processes involve making decisions about the relative importance of information and choosing the best solution.

**Content Model Key:** IV.A.2.b.1

IV. Occupational Requirements

A. Generalized Work Activities

2. Mental Processes

b. Reasoning/Decision Making

*1. Making Decisions and Solving Problems*

| <b>Variable</b> | <b>Variable Description</b>                     | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| *G10FG00M       | Making Decisions and Solving Problems-Frequency | Means_GW         | 1-4                 | FG, G                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Thinking Creatively

**Description:** Originating, inventing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.

**Content Model Key:** IV.A.2.b.2

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 2. Mental Processes
      - b. Reasoning/Decision Making
        - 2. *Thinking Creatively*

| Variable | Variable Description      | File Name | Field Values | Scale, Ques Codes |
|----------|---------------------------|-----------|--------------|-------------------|
| G11LV00M | Thinking Creatively-Level | Means_GW  | 1-7, 0(NR)   | LV, G             |

| Left Label  | Value | Right Label   |
|---|-------|---|
| Creating or inventing new and yet-to-be-proven practices, technologies, materials, products, or strategies, where the creative effort will have widespread impact and will result in substantial improvements for both an organization and its customers. | 7     |   |
|   | 6.5   | Designing an office building complex.<br>Creating new computer software.  |
|   | 4     | Adapting popular music for a high-school marching band.<br>Developing a traffic flow plan around a very busy shopping center. |
|   | 1.5   | Changing the spacing on a printed report.<br>Selecting colors to paint a small office area.                                   |
| Offering suggestions for some change or improvement to immediate work functions or products.  | 1     |   |

G11IM00M Thinking Creatively-Importance Means\_GW 1-5 IM, G

G11FR00M Thinking Creatively-Frequency Means\_GW 1-7 FR, G

\*G11FG00M Thinking Creatively-Frequency Means\_GW 1-4 FG, G

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Updating & Using Job-Relevant Knowledge

**Description:** Keeping up-to-date technically and knowing one's own jobs' and related jobs' functions.

**Content Model Key:** IV.A.2.b.3

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 2. Mental Processes
      - b. Reasoning/Decision Making
        - 3. *Updating & Using Job-Relevant Knowledge*

| Variable | Variable Description                          | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| G12LV00M | Updating & Using Job-Relevant Knowledge-Level | Means_GW  | 1-7, 0(NR)   | LV, G             |

| Left Label   | Value | Right Label  |
|--|-------|--|
| Learning, retaining, and staying current with complex, often highly technical information. | 7     |  |
|  | 6.5   | Learning information related to a complex and rapidly changing technology.         |
|  | 4     | Keeping up to date on changes in maintenance procedures for repairing sports cars. |
|  | 1.5   | Staying current on price changes in a small retail store.                          |
| Learning, retaining, and staying current with relatively easy-to-master information.       | 1     |  |

|           |  |          |     |       |
|-----------|--|----------|-----|-------|
| G12IM00M  | Updating & Using Job-Relevant Knowledge-Importance | Means_GW | 1-5 | IM, G |
| G12FR00M  | Updating & Using Job-Relevant Knowledge-Frequency  | Means_GW | 1-7 | FR, G |
| *G12FG00M | Updating & Using Job-Relevant Knowledge-Frequency  | Means_GW | 1-4 | FG, G |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Developing Objectives and Strategies

**Description:** Establishing long range objectives and specifying the strategies and actions to achieve these objectives.

**Content Model Key:** IV.A.2.b.4

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 2. Mental Processes
      - b. Reasoning/Decision Making
        - 4. *Developing Objectives and Strategies*

| Variable  | Variable Description                            | File Name   | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |  |   |  |
|---|---|---|--------------|-------------------|------------|-------|-------------|--|---|--|--|-----|---|--|---|---|--|-----|---|--|---|--|
| G13LV00M  | Developing Objectives and Strategies-Level      | Means_GW  | 1-7, 0(NR)   | LV, G             |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Doing complex, future oriented strategic planning.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.5</td> <td>Developing a 10 year business plan for an organization or a unit.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Developing the activities and time line to complete the merger of two organizations over a three year period.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Planning the holiday schedule for an airline workforce.</td> </tr> <tr> <td>Doing strategic or long-term planning that is not complex.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |   |   |              |                   | Left Label | Value | Right Label | Doing complex, future oriented strategic planning. | 7 |  |  | 6.5 | Developing a 10 year business plan for an organization or a unit. |  | 4 | Developing the activities and time line to complete the merger of two organizations over a three year period. |  | 1.5 | Planning the holiday schedule for an airline workforce. | Doing strategic or long-term planning that is not complex. | 1 |  |
| Left Label  | Value   | Right Label   |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |  |   |  |
| Doing complex, future oriented strategic planning.  | 7   |   |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |  |   |  |
|   | 6.5   | Developing a 10 year business plan for an organization or a unit.   |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |  |   |  |
|   | 4   | Developing the activities and time line to complete the merger of two organizations over a three year period. |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |  |   |  |
|   | 1.5   | Planning the holiday schedule for an airline workforce.   |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |  |   |  |
| Doing strategic or long-term planning that is not complex.  | 1   |   |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |  |   |  |
| G13IM00M  | Developing Objectives and Strategies-Importance | Means_GW  | 1-5          | IM, G             |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |  |   |  |
| G13FR00M  | Developing Objectives and Strategies-Frequency  | Means_GW  | 1-7          | FR, G             |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |  |   |  |
| *G13FG00M   | Developing Objectives and Strategies-Frequency  | Means_GW  | 1-4          | FG, G             |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |  |   |  |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Scheduling Work and Activities

**Description:** Scheduling events, programs, activities, as well as the work of others.

**Content Model Key:** IV.A.2.b.5

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 2. Mental Processes
      - b. Reasoning/Decision Making
        - 5. *Scheduling Work and Activities*

| Variable  | Variable Description                      | File Name   | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
|---|---|---|--------------|-------------------|------------|-------|-------------|--|---|--|--|-----|---|--|---|--|--|-----|--|--|---|--|
| G14LV00M  | Scheduling Work and Activities-Level      | Means_GW  | 1-7, 0(NR)   | LV, G             |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| <table border="1"> <thead> <tr> <th>Left Label</th> <th>Value</th> <th>Right Label</th> </tr> </thead> <tbody> <tr> <td>Engaging in complex and difficult scheduling activities.</td> <td>7</td> <td></td> </tr> <tr> <td></td> <td>6.5</td> <td>Scheduling a complex conference program with multiple, parallel sessions.</td> </tr> <tr> <td></td> <td>4</td> <td>Preparing the work schedule for salesclerks in a large retail store.</td> </tr> <tr> <td></td> <td>1.5</td> <td>Making appointments for patients using a predetermined schedule.</td> </tr> <tr> <td>Engaging in simple or straightforward scheduling activities.</td> <td>1</td> <td></td> </tr> </tbody> </table> |   |   |              |                   | Left Label | Value | Right Label | Engaging in complex and difficult scheduling activities. | 7 |  |  | 6.5 | Scheduling a complex conference program with multiple, parallel sessions. |  | 4 | Preparing the work schedule for salesclerks in a large retail store. |  | 1.5 | Making appointments for patients using a predetermined schedule. | Engaging in simple or straightforward scheduling activities. | 1 |  |
| Left Label  | Value                                     | Right Label   |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| Engaging in complex and difficult scheduling activities.  | 7   |   |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
|   | 6.5                                       | Scheduling a complex conference program with multiple, parallel sessions. |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
|   | 4   | Preparing the work schedule for salesclerks in a large retail store.      |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
|   | 1.5                                       | Making appointments for patients using a predetermined schedule.          |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| Engaging in simple or straightforward scheduling activities.  | 1   |   |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| G14IM00M  | Scheduling Work and Activities-Importance | Means_GW  | 1-5          | IM, G             |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| G14FR00M  | Scheduling Work and Activities-Frequency  | Means_GW  | 1-7          | FR, G             |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| *G14FG00M   | Scheduling Work and Activities-Frequency  | Means_GW  | 1-4          | FG, G             |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Organizing, Planning, and Prioritizing

**Description:** Developing plans to accomplish work, and prioritizing and organizing one's own work.

**Content Model Key:** IV.A.2.b.6

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 2. Mental Processes
      - b. Reasoning/Decision Making
        - 6. *Organizing, Planning, and Prioritizing*

| Variable   | Variable Description                              | File Name   | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
|--|---|---|--------------|-------------------|------------|-------|-------------|--|---|--|--|-----|--|--|---|---|--|-----|---|--|---|--|
| G15LV00M   | Organizing, Planning, and Prioritizing-Level      | Means_GW  | 1-7, 0(NR)   | LV, G             |            |       |             |  |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Doing a high degree of complex planning, organizing, and prioritizing of one's own work.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.5</td> <td>Prioritizing and planning multiple tasks several months ahead.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Planning and organizing one's own activities that often change from week to week.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Organizing a work schedule that is repetitive and easy to plan.</td> </tr> <tr> <td>Doing uncomplicated planning, organizing, or prioritizing of one's own work.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |   |   |              |                   | Left Label | Value | Right Label | Doing a high degree of complex planning, organizing, and prioritizing of one's own work. | 7 |  |  | 6.5 | Prioritizing and planning multiple tasks several months ahead. |  | 4 | Planning and organizing one's own activities that often change from week to week. |  | 1.5 | Organizing a work schedule that is repetitive and easy to plan. | Doing uncomplicated planning, organizing, or prioritizing of one's own work. | 1 |  |
| Left Label   | Value   | Right Label   |              |                   |            |       |             |  |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
| Doing a high degree of complex planning, organizing, and prioritizing of one's own work.   | 7   |   |              |                   |            |       |             |  |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
|  | 6.5   | Prioritizing and planning multiple tasks several months ahead.                    |              |                   |            |       |             |  |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
|  | 4   | Planning and organizing one's own activities that often change from week to week. |              |                   |            |       |             |  |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
|  | 1.5   | Organizing a work schedule that is repetitive and easy to plan.                   |              |                   |            |       |             |  |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
| Doing uncomplicated planning, organizing, or prioritizing of one's own work.   | 1   |   |              |                   |            |       |             |  |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
| G15IM00M   | Organizing, Planning, and Prioritizing-Importance | Means_GW  | 1-5          | IM, G             |            |       |             |  |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
| G15FR00M   | Organizing, Planning, and Prioritizing-Frequency  | Means_GW  | 1-7          | FR, G             |            |       |             |  |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
| *G15FG00M  | Organizing, Planning, and Prioritizing-Frequency  | Means_GW  | 1-4          | FG, G             |            |       |             |  |   |  |  |     |  |  |   |   |  |     |   |  |   |  |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Performing General Physical Activities

**Description:** Performing physical activities that require moving one's whole body, such as in climbing, lifting, balancing, walking, stooping, where the activities often also require considerable use of the arms and legs, such as in the physical handling of materials.

**Content Model Key:** IV.A.3.a.1

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 3. Work Output
      - a. Performing Physical & Manual Work Activ.
        - 1. *Performing General Physical Activities*

| Variable  | Variable Description                              | File Name  | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
|---|---|--|--------------|-------------------|------------|-------|-------------|---|---|--|--|-----|---|--|---|--|--|-----|--|--|---|--|
| G16LV00M  | Performing General Physical Activities-Level      | Means_GW   | 1-7, 0(NR)   | LV, G             |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Making repetitive and often fatiguing extensive use of the whole body in completing work activities that are done with or without the use of tools.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.5</td> <td>Climbing up and down poles to install electric wires.<br/>Walking a mail delivery route.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Painting the outside of a house.<br/>Caring for patients in a hospital.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Walking to and from work stations in a small office.<br/>Taking inventory of small parts.</td> </tr> <tr> <td>Making non-fatiguing use of the whole body in completing work activities that are done with or without the use of tools.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |   |  |              |                   | Left Label | Value | Right Label | Making repetitive and often fatiguing extensive use of the whole body in completing work activities that are done with or without the use of tools. | 7 |  |  | 6.5 | Climbing up and down poles to install electric wires.<br>Walking a mail delivery route. |  | 4 | Painting the outside of a house.<br>Caring for patients in a hospital. |  | 1.5 | Walking to and from work stations in a small office.<br>Taking inventory of small parts. | Making non-fatiguing use of the whole body in completing work activities that are done with or without the use of tools. | 1 |  |
| Left Label  | Value   | Right Label  |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| Making repetitive and often fatiguing extensive use of the whole body in completing work activities that are done with or without the use of tools.   | 7   |  |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
|   | 6.5   | Climbing up and down poles to install electric wires.<br>Walking a mail delivery route.  |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
|   | 4   | Painting the outside of a house.<br>Caring for patients in a hospital.                   |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
|   | 1.5   | Walking to and from work stations in a small office.<br>Taking inventory of small parts. |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| Making non-fatiguing use of the whole body in completing work activities that are done with or without the use of tools.  | 1   |  |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| G16IM00M  | Performing General Physical Activities-Importance | Means_GW   | 1-5          | IM, G             |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| G16FR00M  | Performing General Physical Activities-Frequency  | Means_GW   | 1-7          | FR, G             |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| *G16FG00M   | Performing General Physical Activities-Frequency  | Means_GW   | 1-4          | FG, G             |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Handling and Moving Objects

**Description:** Using one's own hands and arms in handling, installing, forming, positioning, and moving materials, or in manipulating things, including the use of keyboards.

**Content Model Key:** IV.A.3.a.2

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 3. Work Output
      - a. Performing Physical & Manual Work Activ.
        - 2. *Handling and Moving Objects*

| Variable  | Variable Description                   | File Name  | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |   |  |
|---|--|--|--------------|-------------------|------------|-------|-------------|---|---|--|--|-----|---|--|---|---|--|-----|--|--|---|--|
| G17LV00M  | Handling and Moving Objects-Level      | Means_GW   | 1-7, 0(NR)   | LV, G             |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Using one's hands and arms to do the same functions almost continually.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.5</td> <td>Continually sorting materials into bins. Loading boxes on an assembly line.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Arranging books in a library. Positioning materials in a machine.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Making minor adjustments to electronic testing equipment. Changing settings on office reproduction machines.</td> </tr> <tr> <td>Making little use of one's hands and arms.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |  |  |              |                   | Left Label | Value | Right Label | Using one's hands and arms to do the same functions almost continually. | 7 |  |  | 6.5 | Continually sorting materials into bins. Loading boxes on an assembly line. |  | 4 | Arranging books in a library. Positioning materials in a machine. |  | 1.5 | Making minor adjustments to electronic testing equipment. Changing settings on office reproduction machines. | Making little use of one's hands and arms. | 1 |  |
| Left Label  | Value                                  | Right Label  |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |   |  |
| Using one's hands and arms to do the same functions almost continually.   | 7                                      |  |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |   |  |
|   | 6.5                                    | Continually sorting materials into bins. Loading boxes on an assembly line.                                  |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |   |  |
|   | 4                                      | Arranging books in a library. Positioning materials in a machine.  |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |   |  |
|   | 1.5                                    | Making minor adjustments to electronic testing equipment. Changing settings on office reproduction machines. |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |   |  |
| Making little use of one's hands and arms.  | 1                                      |  |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |   |  |
| G17IM00M  | Handling and Moving Objects-Importance | Means_GW   | 1-5          | IM, G             |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |   |  |
| G17FR00M  | Handling and Moving Objects-Frequency  | Means_GW   | 1-7          | FR, G             |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |   |  |
| *G17FG00M   | Handling and Moving Objects-Frequency  | Means_GW   | 1-4          | FG, G             |            |       |             |   |   |  |  |     |   |  |   |   |  |     |  |  |   |  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Controlling Machines and Processes

**Description:** Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).

**Content Model Key:** IV.A.3.a.3

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 3. Work Output
      - a. Performing Physical & Manual Work Activ.
        - 3. *Controlling Machines and Processes*

| Variable  | Variable Description                          | File Name  | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
|---|---|--|--------------|-------------------|------------|-------|-------------|---|---|--|--|-----|---|--|---|--|--|-----|---|---|---|--|
| G18LV00M  | Controlling Machines and Processes-Level      | Means_GW   | 1-7, 0(NR)   | LV, G             |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Controlling machines or processes that are very difficult to operate.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.5</td> <td>Operating a precision milling machine.<br/>Running a large boom crane.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Operating a drilling rig.<br/>Controlling the mixture of chemicals in test tubes.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Blending paint.<br/>Operating a cash register.</td> </tr> <tr> <td>Controlling machines or processes that are easy to operate.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |   |  |              |                   | Left Label | Value | Right Label | Controlling machines or processes that are very difficult to operate. | 7 |  |  | 6.5 | Operating a precision milling machine.<br>Running a large boom crane. |  | 4 | Operating a drilling rig.<br>Controlling the mixture of chemicals in test tubes. |  | 1.5 | Blending paint.<br>Operating a cash register. | Controlling machines or processes that are easy to operate. | 1 |  |
| Left Label  | Value   | Right Label  |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| Controlling machines or processes that are very difficult to operate.   | 7   |  |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
|   | 6.5   | Operating a precision milling machine.<br>Running a large boom crane.            |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
|   | 4   | Operating a drilling rig.<br>Controlling the mixture of chemicals in test tubes. |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
|   | 1.5   | Blending paint.<br>Operating a cash register.                                    |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| Controlling machines or processes that are easy to operate.   | 1   |  |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| G18IM00M  | Controlling Machines and Processes-Importance | Means_GW   | 1-5          | IM, G             |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| G18FR00M  | Controlling Machines and Processes-Frequency  | Means_GW   | 1-7          | FR, G             |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| *G18FG00M   | Controlling Machines and Processes-Frequency  | Means_GW   | 1-4          | FG, G             |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Operating Vehicles or Equipment

**Description:** Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.

**Content Model Key:** IV.A.3.a.4

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 3. Work Output
      - a. Performing Physical & Manual Work Activ.
        - 4. *Operating Vehicles or Equipment*

| Variable   | Variable Description                       | File Name   | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |   |   |  |
|--|--|---|--------------|-------------------|------------|-------|-------------|---|---|--|--|-----|---|--|---|---|--|-----|---|---|---|--|
| G20LV00M   | Operating Vehicles or Equipment-Level      | Means_GW  | 1-7, 0(NR)   | LV, G             |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |   |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Operating equipment or vehicles that are very difficult to run.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.5</td> <td>Hovering a helicopter in a strong wind.<br/>Running a power shovel in very hard or very soft ground.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Operating a firefighting pumper truck.<br/>Driving an eighteen wheel moving van.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Driving a car.<br/>Operating a grass mowing machine.</td> </tr> <tr> <td>Operating equipment or vehicles that are easy to run.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |  |   |              |                   | Left Label | Value | Right Label | Operating equipment or vehicles that are very difficult to run. | 7 |  |  | 6.5 | Hovering a helicopter in a strong wind.<br>Running a power shovel in very hard or very soft ground. |  | 4 | Operating a firefighting pumper truck.<br>Driving an eighteen wheel moving van. |  | 1.5 | Driving a car.<br>Operating a grass mowing machine. | Operating equipment or vehicles that are easy to run. | 1 |  |
| Left Label   | Value                                      | Right Label   |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |   |   |  |
| Operating equipment or vehicles that are very difficult to run.  | 7  |   |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |   |   |  |
|  | 6.5  | Hovering a helicopter in a strong wind.<br>Running a power shovel in very hard or very soft ground. |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |   |   |  |
|  | 4  | Operating a firefighting pumper truck.<br>Driving an eighteen wheel moving van.                     |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |   |   |  |
|  | 1.5  | Driving a car.<br>Operating a grass mowing machine.   |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |   |   |  |
| Operating equipment or vehicles that are easy to run.  | 1  |   |              |                   |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |   |   |  |
| G20IM00M   | Operating Vehicles or Equipment-Importance | Means_GW  | 1-5          | IM, G             |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |   |   |  |
| G20FR00M   | Operating Vehicles or Equipment-Frequency  | Means_GW  | 1-7          | FR, G             |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |   |   |  |
| *G20FG00M  | Operating Vehicles or Equipment-Frequency  | Means_GW  | 1-4          | FG, G             |            |       |             |   |   |  |  |     |   |  |   |   |  |     |   |   |   |  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Interacting With Computers

**Description:** Controlling computer functions by using programs, setting up functions, writing software, or otherwise communicating with computer systems.

**Content Model Key:** IV.A.3.b.1

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 3. Work Output
      - b. Performing Complex/Technical Activities
        - 1. *Interacting With Computers*

| Variable   | Variable Description                  | File Name  | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |  |   |  |
|--|---------------------------------------|--|--------------|-------------------|------------|-------|-------------|--|---|--|--|-----|--|--|---|---|--|-----|--|--|---|--|
| G19LV00M   | Interacting With Computers-Level      | Means_GW   | 1-7, 0(NR)   | LV, G             |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Using computers to develop very complex, high speed data linkages and operating systems.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.5</td> <td>Setting up a new computer system for a large, multi-national company.<br/>Programming a high speed computer to evaluate scientific information.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Writing software to keep track of parts in inventory.<br/>Setting up the payroll on computer for a large employer.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Key entering employee personnel information.<br/>Editing correspondence on word processing equipment.</td> </tr> <tr> <td>Using computers to produce standard correspondence, graphic materials, and business related information.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |                                       |  |              |                   | Left Label | Value | Right Label | Using computers to develop very complex, high speed data linkages and operating systems. | 7 |  |  | 6.5 | Setting up a new computer system for a large, multi-national company.<br>Programming a high speed computer to evaluate scientific information. |  | 4 | Writing software to keep track of parts in inventory.<br>Setting up the payroll on computer for a large employer. |  | 1.5 | Key entering employee personnel information.<br>Editing correspondence on word processing equipment. | Using computers to produce standard correspondence, graphic materials, and business related information. | 1 |  |
| Left Label   | Value                                 | Right Label  |              |                   |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |  |   |  |
| Using computers to develop very complex, high speed data linkages and operating systems.   | 7                                     |  |              |                   |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |  |   |  |
|  | 6.5                                   | Setting up a new computer system for a large, multi-national company.<br>Programming a high speed computer to evaluate scientific information. |              |                   |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |  |   |  |
|  | 4                                     | Writing software to keep track of parts in inventory.<br>Setting up the payroll on computer for a large employer.                              |              |                   |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |  |   |  |
|  | 1.5                                   | Key entering employee personnel information.<br>Editing correspondence on word processing equipment.   |              |                   |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |  |   |  |
| Using computers to produce standard correspondence, graphic materials, and business related information.   | 1                                     |  |              |                   |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |  |   |  |
| G19IM00M   | Interacting With Computers-Importance | Means_GW   | 1-5          | IM, G             |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |  |   |  |
| G19FR00M   | Interacting With Computers-Frequency  | Means_GW   | 1-7          | FR, G             |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |  |   |  |
| *G19FG00M  | Interacting With Computers-Frequency  | Means_GW   | 1-4          | FG, G             |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |  |   |  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Drafting & Specifying Tech. Devices,etc.

**Description:** Providing documentation, detailed instructions, drawings, or specifications to inform others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.

**Content Model Key:** IV.A.3.b.2

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 3. Work Output
      - b. Performing Complex/Technical Activities
        - 2. *Drafting & Specifying Tech. Devices,etc.*

| Variable | Variable Description                               | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| G21LV00M | Drafting & Specifying Tech. Devices,etc.-<br>Level | Means_GW  | 1-7, 0(NR)   | LV, G             |

| Left Label  | Value | Right Label  |
|---|-------|--|
| Drafting and specifying the components or technical relationships for complicated devices, parts, or equipment.               | 7     |  |
|   | 6.5   | Drawing the electronic circuitry for a high-speed scientific computer.<br>Designing a new ocean liner.     |
|   | 4     | Drafting the plumbing requirements for an office building.<br>Specifying the furnishings for a new school. |
|   | 1.5   | Specifying the lighting required for a work area.<br>Laying out the fabric to upholster a chair.           |
| Drafting or specifying the components or technical relationships for devices, parts, or equipment that are easily understood. | 1     |  |

|           |   |          |     |       |
|-----------|---|----------|-----|-------|
| G21IM00M  | Drafting & Specifying Tech. Devices,etc.-<br>Importance | Means_GW | 1-5 | IM, G |
| G21FR00M  | Drafting & Specifying Tech. Devices,etc.-<br>Frequency  | Means_GW | 1-7 | FR, G |
| *G21FG00M | Drafting & Specifying Tech. Devices,etc.-<br>Frequency  | Means_GW | 1-4 | FG, G |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Implementing Ideas, Programs, etc.

**Description:** Conducting or carrying out work procedures and activities in accord with one's own ideas or information provided through directions/instructions for purposes of installing, modifying, preparing, delivering, constructing, integrating, finishing, or completing programs, systems, structures, or products.

**Content Model Key:** IV.A.3.b.3

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 3. Work Output
      - b. Performing Complex/Technical Activities
        - 3. *Implementing Ideas, Programs, etc.*

| Variable   | Variable Description                          | File Name   | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |     |  |  |  |   |  |   |   |  |     |   |   |   |  |
|--|---|---|--------------|-------------------|------------|-------|-------------|--|---|--|--|-----|--|--|--|---|--|---|---|--|-----|---|---|---|--|
| G22LV00M   | Implementing Ideas, Programs, etc.-Level      | Means_GW  | 1-7, 0(NR)   | LV, G             |            |       |             |  |   |  |  |     |  |  |  |   |  |   |   |  |     |   |   |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td style="vertical-align: top;">Performing highly complex and very difficult work activities with very limited guidelines to follow.</td> <td style="text-align: center; vertical-align: top;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center; vertical-align: top;">6.5</td> <td style="vertical-align: top;">Performing surgery in a rarely explored area of the brain.</td> </tr> <tr> <td></td> <td></td> <td style="vertical-align: top;">Building a health care system within a third world country.</td> </tr> <tr> <td></td> <td style="text-align: center; vertical-align: top;">4</td> <td style="vertical-align: top;">Building an electrical distribution system for a new industrial and commercial park.<br/>Completing the installation of a new radar guidance system for commercial aircraft.</td> </tr> <tr> <td></td> <td style="text-align: center; vertical-align: top;">1.5</td> <td style="vertical-align: top;">Setting up a retail store display.<br/>Installing new highway signs.</td> </tr> <tr> <td style="vertical-align: top;">Performing activities that have clear cut directions and are easy to carry out.</td> <td style="text-align: center; vertical-align: top;">1</td> <td></td> </tr> </tbody> </table> |   |   |              |                   | Left Label | Value | Right Label | Performing highly complex and very difficult work activities with very limited guidelines to follow. | 7 |  |  | 6.5 | Performing surgery in a rarely explored area of the brain. |  |  | Building a health care system within a third world country. |  | 4 | Building an electrical distribution system for a new industrial and commercial park.<br>Completing the installation of a new radar guidance system for commercial aircraft. |  | 1.5 | Setting up a retail store display.<br>Installing new highway signs. | Performing activities that have clear cut directions and are easy to carry out. | 1 |  |
| Left Label   | Value   | Right Label   |              |                   |            |       |             |  |   |  |  |     |  |  |  |   |  |   |   |  |     |   |   |   |  |
| Performing highly complex and very difficult work activities with very limited guidelines to follow.   | 7   |   |              |                   |            |       |             |  |   |  |  |     |  |  |  |   |  |   |   |  |     |   |   |   |  |
|  | 6.5   | Performing surgery in a rarely explored area of the brain.  |              |                   |            |       |             |  |   |  |  |     |  |  |  |   |  |   |   |  |     |   |   |   |  |
|  |   | Building a health care system within a third world country.   |              |                   |            |       |             |  |   |  |  |     |  |  |  |   |  |   |   |  |     |   |   |   |  |
|  | 4   | Building an electrical distribution system for a new industrial and commercial park.<br>Completing the installation of a new radar guidance system for commercial aircraft. |              |                   |            |       |             |  |   |  |  |     |  |  |  |   |  |   |   |  |     |   |   |   |  |
|  | 1.5   | Setting up a retail store display.<br>Installing new highway signs.   |              |                   |            |       |             |  |   |  |  |     |  |  |  |   |  |   |   |  |     |   |   |   |  |
| Performing activities that have clear cut directions and are easy to carry out.  | 1   |   |              |                   |            |       |             |  |   |  |  |     |  |  |  |   |  |   |   |  |     |   |   |   |  |
| G22IM00M   | Implementing Ideas, Programs, etc.-Importance | Means_GW  | 1-5          | IM, G             |            |       |             |  |   |  |  |     |  |  |  |   |  |   |   |  |     |   |   |   |  |
| G22FR00M   | Implementing Ideas, Programs, etc.-Frequency  | Means_GW  | 1-7          | FR, G             |            |       |             |  |   |  |  |     |  |  |  |   |  |   |   |  |     |   |   |   |  |
| *G22FG00M  | Implementing Ideas, Programs, etc.-Frequency  | Means_GW  | 1-4          | FG, G             |            |       |             |  |   |  |  |     |  |  |  |   |  |   |   |  |     |   |   |   |  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Repairing & Maintaining Mech. Equip.

**Description:** Fixing, servicing, aligning, setting up, adjusting, and testing machines, devices, moving parts, and equipment that operate primarily on the basis of mechanical (not electronic) principles.

**Content Model Key:** IV.A.3.b.4

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 3. Work Output
      - b. Performing Complex/Technical Activities
        - 4. *Repairing & Maintaining Mech. Equip.*

| Variable  | Variable Description                            | File Name  | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |   |   |  |
|---|---|--|--------------|-------------------|------------|-------|-------------|--|---|--|--|-----|---|--|---|--|--|-----|--|---|---|--|
| G23LV00M  | Repairing & Maintaining Mech. Equip.-Level      | Means_GW   | 1-7, 0(NR)   | LV, G             |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |   |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td style="vertical-align: top;">Performing complex or non-routine repair, maintenance, or adjustment of mechanical equipment, often involving overhauls or rebuilding.</td> <td style="text-align: center; vertical-align: top;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center; vertical-align: top;">6.5</td> <td style="vertical-align: top;">Rebuilding a high-performance engine.<br/>Overhauling a power plant turbine.</td> </tr> <tr> <td></td> <td style="text-align: center; vertical-align: top;">4</td> <td style="vertical-align: top;">Removing and replacing broken parts in an automobile transmission.<br/>Adjusting a grandfather clock.</td> </tr> <tr> <td></td> <td style="text-align: center; vertical-align: top;">1.5</td> <td style="vertical-align: top;">Making routine preventive maintenance to a door lock.<br/>Making simple, external adjustments to a door hinge with ordinary hand tools.</td> </tr> <tr> <td style="vertical-align: top;">Performing straightforward repair, maintenance, or adjustment of mechanical equipment using established, easy to understand procedures.</td> <td style="text-align: center; vertical-align: top;">1</td> <td></td> </tr> </tbody> </table> |   |  |              |                   | Left Label | Value | Right Label | Performing complex or non-routine repair, maintenance, or adjustment of mechanical equipment, often involving overhauls or rebuilding. | 7 |  |  | 6.5 | Rebuilding a high-performance engine.<br>Overhauling a power plant turbine. |  | 4 | Removing and replacing broken parts in an automobile transmission.<br>Adjusting a grandfather clock. |  | 1.5 | Making routine preventive maintenance to a door lock.<br>Making simple, external adjustments to a door hinge with ordinary hand tools. | Performing straightforward repair, maintenance, or adjustment of mechanical equipment using established, easy to understand procedures. | 1 |  |
| Left Label  | Value   | Right Label  |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |   |   |  |
| Performing complex or non-routine repair, maintenance, or adjustment of mechanical equipment, often involving overhauls or rebuilding.  | 7   |  |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |   |   |  |
|   | 6.5   | Rebuilding a high-performance engine.<br>Overhauling a power plant turbine.  |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |   |   |  |
|   | 4   | Removing and replacing broken parts in an automobile transmission.<br>Adjusting a grandfather clock.                                   |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |   |   |  |
|   | 1.5   | Making routine preventive maintenance to a door lock.<br>Making simple, external adjustments to a door hinge with ordinary hand tools. |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |   |   |  |
| Performing straightforward repair, maintenance, or adjustment of mechanical equipment using established, easy to understand procedures.   | 1   |  |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |   |   |  |
| G23IM00M  | Repairing & Maintaining Mech. Equip.-Importance | Means_GW   | 1-5          | IM, G             |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |   |   |  |
| G23FR00M  | Repairing & Maintaining Mech. Equip.-Frequency  | Means_GW   | 1-7          | FR, G             |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |   |   |  |
| *G23FG00M   | Repairing & Maintaining Mech. Equip.-Frequency  | Means_GW   | 1-4          | FG, G             |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |   |   |  |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Repairing & Maintaining Elect. Equip.

**Description:** Fixing, servicing, adjusting, regulating, calibrating, fine-tuning, or testing machines, devices, and equipment that operate primarily on the basis of electrical or electronic (not mechanical) principles.

**Content Model Key:** IV.A.3.b.5

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 3. Work Output
      - b. Performing Complex/Technical Activities
        - 5. *Repairing & Maintaining Elect. Equip.*

| Variable | Variable Description                        | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| G24LV00M | Repairing & Maintaining Elect. Equip.-Level | Means_GW  | 1-7, 0(NR)   | LV, G             |

| Left Label  | Value | Right Label  |
|---|-------|--|
| Performing complex or non-routine repair, maintenance, or adjustment of electronic equipment, where repairs are often made to complex internal components or circuitry. | 7     |  |
|   | 6.5   | Making repairs or replacements of electrical components on circuit boards.<br>Using highly complex electronic test equipment, (e.g., meters, oscilloscopes) to calibrate and fine-tune electronic equipment. |
|   | 4     | Making repairs that consist primarily of swapping circuit boards among pieces of electronic equipment.<br>Using electronic test equipment, (e.g., meter) to calibrate and fine tune circuits and components. |
|   | 1.5   | Performing simple external adjustments to a television using knobs or dials, without the use of electronic test equipment.   |
| Performing straightforward repair, maintenance, or adjustment of electronic devices or equipment using established, easy to understand procedures.                      | 1     |  |

|          |  |          |     |       |
|----------|--|----------|-----|-------|
| G24IM00M | Repairing & Maintaining Elect. Equip.-Importance | Means_GW | 1-5 | IM, G |
|----------|--|----------|-----|-------|

|          |   |          |     |       |
|----------|---|----------|-----|-------|
| G24FR00M | Repairing & Maintaining Elect. Equip.-Frequency | Means_GW | 1-7 | FR, G |
|----------|---|----------|-----|-------|

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Repairing & Maintaining Elect. Equip. (Continued)

**Description:** Fixing, servicing, adjusting, regulating, calibrating, fine-tuning, or testing machines, devices, and equipment that operate primarily on the basis of electrical or electronic (not mechanical) principles.

**Content Model Key:** IV.A.3.b.5

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 3. Work Output
      - b. Performing Complex/Technical Activities
        - 5. *Repairing & Maintaining Elect. Equip.*

| Variable  | Variable Description                                | File Name | Field Values | Scale, Ques Codes |
|-----------|---|-----------|--------------|-------------------|
| *G24FG00M | Repairing & Maintaining Elect. Equip.-<br>Frequency | Means_GW  | 1-4          | FG, G             |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Documenting/Recording Information

**Description:** Entering, transcribing, recording, storing, or maintaining information in either written form or by electronic/magnetic recording.

**Content Model Key:** IV.A.3.b.6

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 3. Work Output
      - b. Performing Complex/Technical Activities
        - 6. *Documenting/Recording Information*

| Variable  | Variable Description                         | File Name   | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
|---|--|---|--------------|-------------------|------------|-------|-------------|---|---|--|--|-----|---|--|---|--|--|-----|--|--|---|--|
| G25LV00M  | Documenting/Recording Information-Level      | Means_GW  | 1-7, 0(NR)   | LV, G             |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Documenting or recording very complex information using new, unstandardized procedures.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.5</td> <td>Keeping records about the progress of a rare disease in a third world country.<br/>Maintaining information about the use of orbiting satellites for private industry communications.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Recording the day shift operating results for a nuclear power generating plant.<br/>Documenting the results of a major crime scene investigation.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Recording the weights of trucks using the highways.<br/>Documenting the contents of rail cargo.</td> </tr> <tr> <td>Documenting or recording straightforward information using predetermined forms and procedures.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |  |   |              |                   | Left Label | Value | Right Label | Documenting or recording very complex information using new, unstandardized procedures. | 7 |  |  | 6.5 | Keeping records about the progress of a rare disease in a third world country.<br>Maintaining information about the use of orbiting satellites for private industry communications. |  | 4 | Recording the day shift operating results for a nuclear power generating plant.<br>Documenting the results of a major crime scene investigation. |  | 1.5 | Recording the weights of trucks using the highways.<br>Documenting the contents of rail cargo. | Documenting or recording straightforward information using predetermined forms and procedures. | 1 |  |
| Left Label  | Value  | Right Label   |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| Documenting or recording very complex information using new, unstandardized procedures.   | 7  |   |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
|   | 6.5  | Keeping records about the progress of a rare disease in a third world country.<br>Maintaining information about the use of orbiting satellites for private industry communications. |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
|   | 4  | Recording the day shift operating results for a nuclear power generating plant.<br>Documenting the results of a major crime scene investigation.                                    |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
|   | 1.5  | Recording the weights of trucks using the highways.<br>Documenting the contents of rail cargo.  |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| Documenting or recording straightforward information using predetermined forms and procedures.  | 1  |   |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| G25IM00M  | Documenting/Recording Information-Importance | Means_GW  | 1-5          | IM, G             |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| G25FR00M  | Documenting/Recording Information-Frequency  | Means_GW  | 1-7          | FR, G             |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| *G25FG00M   | Documenting/Recording Information-Frequency  | Means_GW  | 1-4          | FG, G             |            |       |             |   |   |  |  |     |   |  |   |  |  |     |  |  |   |  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Interpreting Meaning of Info. to Others

**Description:** Translating or explaining what information means and how it can be understood or used to support responses or feedback to others.

**Content Model Key:** IV.A.4.a.1

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 4. Interacting With Others
      - a. Communicating/Interacting
        - 1. *Interpreting Meaning of Info. to Others*

| Variable   | Variable Description                               | File Name   | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |  |   |  |
|--|--|---|--------------|-------------------|------------|-------|-------------|--|---|--|--|-----|---|--|---|---|--|-----|--|--|---|--|
| G26LV00M   | Interpreting Meaning of Info. to Others-Level      | Means_GW  | 1-7, 0(NR)   | LV, G             |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Making very difficult interpretations of information with limited, if any, guidance to follow.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.5</td> <td>Translating the inscriptions of a just discovered tribe of people living in isolation. Interpreting the results of experiments in quantum physics so they can be understood by most people.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Translating a presentation made at an international scientific conference from French to English.<br/>Interpreting how foreign tax laws apply to U.S. exports.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Interpreting the results of a blood pressure reading.<br/>Explaining how to use a bus schedule.</td> </tr> <tr> <td>Making easy interpretations of information with a high degree of guidance to follow.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |  |   |              |                   | Left Label | Value | Right Label | Making very difficult interpretations of information with limited, if any, guidance to follow. | 7 |  |  | 6.5 | Translating the inscriptions of a just discovered tribe of people living in isolation. Interpreting the results of experiments in quantum physics so they can be understood by most people. |  | 4 | Translating a presentation made at an international scientific conference from French to English.<br>Interpreting how foreign tax laws apply to U.S. exports. |  | 1.5 | Interpreting the results of a blood pressure reading.<br>Explaining how to use a bus schedule. | Making easy interpretations of information with a high degree of guidance to follow. | 1 |  |
| Left Label   | Value  | Right Label   |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |  |   |  |
| Making very difficult interpretations of information with limited, if any, guidance to follow.   | 7  |   |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |  |   |  |
|  | 6.5  | Translating the inscriptions of a just discovered tribe of people living in isolation. Interpreting the results of experiments in quantum physics so they can be understood by most people. |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |  |   |  |
|  | 4  | Translating a presentation made at an international scientific conference from French to English.<br>Interpreting how foreign tax laws apply to U.S. exports.                               |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |  |   |  |
|  | 1.5  | Interpreting the results of a blood pressure reading.<br>Explaining how to use a bus schedule.  |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |  |   |  |
| Making easy interpretations of information with a high degree of guidance to follow.   | 1  |   |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |  |   |  |
| G26IM00M   | Interpreting Meaning of Info. to Others-Importance | Means_GW  | 1-5          | IM, G             |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |  |   |  |
| G26FR00M   | Interpreting Meaning of Info. to Others-Frequency  | Means_GW  | 1-7          | FR, G             |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |  |   |  |
| *G26FG00M  | Interpreting Meaning of Info. to Others-Frequency  | Means_GW  | 1-4          | FG, G             |            |       |             |  |   |  |  |     |   |  |   |   |  |     |  |  |   |  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Communicating With Other Workers

**Description:** Providing information to supervisors, fellow workers, and subordinates. This information can be exchanged face-to-face, in writing, or via telephone/electronic transfer.

**Content Model Key:** IV.A.4.a.2

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 4. Interacting With Others
      - a. Communicating/Interacting
        - 2. *Communicating With Other Workers*

| Variable  | Variable Description                        | File Name  | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |   |   |  |
|---|---|--|--------------|-------------------|------------|-------|-------------|--|---|--|--|-----|--|--|---|---|--|-----|--|---|---|--|
| G27LV00M  | Communicating With Other Workers-Level      | Means_GW   | 1-7, 0(NR)   | LV, G             |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |   |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Providing complex oral and written communications to others in the organization.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.5</td> <td>Creating videotaped presentations of a company's internal policy.<br/>Preparing important reports for management.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Writing memos to other team members.<br/>Reporting the results of a sales meeting to a supervisor.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Writing brief notes to others.<br/>Communicating minimally with others.</td> </tr> <tr> <td>Providing straightforward oral or written communications to others in the organization.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |   |  |              |                   | Left Label | Value | Right Label | Providing complex oral and written communications to others in the organization. | 7 |  |  | 6.5 | Creating videotaped presentations of a company's internal policy.<br>Preparing important reports for management. |  | 4 | Writing memos to other team members.<br>Reporting the results of a sales meeting to a supervisor. |  | 1.5 | Writing brief notes to others.<br>Communicating minimally with others. | Providing straightforward oral or written communications to others in the organization. | 1 |  |
| Left Label  | Value                                       | Right Label  |              |                   |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |   |   |  |
| Providing complex oral and written communications to others in the organization.  | 7   |  |              |                   |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |   |   |  |
|   | 6.5   | Creating videotaped presentations of a company's internal policy.<br>Preparing important reports for management. |              |                   |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |   |   |  |
|   | 4   | Writing memos to other team members.<br>Reporting the results of a sales meeting to a supervisor.                |              |                   |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |   |   |  |
|   | 1.5   | Writing brief notes to others.<br>Communicating minimally with others.   |              |                   |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |   |   |  |
| Providing straightforward oral or written communications to others in the organization.   | 1   |  |              |                   |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |   |   |  |
| G27IM00M  | Communicating With Other Workers-Importance | Means_GW   | 1-5          | IM, G             |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |   |   |  |
| G27FR00M  | Communicating With Other Workers-Frequency  | Means_GW   | 1-7          | FR, G             |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |   |   |  |
| *G27FG00M   | Communicating With Other Workers-Frequency  | Means_GW   | 1-4          | FG, G             |            |       |             |  |   |  |  |     |  |  |   |   |  |     |  |   |   |  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Communicating With Persons Outside Org.

**Description:** Communicating with persons outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged face-to-face, in writing, or via telephone/electronic transfer.

**Content Model Key:** IV.A.4.a.3

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 4. Interacting With Others
      - a. Communicating/Interacting
        - 3. *Communicating With Persons Outside Org.*

| Variable | Variable Description                              | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| G28LV00M | Communicating With Persons Outside Org.-<br>Level | Means_GW  | 1-7, 0(NR)   | LV, G             |

| Left Label   | Value | Right Label  |
|--|-------|--|
| Presenting complex oral and written communications to persons outside the organization.            | 7     |  |
|  | 6.5   | Preparing or delivering press releases.<br>Presenting highly technical information to customers.         |
|  | 4     | Making standard presentations about available services.<br>Writing ads for openings in the organization. |
|  | 1.5   | Having little contact with individuals outside the organization.   |
| Presenting routine and simple oral and written communications to persons outside the organization. | 1     |  |

|           |  |          |     |       |
|-----------|--|----------|-----|-------|
| G28IM00M  | Communicating With Persons Outside Org.-<br>Importance | Means_GW | 1-5 | IM, G |
| G28FR00M  | Communicating With Persons Outside Org.-<br>Frequency  | Means_GW | 1-7 | FR, G |
| *G28FG00M | Communicating With Persons Outside Org.-<br>Frequency  | Means_GW | 1-4 | FG, G |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Establishing & Maintaining Relationships

**Description:** Developing constructive and cooperative working relationships with others.

**Content Model Key:** IV.A.4.a.4

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 4. Interacting With Others
      - a. Communicating/Interacting
        - 4. *Establishing & Maintaining Relationships*

| Variable | Variable Description                           | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| G29LV00M | Establishing & Maintaining Relationships-Level | Means_GW  | 1-7, 0(NR)   | LV, G             |

| Left Label  | Value | Right Label  |
|---|-------|--|
| Developing very good interpersonal relationships with highly diverse individuals or stakeholders in difficult situations. | 7     |  |
|   | 6.5   | Working with and gaining cooperation from a group of multinational/multicultural executives, initially hostile to your organization. |
|   | 4     | Getting along well and maintaining good working relationships with almost all co-workers and clients.                                |
|   | 1.5   | Exchanging greetings with a co-worker.   |
| Developing very few working relationships with others.  | 1     |  |

|           |   |          |     |       |
|-----------|---|----------|-----|-------|
| G29IM00M  | Establishing & Maintaining Relationships-Importance | Means_GW | 1-5 | IM, G |
| G29FR00M  | Establishing & Maintaining Relationships-Frequency  | Means_GW | 1-7 | FR, G |
| *G29FG00M | Establishing & Maintaining Relationships-Frequency  | Means_GW | 1-4 | FG, G |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Assisting and Caring for Others

**Description:** Providing assistance or personal care to others.

**Content Model Key:** IV.A.4.a.5

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 4. Interacting With Others
      - a. Communicating/Interacting
        - 5. *Assisting and Caring for Others*

| Variable  | Variable Description                       | File Name  | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
|---|--|--|--------------|-------------------|------------|-------|-------------|---|---|--|--|-----|--|--|---|---|--|-----|---|--|---|--|
| G30LV00M  | Assisting and Caring for Others-Level      | Means_GW   | 1-7, 0(NR)   | LV, G             |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Providing care or assistance to others in highly stressful or difficult situations.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.5</td> <td>Caring for seriously injured persons in an emergency room.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Assisting a stranded traveler in finding lodging.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Helping a co-worker complete an assignment.</td> </tr> <tr> <td>Needing to provide minimal help or assistance to others.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |  |  |              |                   | Left Label | Value | Right Label | Providing care or assistance to others in highly stressful or difficult situations. | 7 |  |  | 6.5 | Caring for seriously injured persons in an emergency room. |  | 4 | Assisting a stranded traveler in finding lodging. |  | 1.5 | Helping a co-worker complete an assignment. | Needing to provide minimal help or assistance to others. | 1 |  |
| Left Label  | Value                                      | Right Label  |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
| Providing care or assistance to others in highly stressful or difficult situations.   | 7  |  |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
|   | 6.5  | Caring for seriously injured persons in an emergency room. |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
|   | 4  | Assisting a stranded traveler in finding lodging.          |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
|   | 1.5  | Helping a co-worker complete an assignment.                |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
| Needing to provide minimal help or assistance to others.  | 1  |  |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
| G30IM00M  | Assisting and Caring for Others-Importance | Means_GW   | 1-5          | IM, G             |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
| G30FR00M  | Assisting and Caring for Others-Frequency  | Means_GW   | 1-7          | FR, G             |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |
| *G30FG00M   | Assisting and Caring for Others-Frequency  | Means_GW   | 1-4          | FG, G             |            |       |             |   |   |  |  |     |  |  |   |   |  |     |   |  |   |  |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Selling or Influencing Others

**Description:** Convincing others to buy merchandise/goods, or otherwise changing their minds or actions.

**Content Model Key:** IV.A.4.a.6

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 4. Interacting With Others
      - a. Communicating/Interacting
        - 6. *Selling or Influencing Others*

| Variable   | Variable Description                     | File Name  | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |
|--|--|--|--------------|-------------------|------------|-------|-------------|---|---|--|--|-----|--|--|---|--|--|-----|--|---|---|--|
| G31LV00M   | Selling or Influencing Others-Level      | Means_GW   | 1-7, 0(NR)   | LV, G             |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Doing a lot of high-level persuading to accomplish work objectives, involving persuading a very difficult to convince audience.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.5</td> <td>Delivering major sales campaign in a new market.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Delivering standard arguments or sales pitches to convince others to buy popular products.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Convincing a co-worker to assist with an assignment.</td> </tr> <tr> <td>Doing little persuading to accomplish work objectives, because there is little need to convince others in any area.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |  |  |              |                   | Left Label | Value | Right Label | Doing a lot of high-level persuading to accomplish work objectives, involving persuading a very difficult to convince audience. | 7 |  |  | 6.5 | Delivering major sales campaign in a new market. |  | 4 | Delivering standard arguments or sales pitches to convince others to buy popular products. |  | 1.5 | Convincing a co-worker to assist with an assignment. | Doing little persuading to accomplish work objectives, because there is little need to convince others in any area. | 1 |  |
| Left Label   | Value                                    | Right Label  |              |                   |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |
| Doing a lot of high-level persuading to accomplish work objectives, involving persuading a very difficult to convince audience.  | 7  |  |              |                   |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |
|  | 6.5                                      | Delivering major sales campaign in a new market.   |              |                   |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |
|  | 4  | Delivering standard arguments or sales pitches to convince others to buy popular products. |              |                   |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |
|  | 1.5                                      | Convincing a co-worker to assist with an assignment.                                       |              |                   |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |
| Doing little persuading to accomplish work objectives, because there is little need to convince others in any area.  | 1  |  |              |                   |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |
| G31IM00M   | Selling or Influencing Others-Importance | Means_GW   | 1-5          | IM, G             |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |
| G31FR00M   | Selling or Influencing Others-Frequency  | Means_GW   | 1-7          | FR, G             |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |
| *G31FG00M  | Selling or Influencing Others-Frequency  | Means_GW   | 1-4          | FG, G             |            |       |             |   |   |  |  |     |  |  |   |  |  |     |  |   |   |  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Resolving Conflict,Negotiating w/ Others

**Description:** Handling complaints, arbitrating disputes, and resolving grievances, or otherwise negotiating with others.

**Content Model Key:** IV.A.4.a.7

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 4. Interacting With Others
      - a. Communicating/Interacting
        - 7. *Resolving Conflict,Negotiating w/ Others*

| Variable | Variable Description                           | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| G32LV00M | Resolving Conflict,Negotiating w/ Others-Level | Means_GW  | 1-7, 0(NR)   | LV, G             |

| Left Label  | Value | Right Label   |
|---|-------|---|
| Handling complaints and negotiations in very challenging situations, involving complex matters and significant conflict and pressure.       | 7     |   |
|   | 6.5   | Negotiating a major labor-management contract.                                  |
|   | 4     | Getting two subordinates to agree on their vacation schedules.                  |
|   | 1.5   | Apologizing to a customer who has complained about being kept waiting too long. |
| Handling negotiations that involve very simple matters that are easily resolved, or needing to do little complaint-handling or negotiating. | 1     |   |

|           |   |          |     |       |
|-----------|---|----------|-----|-------|
| G32IM00M  | Resolving Conflict,Negotiating w/ Others-Importance | Means_GW | 1-5 | IM, G |
| G32FR00M  | Resolving Conflict,Negotiating w/ Others-Frequency  | Means_GW | 1-7 | FR, G |
| *G32FG00M | Resolving Conflict,Negotiating w/ Others-Frequency  | Means_GW | 1-4 | FG, G |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Performing for/Working With Public

**Description:** Performing for people or dealing directly with the public, including serving persons in restaurants and stores, and receiving clients or guests.

**Content Model Key:** IV.A.4.a.8

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 4. Interacting With Others
      - a. Communicating/Interacting
        - 8. *Performing for/Working With Public*

| Variable  | Variable Description                          | File Name  | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
|---|---|--|--------------|-------------------|------------|-------|-------------|--|---|--|--|-----|---|--|---|--|--|-----|--|--|---|--|
| G33LV00M  | Performing for/Working With Public-Level      | Means_GW   | 1-7, 0(NR)   | LV, G             |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Handling interactions with the public, where the audience is hard to please or other conflict is involved.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.5</td> <td>Doing a monologue on national TV.<br/>Calming a very disorderly crowd.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Selling shoes in a popular shoe store.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Answering very simple questions at a visitor information stand.<br/>Tending a highway toll booth.</td> </tr> <tr> <td>Having little interaction with the public, or needing to have only brief interactions.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |   |  |              |                   | Left Label | Value | Right Label | Handling interactions with the public, where the audience is hard to please or other conflict is involved. | 7 |  |  | 6.5 | Doing a monologue on national TV.<br>Calming a very disorderly crowd. |  | 4 | Selling shoes in a popular shoe store. |  | 1.5 | Answering very simple questions at a visitor information stand.<br>Tending a highway toll booth. | Having little interaction with the public, or needing to have only brief interactions. | 1 |  |
| Left Label  | Value   | Right Label  |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| Handling interactions with the public, where the audience is hard to please or other conflict is involved.  | 7   |  |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
|   | 6.5   | Doing a monologue on national TV.<br>Calming a very disorderly crowd.                            |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
|   | 4   | Selling shoes in a popular shoe store.   |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
|   | 1.5   | Answering very simple questions at a visitor information stand.<br>Tending a highway toll booth. |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| Having little interaction with the public, or needing to have only brief interactions.  | 1   |  |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| G33IM00M  | Performing for/Working With Public-Importance | Means_GW   | 1-5          | IM, G             |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| G33FR00M  | Performing for/Working With Public-Frequency  | Means_GW   | 1-7          | FR, G             |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |
| *G33FG00M   | Performing for/Working With Public-Frequency  | Means_GW   | 1-4          | FG, G             |            |       |             |  |   |  |  |     |   |  |   |  |  |     |  |  |   |  |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Coordinating Work & Activities of Others

**Description:** Coordinating members of a work group to accomplish tasks.

**Content Model Key:** IV.A.4.b.1

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 4. Interacting With Others
      - b. Coordinating/Developing/Managing/Advising
        - 1. *Coordinating Work & Activities of Others*

| Variable | Variable Description                           | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| G34LV00M | Coordinating Work & Activities of Others-Level | Means_GW  | 1-7, 0(NR)   | LV, G             |

| Left Label  | Value | Right Label  |
|---|-------|--|
| Coordinating the work of many employees, where a complex sequencing of others' tasks is required. | 7     |  |
|   | 6.5   | Acting as general contractor for the building of a large industrial complex.     |
|   | 4     | Organizing the clean-up crew after a major sports event or political convention. |
|   | 1.5   | Exchanging information during shift change.                                      |
| Needing to do little coordinating of others.  | 1     |  |

|           |   |          |     |       |
|-----------|---|----------|-----|-------|
| G34IM00M  | Coordinating Work & Activities of Others-Importance | Means_GW | 1-5 | IM, G |
| G34FR00M  | Coordinating Work & Activities of Others-Frequency  | Means_GW | 1-7 | FR, G |
| *G34FG00M | Coordinating Work & Activities of Others-Frequency  | Means_GW | 1-4 | FG, G |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Developing and Building Teams

**Description:** Encouraging and building mutual trust, respect, and cooperation among team members.

**Content Model Key:** IV.A.4.b.2

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 4. Interacting With Others
      - b. Coordinating/Developing/Managing/Advising
        - 2. *Developing and Building Teams*

| Variable  | Variable Description                     | File Name  | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |                             |   |  |
|---|--|--|--------------|-------------------|------------|-------|-------------|---|---|--|--|-----|--|--|---|---|--|-----|--|-----------------------------|---|--|
| G35LV00M  | Developing and Building Teams-Level      | Means_GW   | 1-7, 0(NR)   | LV, G             |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |                             |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Managing large teams and building cooperation among diverse team members toward accomplishment of highly complex or poorly defined activities/projects.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.5</td> <td>Leading a large team to design and build a new aircraft.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Leading an assembly team in an automobile production plant.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Encouraging two co-workers to stick with a tough assignment.</td> </tr> <tr> <td>Doing little team building.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |  |  |              |                   | Left Label | Value | Right Label | Managing large teams and building cooperation among diverse team members toward accomplishment of highly complex or poorly defined activities/projects. | 7 |  |  | 6.5 | Leading a large team to design and build a new aircraft. |  | 4 | Leading an assembly team in an automobile production plant. |  | 1.5 | Encouraging two co-workers to stick with a tough assignment. | Doing little team building. | 1 |  |
| Left Label  | Value                                    | Right Label  |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |                             |   |  |
| Managing large teams and building cooperation among diverse team members toward accomplishment of highly complex or poorly defined activities/projects.   | 7  |  |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |                             |   |  |
|   | 6.5                                      | Leading a large team to design and build a new aircraft.     |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |                             |   |  |
|   | 4  | Leading an assembly team in an automobile production plant.  |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |                             |   |  |
|   | 1.5                                      | Encouraging two co-workers to stick with a tough assignment. |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |                             |   |  |
| Doing little team building.   | 1  |  |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |                             |   |  |
| G35IM00M  | Developing and Building Teams-Importance | Means_GW   | 1-5          | IM, G             |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |                             |   |  |
| G35FR00M  | Developing and Building Teams-Frequency  | Means_GW   | 1-7          | FR, G             |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |                             |   |  |
| *G35FG00M   | Developing and Building Teams-Frequency  | Means_GW   | 1-4          | FG, G             |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |                             |   |  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Teaching Others

**Description:** Identifying educational needs, developing formal training programs or classes, and teaching or instructing others.

**Content Model Key:** IV.A.4.b.3

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 4. Interacting With Others
      - b. Coordinating/Developing/Managing/Advising
        - 3. *Teaching Others*

| Variable  | Variable Description       | File Name   | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
|---|----------------------------|---|--------------|-------------------|------------|-------|-------------|--|---|--|--|-----|---|--|---|--|--|-----|---|---|---|--|
| G36LV00M  | Teaching Others-Level      | Means_GW  | 1-7, 0(NR)   | LV, G             |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Teaching and explaining difficult tasks, concepts, or material, and conducting complex training.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.5</td> <td>Developing and conducting training programs for a medical school.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Teaching a social sciences course to high school students.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Giving co-workers brief instructions on a simple procedural change.</td> </tr> <tr> <td>Doing little training or educating of others.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |                            |   |              |                   | Left Label | Value | Right Label | Teaching and explaining difficult tasks, concepts, or material, and conducting complex training. | 7 |  |  | 6.5 | Developing and conducting training programs for a medical school. |  | 4 | Teaching a social sciences course to high school students. |  | 1.5 | Giving co-workers brief instructions on a simple procedural change. | Doing little training or educating of others. | 1 |  |
| Left Label  | Value                      | Right Label   |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| Teaching and explaining difficult tasks, concepts, or material, and conducting complex training.  | 7                          |   |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
|   | 6.5                        | Developing and conducting training programs for a medical school.   |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
|   | 4                          | Teaching a social sciences course to high school students.          |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
|   | 1.5                        | Giving co-workers brief instructions on a simple procedural change. |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| Doing little training or educating of others.   | 1                          |   |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| G36IM00M  | Teaching Others-Importance | Means_GW  | 1-5          | IM, G             |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| G36FR00M  | Teaching Others-Frequency  | Means_GW  | 1-7          | FR, G             |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| *G36FG00M   | Teaching Others-Frequency  | Means_GW  | 1-4          | FG, G             |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Guiding, Directing & Motivating Subord.

**Description:** Providing guidance and direction to subordinates, including setting performance standards and monitoring subordinates.

**Content Model Key:** IV.A.4.b.4

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 4. Interacting With Others
      - b. Coordinating/Developing/Managing/Advising
        - 4. *Guiding, Directing & Motivating Subord.*

| Variable | Variable Description                              | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| G37LV00M | Guiding, Directing & Motivating Subord.-<br>Level | Means_GW  | 1-7, 0(NR)   | LV, G             |

| Left Label   | Value | Right Label   |
|--|-------|---|
| Directing and motivating several organization members, and building and maintaining morale in difficult or unpleasant work settings. | 7     |   |
|  | 6.5   | Managing a severely downsized unit.                                 |
|  | 4     | Supervising a small number of subordinates in a well-paid industry. |
|  | 1.5   | Working occasionally as a back-up supervisor.                       |
| Doing little directing or motivating of subordinates.  | 1     |   |

|           |  |          |     |       |
|-----------|--|----------|-----|-------|
| G37IM00M  | Guiding, Directing & Motivating Subord.-<br>Importance | Means_GW | 1-5 | IM, G |
| G37FR00M  | Guiding, Directing & Motivating Subord.-<br>Frequency  | Means_GW | 1-7 | FR, G |
| *G37FG00M | Guiding, Directing & Motivating Subord.-<br>Frequency  | Means_GW | 1-4 | FG, G |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Coaching and Developing Others

**Description:** Identifying developmental needs of others and coaching or otherwise helping others to improve their knowledge or skills.

**Content Model Key:** IV.A.4.b.5

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 4. Interacting With Others
      - b. Coordinating/Developing/Managing/Advising
        - 5. *Coaching and Developing Others*

| Variable  | Variable Description                      | File Name  | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |  |   |  |
|---|---|--|--------------|-------------------|------------|-------|-------------|---|---|--|--|-----|--|--|---|---|--|-----|--|--|---|--|
| G38LV00M  | Coaching and Developing Others-Level      | Means_GW   | 1-7, 0(NR)   | LV, G             |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |  |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Identifying effective ways of developing others to perform highly complex or difficult tasks, and coaching them under these difficult conditions.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.5</td> <td>Serving as an executive mentor.<br/>Coaching a college athletic team.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Providing on-the-job training for clerical workers.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Showing a co-worker how to operate a piece of equipment.</td> </tr> <tr> <td>Doing little coaching or developing of others.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |   |  |              |                   | Left Label | Value | Right Label | Identifying effective ways of developing others to perform highly complex or difficult tasks, and coaching them under these difficult conditions. | 7 |  |  | 6.5 | Serving as an executive mentor.<br>Coaching a college athletic team. |  | 4 | Providing on-the-job training for clerical workers. |  | 1.5 | Showing a co-worker how to operate a piece of equipment. | Doing little coaching or developing of others. | 1 |  |
| Left Label  | Value                                     | Right Label  |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |  |   |  |
| Identifying effective ways of developing others to perform highly complex or difficult tasks, and coaching them under these difficult conditions.   | 7   |  |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |  |   |  |
|   | 6.5                                       | Serving as an executive mentor.<br>Coaching a college athletic team. |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |  |   |  |
|   | 4   | Providing on-the-job training for clerical workers.                  |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |  |   |  |
|   | 1.5                                       | Showing a co-worker how to operate a piece of equipment.             |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |  |   |  |
| Doing little coaching or developing of others.  | 1   |  |              |                   |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |  |   |  |
| G38IM00M  | Coaching and Developing Others-Importance | Means_GW   | 1-5          | IM, G             |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |  |   |  |
| G38FR00M  | Coaching and Developing Others-Frequency  | Means_GW   | 1-7          | FR, G             |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |  |   |  |
| *G38FG00M   | Coaching and Developing Others-Frequency  | Means_GW   | 1-4          | FG, G             |            |       |             |   |   |  |  |     |  |  |   |   |  |     |  |  |   |  |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Provide Consultation & Advice to Others

**Description:** Providing consultation and expert advice to management or other groups on technical, systems-related, or process related topics.

**Content Model Key:** IV.A.4.b.6

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 4. Interacting With Others
      - b. Coordinating/Developing/Managing/Advising
        - 6. *Provide Consultation & Advice to Others*

| Variable | Variable Description                          | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| G39LV00M | Provide Consultation & Advice to Others-Level | Means_GW  | 1-7, 0(NR)   | LV, G             |

| Left Label   | Value | Right Label   |
|--|-------|---|
| Providing expert guidance on complex matters regarding the design, development, or implementation of major programs. | 7     |   |
|  | 6.5   | Providing ideas for changing an organization to increase profitability. |
|  | 4     | Recommending a new software package to increase operational efficiency. |
|  | 1.5   | Working in a position that requires little advising of others.          |
| Providing little advice or consultation to others.   | 1     |   |

|           |  |          |     |       |
|-----------|--|----------|-----|-------|
| G39IM00M  | Provide Consultation & Advice to Others-Importance | Means_GW | 1-5 | IM, G |
| G39FR00M  | Provide Consultation & Advice to Others-Frequency  | Means_GW | 1-7 | FR, G |
| *G39FG00M | Provide Consultation & Advice to Others-Frequency  | Means_GW | 1-4 | FG, G |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Performing Administrative Activities

**Description:** Approving requests, handling paperwork, and performing day-to-day administrative tasks.

**Content Model Key:** IV.A.4.c.1

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 4. Interacting With Others
      - c. Administering
        - 1. *Performing Administrative Activities*

| Variable  | Variable Description                            | File Name   | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
|---|---|---|--------------|-------------------|------------|-------|-------------|--|---|--|--|-----|---|--|---|--|--|-----|---|---|---|--|
| G40LV00M  | Performing Administrative Activities-Level      | Means_GW  | 1-7, 0(NR)   | LV, G             |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Overseeing administrative activities for a large workforce, with a complex set of administrative procedures.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.5</td> <td>Serving as the benefits director for a large and growing computer sales organization.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Completing tax forms required of self-employed business persons.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Completing routine paperwork on standard forms.</td> </tr> <tr> <td>Doing very straightforward administrative activities.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |   |   |              |                   | Left Label | Value | Right Label | Overseeing administrative activities for a large workforce, with a complex set of administrative procedures. | 7 |  |  | 6.5 | Serving as the benefits director for a large and growing computer sales organization. |  | 4 | Completing tax forms required of self-employed business persons. |  | 1.5 | Completing routine paperwork on standard forms. | Doing very straightforward administrative activities. | 1 |  |
| Left Label  | Value   | Right Label   |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| Overseeing administrative activities for a large workforce, with a complex set of administrative procedures.  | 7   |   |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
|   | 6.5   | Serving as the benefits director for a large and growing computer sales organization. |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
|   | 4   | Completing tax forms required of self-employed business persons.                      |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
|   | 1.5   | Completing routine paperwork on standard forms.                                       |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| Doing very straightforward administrative activities.   | 1   |   |              |                   |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| G40IM00M  | Performing Administrative Activities-Importance | Means_GW  | 1-5          | IM, G             |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| G40FR00M  | Performing Administrative Activities-Frequency  | Means_GW  | 1-7          | FR, G             |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| *G40FG00M   | Performing Administrative Activities-Frequency  | Means_GW  | 1-4          | FG, G             |            |       |             |  |   |  |  |     |   |  |   |  |  |     |   |   |   |  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Staffing Organizational Units

**Description:** Recruiting, interviewing, selecting, hiring, and promoting persons for the organization.

**Content Model Key:** IV.A.4.c.2

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 4. Interacting With Others
      - c. Administering
        - 2. *Staffing Organizational Units*

| Variable   | Variable Description                     | File Name   | Field Values | Scale, Ques Codes |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
|--|--|---|--------------|-------------------|------------|-------|-------------|---|---|--|--|-----|---|--|---|--|--|-----|---|---|---|--|
| G41LV00M   | Staffing Organizational Units-Level      | Means_GW  | 1-7, 0(NR)   | LV, G             |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 45%;">Left Label</th> <th style="width: 10%;">Value</th> <th style="width: 45%;">Right Label</th> </tr> </thead> <tbody> <tr> <td>Overseeing the staff of a large and diverse workforce, with complex staffing needs.</td> <td style="text-align: center;">7</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">6.5</td> <td>Directing a large recruitment and employment testing program for an international manufacturing organization.</td> </tr> <tr> <td></td> <td style="text-align: center;">4</td> <td>Interviewing candidates for a sales position and making a hiring recommendation.</td> </tr> <tr> <td></td> <td style="text-align: center;">1.5</td> <td>Working in a position that has minimal staffing requirements.</td> </tr> <tr> <td>Doing very straightforward staffing activities.</td> <td style="text-align: center;">1</td> <td></td> </tr> </tbody> </table> |  |   |              |                   | Left Label | Value | Right Label | Overseeing the staff of a large and diverse workforce, with complex staffing needs. | 7 |  |  | 6.5 | Directing a large recruitment and employment testing program for an international manufacturing organization. |  | 4 | Interviewing candidates for a sales position and making a hiring recommendation. |  | 1.5 | Working in a position that has minimal staffing requirements. | Doing very straightforward staffing activities. | 1 |  |
| Left Label   | Value                                    | Right Label   |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| Overseeing the staff of a large and diverse workforce, with complex staffing needs.  | 7  |   |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
|  | 6.5                                      | Directing a large recruitment and employment testing program for an international manufacturing organization. |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
|  | 4  | Interviewing candidates for a sales position and making a hiring recommendation.                              |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
|  | 1.5                                      | Working in a position that has minimal staffing requirements.   |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| Doing very straightforward staffing activities.  | 1  |   |              |                   |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| G41IM00M   | Staffing Organizational Units-Importance | Means_GW  | 1-5          | IM, G             |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| G41FR00M   | Staffing Organizational Units-Frequency  | Means_GW  | 1-7          | FR, G             |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |
| *G41FG00M  | Staffing Organizational Units-Frequency  | Means_GW  | 1-4          | FG, G             |            |       |             |   |   |  |  |     |   |  |   |  |  |     |   |   |   |  |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Monitoring and Controlling Resources

**Description:** Monitoring and controlling resources and overseeing the spending of money.

**Content Model Key:** IV.A.4.c.3

- IV. Occupational Requirements
  - A. Generalized Work Activities
    - 4. Interacting With Others
      - c. Administering
        - 3. *Monitoring and Controlling Resources*

| Variable   | Variable Description                            | File Name   | Field Values | Scale, Ques Codes |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |   |   |  |
|--|---|---|--------------|-------------------|------------|-------|-------------|--|---|--|--|-----|---|--|---|---|--|-----|---|---|---|--|
| G42LV00M   | Monitoring and Controlling Resources-Level      | Means_GW  | 1-7, 0(NR)   | LV, G             |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |   |   |  |
| <table border="1"> <thead> <tr> <th>Left Label</th> <th>Value</th> <th>Right Label</th> </tr> </thead> <tbody> <tr> <td>Monitoring and controlling a large number of resources, including managing a large budget.</td> <td>7</td> <td></td> </tr> <tr> <td></td> <td>6.5</td> <td>Serving as a financial executive in charge of a large company's budget.</td> </tr> <tr> <td></td> <td>4</td> <td>Working as a chef responsible for ordering food for the menu.</td> </tr> <tr> <td></td> <td>1.5</td> <td>Working as a housekeeper responsible for keeping track of the linens.</td> </tr> <tr> <td>Needing to do little monitoring or controlling of resources or money.</td> <td>1</td> <td></td> </tr> </tbody> </table> |   |   |              |                   | Left Label | Value | Right Label | Monitoring and controlling a large number of resources, including managing a large budget. | 7 |  |  | 6.5 | Serving as a financial executive in charge of a large company's budget. |  | 4 | Working as a chef responsible for ordering food for the menu. |  | 1.5 | Working as a housekeeper responsible for keeping track of the linens. | Needing to do little monitoring or controlling of resources or money. | 1 |  |
| Left Label   | Value   | Right Label   |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |   |   |  |
| Monitoring and controlling a large number of resources, including managing a large budget.   | 7   |   |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |   |   |  |
|  | 6.5   | Serving as a financial executive in charge of a large company's budget. |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |   |   |  |
|  | 4   | Working as a chef responsible for ordering food for the menu.           |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |   |   |  |
|  | 1.5   | Working as a housekeeper responsible for keeping track of the linens.   |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |   |   |  |
| Needing to do little monitoring or controlling of resources or money.  | 1   |   |              |                   |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |   |   |  |
| G42IM00M   | Monitoring and Controlling Resources-Importance | Means_GW  | 1-5          | IM, G             |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |   |   |  |
| G42FR00M   | Monitoring and Controlling Resources-Frequency  | Means_GW  | 1-7          | FR, G             |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |   |   |  |
| *G42FG00M  | Monitoring and Controlling Resources-Frequency  | Means_GW  | 1-4          | FG, G             |            |       |             |  |   |  |  |     |   |  |   |   |  |     |   |   |   |  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Have Control Over Unit/Department

**Description:** You have a great deal of control over what happens in your unit or department

**Content Model Key:** IV.B.1.a.1.a.i

IV. Occupational Requirements

B. Organizational Context

1. Structural Characteristics

a. Organizational Structure

1. Decision Making System

a. Decentralization & Employee Empowerment

*i. Have Control Over Unit/Department*

| <b>Variable</b> | <b>Variable Description</b>                 | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O01AG00M        | Have Control Over Unit/Department-Agreement | Means_OC         | 1-5                 | AG                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Have Influence Over Decisions

**Description:** You have a great deal of influence over decisions that are made in your unit or department.

**Content Model Key:** IV.B.1.a.1.a.ii

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - a. Organizational Structure
        - 1. Decision Making System
          - a. Decentralization & Employee Empowerment
            - ii. Have Influence Over Decisions*

| <b>Variable</b> | <b>Variable Description</b>             | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O02AG00M        | Have Influence Over Decisions-Agreement | Means_OC         | 1-5                 | AG                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Monitor Data on Quality/Costs/Waste/etc.

**Description:** You monitor data on quality, costs, waste, and productivity

**Content Model Key:** IV.B.1.a.1.a.iii

IV. Occupational Requirements

B. Organizational Context

1. Structural Characteristics

a. Organizational Structure

1. Decision Making System

a. Decentralization & Employee Empowerment

*iii. Monitor Data on Quality/Costs/Waste/etc.*

| <b>Variable</b> | <b>Variable Description</b>                         | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O53EX00M        | Monitor Data on Quality/Costs/Waste/etc.-<br>Extent | Means_OC         | 1-5                 | EX, O42                  |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Determine Work Flow/Order of Tasks

**Description:** You determine work flow or the order in which tasks are performed

**Content Model Key:** IV.B.1.a.1.a.iv

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - a. Organizational Structure
        - 1. Decision Making System
          - a. Decentralization & Employee Empowerment
            - iv. Determine Work Flow/Order of Tasks*

| <b>Variable</b> | <b>Variable Description</b>               | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O54EX00M        | Determine Work Flow/Order of Tasks-Extent | Means_OC         | 1-5                 | EX, O42                  |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Invest in New Equipment and Technology

**Description:** You invest in new equipment and technology

**Content Model Key:** IV.B.1.a.1.a.v

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - a. Organizational Structure
        - 1. Decision Making System
          - a. Decentralization & Employee Empowerment
            - v. *Invest in New Equipment and Technology*

| <b>Variable</b> | <b>Variable Description</b>                   | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O55EX00M        | Invest in New Equipment and Technology-Extent | Means_OC         | 1-5                 | EX, O42                  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Develop New Products, Services, etc.

**Description:** You develop new products, services, and procedures

**Content Model Key:** IV.B.1.a.1.a.vi

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - a. Organizational Structure
        - 1. Decision Making System
          - a. Decentralization & Employee Empowerment
            - vi. Develop New Products, Services, etc.*

| <b>Variable</b> | <b>Variable Description</b>                 | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O56EX00M        | Develop New Products, Services, etc.-Extent | Means_OC         | 1-5                 | EX, O42                  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Percent of Time in Intact Team

**Description:** Approximately what percentage of your time do you spend working in an intact team? By intact team we mean a group of 3 or more employees who are jointly responsible for whole work processes and work toward shared goals (e.g., production team; development team; project team).

**Content Model Key:** IV.B.1.a.1.b.i

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - a. Organizational Structure
        - 1. Decision Making System
        - b. Individual versus Team Structure
          - i. Percent of Time in Intact Team*

| Variable | Variable Description                                  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| O57TI00I | Percent of Time in Intact Team-% Time: Median         | Means_MD  | 0-4          | TI                |
| O57CO01P | Percent of Time in Intact Team-% Chosen None          | Means_OC  | 0-100%       | CO                |
| O57CO02P | Percent of Time in Intact Team-% Chosen Less than 25% | Means_OC  | 0-100%       | CO                |
| O57CO03P | Percent of Time in Intact Team-% Chosen 25%-50%       | Means_OC  | 0-100%       | CO                |
| O57CO04P | Percent of Time in Intact Team-% Chosen 51%-75%       | Means_OC  | 0-100%       | CO                |
| O57CO05P | Percent of Time in Intact Team-% Chosen More than 75% | Means_OC  | 0-100%       | CO                |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Job Variety

**Description:** How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?

**Content Model Key:** IV.B.1.a.2.a.i

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - a. Organizational Structure
      - 2. Job Characteristics
        - a. Skill Variety
          - i. Job Variety*

| Variable | Variable Description    | File Name | Field Values | Scale, Ques Codes |
|----------|-------------------------|-----------|--------------|-------------------|
| O05VR00M | Job Variety-Job Variety | Means_OC  | 1-5          | VR                |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Complex or High Level Skills Required

**Description:** Your job requires you to use a number of complex or high-level skills.

**Content Model Key:** IV.B.1.a.2.a.ii

IV. Occupational Requirements

B. Organizational Context

1. Structural Characteristics

a. Organizational Structure

2. Job Characteristics

a. Skill Variety

*ii. Complex or High Level Skills Required*

| <b>Variable</b> | <b>Variable Description</b>                    | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| O08AC00M        | Complex or High Level Skills Required-Accuracy | Means_OC         | 1-5                 | AC                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Variety of Tasks Required

**Description:** Your job requires you to perform a variety of tasks.

**Content Model Key:** IV.B.1.a.2.a.iii

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - a. Organizational Structure
      - 2. Job Characteristics
        - a. Skill Variety
        - iii. Variety of Tasks Required*

| <b>Variable</b> | <b>Variable Description</b>        | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|------------------------------------|------------------|---------------------|--------------------------|
| O11AC00M        | Variety of Tasks Required-Accuracy | Means_OC         | 1-5                 | AC                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Significance or Importance of Job

**Description:** In general, how significant or important is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people?

**Content Model Key:** IV.B.1.a.2.b.i

IV. Occupational Requirements

B. Organizational Context

1. Structural Characteristics

a. Organizational Structure

2. Job Characteristics

b. Task Significance

*i. Significance or Importance of Job*

| <b>Variable</b> | <b>Variable Description</b>                    | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| O06SG00M        | Significance or Importance of Job-Significance | Means_OC         | 1-5                 | SG                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Job Quality Affects Lots of People

**Description:** Your job is one where a lot of people can be affected by how well the work gets done.

**Content Model Key:** IV.B.1.a.2.b.ii

IV. Occupational Requirements

B. Organizational Context

1. Structural Characteristics

a. Organizational Structure

2. Job Characteristics

b. Task Significance

*ii. Job Quality Affects Lots of People*

| <b>Variable</b> | <b>Variable Description</b>                 | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O12AC00M        | Job Quality Affects Lots of People-Accuracy | Means_OC         | 1-5                 | AC                       |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Job Itself Is Very Significant

**Description:** Your job itself is very significant and important in the broader scheme of things.

**Content Model Key:** IV.B.1.a.2.b.iii

IV. Occupational Requirements

B. Organizational Context

1. Structural Characteristics

a. Organizational Structure

2. Job Characteristics

b. Task Significance

*iii. Job Itself Is Very Significant*

| <b>Variable</b> | <b>Variable Description</b>             | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O17AC00M        | Job Itself Is Very Significant-Accuracy | Means_OC         | 1-5                 | AC                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Job Involves "Whole" Piece of Work

**Description:** To what extent does your job involve doing a "whole" and identifiable piece of work? That is, is the job a complete piece of work that has an obvious beginning and end? Or is it only a small part of the overall piece of work, which is finished by other people or automatic machines? [If your job involves many different tasks or pieces of work, try to think about your typical tasks or the tasks you spend the most time on.]

**Content Model Key:** IV.B.1.a.2.c.i

IV. Occupational Requirements

B. Organizational Context

1. Structural Characteristics

a. Organizational Structure

2. Job Characteristics

c. Task Identity

*i. Job Involves "Whole" Piece of Work*

| <b>Variable</b> | <b>Variable Description</b>                     | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O04PC00M        | Job Involves "Whole" Piece of Work-Part of Work | Means_OC         | 1-5                 | PC                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Can Do Entire Piece of Work

**Description:** Your job is arranged so that you can do an entire piece of work from beginning to end.

**Content Model Key:** IV.B.1.a.2.c.ii

IV. Occupational Requirements

B. Organizational Context

1. Structural Characteristics

a. Organizational Structure

2. Job Characteristics

c. Task Identity

*ii. Can Do Entire Piece of Work*

| <b>Variable</b> | <b>Variable Description</b>          | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--------------------------------------|------------------|---------------------|--------------------------|
| O09AC00M        | Can Do Entire Piece of Work-Accuracy | Means_OC         | 1-5                 | AC                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Can Finish What You Start

**Description:** Your job provides you a chance to completely finish the piece of work you began.

**Content Model Key:** IV.B.1.a.2.c.iii

IV. Occupational Requirements

B. Organizational Context

1. Structural Characteristics

a. Organizational Structure

2. Job Characteristics

c. Task Identity

*iii. Can Finish What You Start*

| <b>Variable</b> | <b>Variable Description</b>        | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|------------------------------------|------------------|---------------------|--------------------------|
| O14AC00M        | Can Finish What You Start-Accuracy | Means_OC         | 1-5                 | AC                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Autonomy and Freedom in Job

**Description:** How much autonomy and freedom are there in your job? That is, to what extent does your job permit you to decide on your own how to go about doing your job?

**Content Model Key:** IV.B.1.a.2.d.i

IV. Occupational Requirements

B. Organizational Context

1. Structural Characteristics

a. Organizational Structure

2. Job Characteristics

d. Autonomy

*i. Autonomy and Freedom in Job*

| <b>Variable</b> | <b>Variable Description</b>          | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--------------------------------------|------------------|---------------------|--------------------------|
| O03AU00M        | Autonomy and Freedom in Job-Autonomy | Means_OC         | 1-5                 | AU                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Chance for Initiative and Judgment

**Description:** Your job gives you a chance to use your personal initiative and judgment in carrying out the work.

**Content Model Key:** IV.B.1.a.2.d.ii

IV. Occupational Requirements

B. Organizational Context

1. Structural Characteristics

a. Organizational Structure

2. Job Characteristics

d. Autonomy

*ii. Chance for Initiative and Judgment*

| <b>Variable</b> | <b>Variable Description</b>                 | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O13AC00M        | Chance for Initiative and Judgment-Accuracy | Means_OC         | 1-5                 | AC                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Opportunity for Independence/Freedom

**Description:** Your job gives you considerable opportunity for independence and freedom in how you do your job.

**Content Model Key:** IV.B.1.a.2.d.iii

IV. Occupational Requirements

B. Organizational Context

1. Structural Characteristics

a. Organizational Structure

2. Job Characteristics

d. Autonomy

*iii. Opportunity for Independence/Freedom*

| <b>Variable</b> | <b>Variable Description</b>                   | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O16AC00M        | Opportunity for Independence/Freedom-Accuracy | Means_OC         | 1-5                 | AC                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Extent of Feedback From Doing Job Itself

**Description:** To what extent does doing the job itself provide you with information about your work performance? That is, does the actual work itself provide clues about how well you are doing--aside from any "feedback" co-workers or supervisors may provide?

**Content Model Key:** IV.B.1.a.2.e.i

IV. Occupational Requirements

B. Organizational Context

1. Structural Characteristics

a. Organizational Structure

2. Job Characteristics

e. Feedback

*i. Extent of Feedback From Doing Job Itself*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| O07FB00M | Extent of Feedback From Doing Job Itself-<br>Extent Feedback | Means_OC  | 1-5          | FB                |



**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Doing Job Provides Chances for Feedback

**Description:** Just doing the job provides many chances for you to figure out how well you are doing.

**Content Model Key:** IV.B.1.a.2.e.ii

IV. Occupational Requirements

B. Organizational Context

1. Structural Characteristics

a. Organizational Structure

2. Job Characteristics

e. Feedback

*ii. Doing Job Provides Chances for Feedback*

| <b>Variable</b> | <b>Variable Description</b>                      | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| O10AC00M        | Doing Job Provides Chances for Feedback-Accuracy | Means_OC         | 1-5                 | AC                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** After Finishing Job, Know Own Performance

**Description:** After you finish a job, you know whether you performed well.

**Content Model Key:** IV.B.1.a.2.e.iii

IV. Occupational Requirements

B. Organizational Context

1. Structural Characteristics

a. Organizational Structure

2. Job Characteristics

e. Feedback

*iii. After Finishing Job, Know Own Performance*

| <b>Variable</b> | <b>Variable Description</b>                        | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| O15AC00M        | After Finishing Job, Know Own Performance-Accuracy | Means_OC         | 1-5                 | AC                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Number of Supervisors in Past Year

**Description:** How many different supervisors have you had in the past year?

**Content Model Key:** IV.B.1.a.3.a

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - a. Organizational Structure
        - 3. Job Stability and Rotation
          - a. Number of Supervisors in Past Year*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| O34NS00I | Number of Supervisors in Past Year-Number of Supervisors: Median | Means_MD  | 0-4          | NS                |
| O34CO01P | Number of Supervisors in Past Year-% Chosen Only 1               | Means_OC  | 0-100%       | CO                |
| O34CO02P | Number of Supervisors in Past Year-% Chosen 2                    | Means_OC  | 0-100%       | CO                |
| O34CO03P | Number of Supervisors in Past Year-% Chosen 3                    | Means_OC  | 0-100%       | CO                |
| O34CO04P | Number of Supervisors in Past Year-% Chosen 4 or more            | Means_OC  | 0-100%       | CO                |
| O34CO05P | Number of Supervisors in Past Year-% Chosen Not applicable       | Means_OC  | 0-100%       | CO                |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Number of Work Teams in Past Year

**Description:** Approximately how many different work teams have you belonged to during the past year?

**Content Model Key:** IV.B.1.a.3.b

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - a. Organizational Structure
        - 3. Job Stability and Rotation
          - b. Number of Work Teams in Past Year*

| Variable | Variable Description                                      | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| O35TM00I | Number of Work Teams in Past Year-Number of Teams: Median | Means_MD  | 0-5          | TM                |
| O35CO01P | Number of Work Teams in Past Year-% Chosen<br>None        | Means_OC  | 0-100%       | CO                |
| O35CO02P | Number of Work Teams in Past Year-% Chosen<br>1           | Means_OC  | 0-100%       | CO                |
| O35CO03P | Number of Work Teams in Past Year-% Chosen<br>2-3         | Means_OC  | 0-100%       | CO                |
| O35CO04P | Number of Work Teams in Past Year-% Chosen<br>4-6         | Means_OC  | 0-100%       | CO                |
| O35CO05P | Number of Work Teams in Past Year-% Chosen<br>7-10        | Means_OC  | 0-100%       | CO                |
| O35CO06P | Number of Work Teams in Past Year-% Chosen<br>11 or more  | Means_OC  | 0-100%       | CO                |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Number of Work Group Reorgs. in Past Year

**Description:** In the past year, how many times has your primary work group gone through some kind of reorganization?

**Content Model Key:** IV.B.1.a.3.c

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - a. Organizational Structure
        - 3. Job Stability and Rotation
          - c. Number of Work Group Reorgs. in Past Year*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| O36CH00I | Number of Work Group Reorgs. in Past Year-<br>Change: Median              | Means_MD  | 0-4          | CH                |
| O36CO01P | Number of Work Group Reorgs. in Past Year-<br>% Chosen<br>Never           | Means_OC  | 0-100%       | CO                |
| O36CO02P | Number of Work Group Reorgs. in Past Year-<br>% Chosen<br>Once            | Means_OC  | 0-100%       | CO                |
| O36CO03P | Number of Work Group Reorgs. in Past Year-<br>% Chosen<br>Twice           | Means_OC  | 0-100%       | CO                |
| O36CO04P | Number of Work Group Reorgs. in Past Year-<br>% Chosen<br>3-5 times       | Means_OC  | 0-100%       | CO                |
| O36CO05P | Number of Work Group Reorgs. in Past Year-<br>% Chosen<br>6 times or more | Means_OC  | 0-100%       | CO                |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** No. of Times Nature of Job Changed

**Description:** In the past year, how many times has the nature of your job duties changed dramatically?

**Content Model Key:** IV.B.1.a.3.d

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - a. Organizational Structure
        - 3. Job Stability and Rotation
          - d. No. of Times Nature of Job Changed*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| O37CH00I | No. of Times Nature of Job Changed-Change: Median              | Means_MD  | 0-4          | CH                |
| O37CO01P | No. of Times Nature of Job Changed-% Chosen<br>Never           | Means_OC  | 0-100%       | CO                |
| O37CO02P | No. of Times Nature of Job Changed-% Chosen<br>Once            | Means_OC  | 0-100%       | CO                |
| O37CO03P | No. of Times Nature of Job Changed-% Chosen<br>Twice           | Means_OC  | 0-100%       | CO                |
| O37CO04P | No. of Times Nature of Job Changed-% Chosen<br>3-5 times       | Means_OC  | 0-100%       | CO                |
| O37CO05P | No. of Times Nature of Job Changed-% Chosen<br>6 times or more | Means_OC  | 0-100%       | CO                |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Job Rotation Practices

**Description:** Which statement best describes the job rotation practices in your job and your work group?

**Content Model Key:** IV.B.1.a.3.e

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - a. Organizational Structure
        - 3. Job Stability and Rotation
          - e. Job Rotation Practices*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| O65CO01P | Job Rotation Practices-% Chosen<br>No job rotation - There is no job rotation -- you are trained to do one job and do not usually rotate to other jobs.                                      | Means_OC  | 0-100%       | CO                |
| O65CO02P | Job Rotation Practices-% Chosen<br>Rotate jobs within your work group - You rotate within your work group, but not usually outside your group.   | Means_OC  | 0-100%       | CO                |
| O65CO03P | Job Rotation Practices-% Chosen<br>Rotate jobs within and across work group - You rotate jobs within your work group, and across work groups in your department, but not across departments. | Means_OC  | 0-100%       | CO                |
| O65CO04P | Job Rotation Practices-% Chosen<br>Rotate jobs across work groups & depts - You rotate across work groups and across departments.  | Means_OC  | 0-100%       | CO                |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Sources of People for Current Job

**Description:** Which of the sources listed below are used to recruit people for your current job?

**Content Model Key:** IV.B.1.b.1.a.i

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - b. Human Resources Systems and Practices
        - 1. Recruitment and Selection
          - a. Recruitment Operations
            - i. *Sources of People for Current Job*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| O64CA01M | Sources of People for Current Job-Check All that Apply<br>Employee referrals                                | Means_OC  | 0-100%       | CA                |
| O64CA02M | Sources of People for Current Job-Check All that Apply<br>Direct applications - (i.e., unsolicited resumes) | Means_OC  | 0-100%       | CA                |
| O64CA03M | Sources of People for Current Job-Check All that Apply<br>Employment agencies/Recruiting firms              | Means_OC  | 0-100%       | CA                |
| O64CA04M | Sources of People for Current Job-Check All that Apply<br>College placement offices                         | Means_OC  | 0-100%       | CA                |
| O64CA05M | Sources of People for Current Job-Check All that Apply<br>Internships                                       | Means_OC  | 0-100%       | CA                |
| O64CA06M | Sources of People for Current Job-Check All that Apply<br>Recruiting booths at community functions          | Means_OC  | 0-100%       | CA                |
| O64CA07M | Sources of People for Current Job-Check All that Apply<br>Newspaper advertisements                          | Means_OC  | 0-100%       | CA                |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Sources of People for Current Job (Continued)

**Description:** Which of the sources listed below are used to recruit people for your current job?

**Content Model Key:** IV.B.1.b.1.a.i

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - b. Human Resources Systems and Practices
        - 1. Recruitment and Selection
          - a. Recruitment Operations
            - i. *Sources of People for Current Job*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| O64CA08M | Sources of People for Current Job-Check All that Apply<br>Professional journal advertisements | Means_OC  | 0-100%       | CA                |
| O64CA09M | Sources of People for Current Job-Check All that Apply<br>Other advertisements                | Means_OC  | 0-100%       | CA                |
| O64CA10M | Sources of People for Current Job-Check All that Apply<br>Rehiring                            | Means_OC  | 0-100%       | CA                |
| O64CA11M | Sources of People for Current Job-Check All that Apply<br>High school referrals               | Means_OC  | 0-100%       | CA                |
| O64CA12M | Sources of People for Current Job-Check All that Apply<br>In-house notices                    | Means_OC  | 0-100%       | CA                |
| O64CA13M | Sources of People for Current Job-Check All that Apply<br>Radio                               | Means_OC  | 0-100%       | CA                |
| O64CA14M | Sources of People for Current Job-Check All that Apply<br>Television                          | Means_OC  | 0-100%       | CA                |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Sources of People for Current Job (Continued)

**Description:** Which of the sources listed below are used to recruit people for your current job?

**Content Model Key:** IV.B.1.b.1.a.i

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - b. Human Resources Systems and Practices
        - 1. Recruitment and Selection
          - a. Recruitment Operations
            - i. *Sources of People for Current Job*

| <b>Variable</b> | <b>Variable Description</b>  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| O64CA15M        | Sources of People for Current Job-Check All that Apply<br>In-house referrals             | Means_OC         | 0-100%              | CA                       |
| O64CA16M        | Sources of People for Current Job-Check All that Apply<br>Other - (please specify _____) | Means_OC         | 0-100%              | CA                       |
| O64CA17M        | Sources of People for Current Job-Check All that Apply<br>Do not know or are unsure      | Means_OC         | 0-100%              | CA                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Assessment Methods Used to Select for Job

**Description:** Which of the following assessment methods are used to select people for your current job?

**Content Model Key:** IV.B.1.b.1.b.i

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - b. Human Resources Systems and Practices
        - 1. Recruitment and Selection
          - b. Selection Assessment Methods Used
            - i. *Assessment Methods Used to Select for Job*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| O63CA01P | Assessment Methods Used to Select for Job-<br>Check All that Apply<br>Ability Tests                 | Means_OC  | 0-100%       | CA                |
| O63CA02P | Assessment Methods Used to Select for Job-<br>Check All that Apply<br>Personality Inventories       | Means_OC  | 0-100%       | CA                |
| O63CA03P | Assessment Methods Used to Select for Job-<br>Check All that Apply<br>Biodata Questionnaires        | Means_OC  | 0-100%       | CA                |
| O63CA04P | Assessment Methods Used to Select for Job-<br>Check All that Apply<br>Weighted Application Blanks   | Means_OC  | 0-100%       | CA                |
| O63CA05P | Assessment Methods Used to Select for Job-<br>Check All that Apply<br>Technical Job Knowledge Tests | Means_OC  | 0-100%       | CA                |
| O63CA06P | Assessment Methods Used to Select for Job-<br>Check All that Apply<br>Background Checks             | Means_OC  | 0-100%       | CA                |
| O63CA07P | Assessment Methods Used to Select for Job-<br>Check All that Apply<br>Interviews                    | Means_OC  | 0-100%       | CA                |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Assessment Methods Used to Select for Job (Continued)

**Description:** Which of the following assessment methods are used to select people for your current job?

**Content Model Key:** IV.B.1.b.1.b.i

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - b. Human Resources Systems and Practices
        - 1. Recruitment and Selection
          - b. Selection Assessment Methods Used
            - i. *Assessment Methods Used to Select for Job*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| O63CA08P | Assessment Methods Used to Select for Job-<br>Check All that Apply<br>Simulations - (e.g., in-baskets, role plays) | Means_OC  | 0-100%       | CA                |
| O63CA09P | Assessment Methods Used to Select for Job-<br>Check All that Apply<br>Ratings by others                            | Means_OC  | 0-100%       | CA                |
| O63CA10P | Assessment Methods Used to Select for Job-<br>Check All that Apply<br>References                                   | Means_OC  | 0-100%       | CA                |
| O63CA11P | Assessment Methods Used to Select for Job-<br>Check All that Apply<br>Educational Records                          | Means_OC  | 0-100%       | CA                |
| O63CA12P | Assessment Methods Used to Select for Job-<br>Check All that Apply<br>Employment Records                           | Means_OC  | 0-100%       | CA                |
| O63CA13P | Assessment Methods Used to Select for Job-<br>Check All that Apply<br>Resume                                       | Means_OC  | 0-100%       | CA                |
| O63CA14P | Assessment Methods Used to Select for Job-<br>Check All that Apply<br>None of the above                            | Means_OC  | 0-100%       | CA                |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Assessment Methods Used to Select for Job (Continued)

**Description:** Which of the following assessment methods are used to select people for your current job?

**Content Model Key:** IV.B.1.b.1.b.i

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - b. Human Resources Systems and Practices
        - 1. Recruitment and Selection
          - b. Selection Assessment Methods Used
            - i. Assessment Methods Used to Select for Job*

| <b>Variable</b> | <b>Variable Description</b>   | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O63CA15P        | Assessment Methods Used to Select for Job-<br>Check All that Apply<br>Do not know or unsure | Means_OC         | 0-100%              | CA                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Training Methods Used in Company

**Description:** Which of the following training methods have been used in company training courses you have attended in the last two years?

**Content Model Key:** IV.B.1.b.2.a.i

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - b. Human Resources Systems and Practices
        - 2. Training and Development
          - a. Training Methods
            - i. Training Methods Used in Company*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| O62CA01M | Training Methods Used in Company-Check All that Apply<br>On-the-Job Training                            | Means_OC  | 0-100%       | CA                |
| O62CA02M | Training Methods Used in Company-Check All that Apply<br>Case Study Exercises                           | Means_OC  | 0-100%       | CA                |
| O62CA03M | Training Methods Used in Company-Check All that Apply<br>Conference Method - (i.e., group discussions)  | Means_OC  | 0-100%       | CA                |
| O62CA04M | Training Methods Used in Company-Check All that Apply<br>Lectures with Questions                        | Means_OC  | 0-100%       | CA                |
| O62CA05M | Training Methods Used in Company-Check All that Apply<br>Business Games                                 | Means_OC  | 0-100%       | CA                |
| O62CA06M | Training Methods Used in Company-Check All that Apply<br>Machine Simulators - (e.g., flight simulators) | Means_OC  | 0-100%       | CA                |
| O62CA07M | Training Methods Used in Company-Check All that Apply<br>Films/Videos                                   | Means_OC  | 0-100%       | CA                |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Training Methods Used in Company (Continued)

**Description:** Which of the following training methods have been used in company training courses you have attended in the last two years?

**Content Model Key:** IV.B.1.b.2.a.i

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - b. Human Resources Systems and Practices
        - 2. Training and Development
          - a. Training Methods
            - i. Training Methods Used in Company*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| O62CA08M | Training Methods Used in Company-Check<br>All that Apply<br>Workbooks                     | Means_OC  | 0-100%       | CA                |
| O62CA09M | Training Methods Used in Company-Check<br>All that Apply<br>Role Plays                    | Means_OC  | 0-100%       | CA                |
| O62CA10M | Training Methods Used in Company-Check<br>All that Apply<br>Computer-Assisted Instruction | Means_OC  | 0-100%       | CA                |
| O62CA11M | Training Methods Used in Company-Check<br>All that Apply<br>Audiocassettes                | Means_OC  | 0-100%       | CA                |
| O62CA12M | Training Methods Used in Company-Check<br>All that Apply<br>Interactive Videos            | Means_OC  | 0-100%       | CA                |
| O62CA13M | Training Methods Used in Company-Check<br>All that Apply<br>None of the above             | Means_OC  | 0-100%       | CA                |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Areas of Recent Formal Training

**Description:** In which of the following content areas have you received formal training in the last two years?

**Content Model Key:** IV.B.1.b.2.b.i

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - b. Human Resources Systems and Practices
    - 2. Training and Development
      - b. Training Topics/Content
        - i. Areas of Recent Formal Training*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| O60CA01P | Areas of Recent Formal Training-Check All that Apply<br>Diversity   | Means_OC  | 0-100%       | CA                |
| O60CA02P | Areas of Recent Formal Training-Check All that Apply<br>Team Skills   | Means_OC  | 0-100%       | CA                |
| O60CA03P | Areas of Recent Formal Training-Check All that Apply<br>Quality Control Skills - (e.g., quality/statistical analysis)   | Means_OC  | 0-100%       | CA                |
| O60CA04P | Areas of Recent Formal Training-Check All that Apply<br>Basic Business or Economics - (e.g., accounting, finance, etc.) | Means_OC  | 0-100%       | CA                |
| O60CA05P | Areas of Recent Formal Training-Check All that Apply<br>Problem Solving Skills  | Means_OC  | 0-100%       | CA                |
| O60CA06P | Areas of Recent Formal Training-Check All that Apply<br>Leadership Skills   | Means_OC  | 0-100%       | CA                |
| O60CA07P | Areas of Recent Formal Training-Check All that Apply<br>Customer Service  | Means_OC  | 0-100%       | CA                |



**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Areas of Recent Formal Training (Continued)

**Description:** In which of the following content areas have you received formal training in the last two years?

**Content Model Key:** IV.B.1.b.2.b.i

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - b. Human Resources Systems and Practices
    - 2. Training and Development
      - b. Training Topics/Content
        - i. Areas of Recent Formal Training*

| <b>Variable</b> | <b>Variable Description</b>  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| O60CA08P        | Areas of Recent Formal Training-Check All that Apply<br>None of the above. | Means_OC         | 0-100%              | CA                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Recent Technical Skill Training

**Description:** In the last two years, how often have you attended company sponsored job-related technical training (i.e., technical skill training)?

**Content Model Key:** IV.B.1.b.2.c.i

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - b. Human Resources Systems and Practices
        - 2. Training and Development
          - c. Extent/Support of Training Activities
            - i. Recent Technical Skill Training*

| Variable | Variable Description                                       | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| O61TR00I | Recent Technical Skill Training-Frequency Training: Median | Means_MD  | 0-3          | TR                |
| O61CO01P | Recent Technical Skill Training-% Chosen Never             | Means_OC  | 0-100%       | CO                |
| O61CO02P | Recent Technical Skill Training-% Chosen Only once         | Means_OC  | 0-100%       | CO                |
| O61CO03P | Recent Technical Skill Training-% Chosen Twice             | Means_OC  | 0-100%       | CO                |
| O61CO04P | Recent Technical Skill Training-% Chosen More than twice   | Means_OC  | 0-100%       | CO                |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Compensation Package Components

**Description:** Which of the following is part of your compensation package (i.e., pay)?

**Content Model Key:** IV.B.1.b.3.a.i

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - b. Human Resources Systems and Practices
        - 3. Reward System
          - a. Basis of Compensation
            - i. Compensation Package Components*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| O58CA01P | Compensation Package Components-Check<br>All that Apply<br>Profit Sharing                           | Means_OC  | 0-100%       | CA                |
| O58CA02P | Compensation Package Components-Check<br>All that Apply<br>Gain Sharing                             | Means_OC  | 0-100%       | CA                |
| O58CA03P | Compensation Package Components-Check<br>All that Apply<br>Knowledge/Skill-based pay                | Means_OC  | 0-100%       | CA                |
| O58CA04P | Compensation Package Components-Check<br>All that Apply<br>Pay based on your individual performance | Means_OC  | 0-100%       | CA                |
| O58CA05P | Compensation Package Components-Check<br>All that Apply<br>Pay based on team performance            | Means_OC  | 0-100%       | CA                |
| O58CA06P | Compensation Package Components-Check<br>All that Apply<br>Pay based on customer satisfaction       | Means_OC  | 0-100%       | CA                |
| O58CA07P | Compensation Package Components-Check<br>All that Apply<br>Pay based on job tenure/seniority        | Means_OC  | 0-100%       | CA                |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Compensation Package Components (Continued)

**Description:** Which of the following is part of your compensation package (i.e., pay)?

**Content Model Key:** IV.B.1.b.3.a.i

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - b. Human Resources Systems and Practices
        - 3. Reward System
          - a. Basis of Compensation
            - i. Compensation Package Components*

| <b>Variable</b> | <b>Variable Description</b>  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| O58CA08P        | Compensation Package Components-Check<br>All that Apply<br>Pay based on job attributes - (e.g., hazards involved, Hay points assigned) | Means_OC         | 0-100%              | CA                       |
| O58CA09P        | Compensation Package Components-Check<br>All that Apply<br>None of the above   | Means_OC         | 0-100%              | CA                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Benefit Components

**Description:** Which of the following is part of your benefits?

**Content Model Key:** IV.B.1.b.3.b.i

- IV. Occupational Requirements
  - B. Organizational Context
    - 1. Structural Characteristics
      - b. Human Resources Systems and Practices
        - 3. Reward System
          - b. Benefits
            - i. Benefit Components*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| O59CA01P | Benefit Components-Check All that Apply<br>Stock ownership in the organization                                 | Means_OC  | 0-100%       | CA                |
| O59CA02P | Benefit Components-Check All that Apply<br>Retirement plan - [e.g., 401(k), pension plan, etc.]                | Means_OC  | 0-100%       | CA                |
| O59CA03P | Benefit Components-Check All that Apply<br>Major medical insurance   | Means_OC  | 0-100%       | CA                |
| O59CA04P | Benefit Components-Check All that Apply<br>Life insurance  | Means_OC  | 0-100%       | CA                |
| O59CA05P | Benefit Components-Check All that Apply<br>Disability insurance.   | Means_OC  | 0-100%       | CA                |
| O59CA06P | Benefit Components-Check All that Apply<br>Flexible working hours.   | Means_OC  | 0-100%       | CA                |
| O59CA07P | Benefit Components-Check All that Apply<br>Daycare   | Means_OC  | 0-100%       | CA                |
| O59CA08P | Benefit Components-Check All that Apply<br>Paid leave - (i.e., holidays, vacation time, maternity leave, etc.) | Means_OC  | 0-100%       | CA                |
| O59CA09P | Benefit Components-Check All that Apply<br>None of the above   | Means_OC  | 0-100%       | CA                |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Achieve Most Important Individ. Goal

**Description:** Realistically, the probability that you will achieve your most important individual work goal this year is:

**Content Model Key:** IV.B.2.a.1.a

- IV. Occupational Requirements
  - B. Organizational Context
    - 2. Social Processes
      - a. Goals
        - 1. Individual Goal Characteristics
          - a. Achieve Most Important Individ. Goal*

| <b>Variable</b> | <b>Variable Description</b>                             | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O47IG00M        | Achieve Most Important Individ. Goal-%<br>Achieve Goals | Means_OC         | 0-5                 | IG                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** How Many Quantitative Individual Goals

**Description:** How many of your individual work goals are quantitative (e.g., selling \$100,000 worth of merchandise as opposed to selling as much merchandise as possible).

**Content Model Key:** IV.B.2.a.1.b

IV. Occupational Requirements

B. Organizational Context

2. Social Processes

a. Goals

1. Individual Goal Characteristics

*b. How Many Quantitative Individual Goals*

| Variable | Variable Description                                      | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| O48GL00M | How Many Quantitative Individual Goals-Frequency of Goals | Means_OC  | 0-5          | GL                |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** How Many Specific Individual Goals

**Description:** How many of your individual work goals are specific -- that is, you will know exactly when you have achieved them?

**Content Model Key:** IV.B.2.a.2.a

IV. Occupational Requirements

B. Organizational Context

2. Social Processes

a. Goals

2. Goal Feedback

*a. How Many Specific Individual Goals*

| <b>Variable</b> | <b>Variable Description</b>                           | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O49GL00M        | How Many Specific Individual Goals-Frequency of Goals | Means_OC         | 0-5                 | GL                       |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** When Get Info. on Individual Goals

**Description:** How often do you get information regarding how close you are to achieving your most important individual work goal (for example, an interim financial report or data on number of units sold)?

**Content Model Key:** IV.B.2.a.2.b

IV. Occupational Requirements

B. Organizational Context

2. Social Processes

a. Goals

2. Goal Feedback

*b. When Get Info. on Individual Goals*

| <b>Variable</b> | <b>Variable Description</b>                  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| O50AV00M        | When Get Info. on Individual Goals-Frequency | Means_OC         | 0-4                 | AV                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Informal, Job-Relevant Feedback

**Description:** To what extent do you receive informal, job-relevant feedback from your supervisor?

**Content Model Key:** IV.B.2.a.2.c

IV. Occupational Requirements

B. Organizational Context

2. Social Processes

a. Goals

2. Goal Feedback

*c. Informal, Job-Relevant Feedback*

| <b>Variable</b> | <b>Variable Description</b>            | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| O51EX00M        | Informal, Job-Relevant Feedback-Extent | Means_OC         | 1-5                 | EX                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Meet 1-on-1 With Supervisor on Goals, etc.

**Description:** During the past year, how often have you met one-on-one with your immediate supervisor to discuss issues such as your performance, goals, training and development?

**Content Model Key:** IV.B.2.a.2.d

IV. Occupational Requirements

B. Organizational Context

2. Social Processes

a. Goals

2. Goal Feedback

*d. Meet 1-on-1 With Supervisor on Goals, etc.*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|---|-----------|--------------|-------------------|
| O52CH00I | Meet 1-on-1 With Supervisor on Goals, etc.-<br>Change: Median             | Means_MD  | 0-4          | CH                |
| O52CO01P | Meet 1-on-1 With Supervisor on Goals, etc.-%<br>Chosen<br>Never           | Means_OC  | 0-100%       | CO                |
| O52CO02P | Meet 1-on-1 With Supervisor on Goals, etc.-%<br>Chosen<br>Once            | Means_OC  | 0-100%       | CO                |
| O52CO03P | Meet 1-on-1 With Supervisor on Goals, etc.-%<br>Chosen<br>Twice           | Means_OC  | 0-100%       | CO                |
| O52CO04P | Meet 1-on-1 With Supervisor on Goals, etc.-%<br>Chosen<br>3-5 times       | Means_OC  | 0-100%       | CO                |
| O52CO05P | Meet 1-on-1 With Supervisor on Goals, etc.-%<br>Chosen<br>6 or more times | Means_OC  | 0-100%       | CO                |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Often Receive Conflicting Requests

**Description:** You often receive conflicting requests from two or more people at work.

**Content Model Key:** IV.B.2.b.1.a

- IV. Occupational Requirements
  - B. Organizational Context
    - 2. Social Processes
      - b. Roles
        - 1. Role Conflict
          - a. Often Receive Conflicting Requests*

| <b>Variable</b> | <b>Variable Description</b>                  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| O38AG00M        | Often Receive Conflicting Requests-Agreement | Means_OC         | 1-5                 | AG                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Work With Groups With Different Focuses

**Description:** You work with two or more groups who want you to focus on different things.

**Content Model Key:** IV.B.2.b.1.b

IV. Occupational Requirements

B. Organizational Context

2. Social Processes

b. Roles

1. Role Conflict

*b. Work With Groups With Different Focuses*

| <b>Variable</b> | <b>Variable Description</b>                       | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O39AG00M        | Work With Groups With Different Focuses-Agreement | Means_OC         | 1-5                 | AG                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** You and Your Supervisor Agree About Job

**Description:** You and your supervisor agree about what your job should be.

**Content Model Key:** IV.B.2.b.1.c

IV. Occupational Requirements

B. Organizational Context

2. Social Processes

b. Roles

1. Role Conflict

*c. You and Your Supervisor Agree About Job*

| <b>Variable</b> | <b>Variable Description</b>                       | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O40AG00M        | You and Your Supervisor Agree About Job-Agreement | Means_OC         | 1-5                 | AG                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Supervisor Makes Conflicting Requests

**Description:** Your supervisor often asks you to do two or more things that conflict (for example, save a large amount of money while at the same time dramatically increasing quality).

**Content Model Key:** IV.B.2.b.1.d

IV. Occupational Requirements

B. Organizational Context

2. Social Processes

b. Roles

1. Role Conflict

*d. Supervisor Makes Conflicting Requests*

| <b>Variable</b> | <b>Variable Description</b>                     | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O41AG00M        | Supervisor Makes Conflicting Requests-Agreement | Means_OC         | 1-5                 | AG                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Negotiate Changes in Role w/Supervisor

**Description:** You have negotiated changes in the nature of your role at work with your supervisor.

**Content Model Key:** IV.B.2.b.2.a

IV. Occupational Requirements

B. Organizational Context

2. Social Processes

b. Roles

2. Role Negotiability

*a. Negotiate Changes in Role w/Supervisor*

| <b>Variable</b> | <b>Variable Description</b>                      | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| O45AG00M        | Negotiate Changes in Role w/Supervisor-Agreement | Means_OC         | 1-5                 | AG                       |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Significant Input Into Way You Do Job

**Description:** You have significant input into the way you do your job.

**Content Model Key:** IV.B.2.b.2.b

IV. Occupational Requirements

B. Organizational Context

2. Social Processes

b. Roles

2. Role Negotiability

*b. Significant Input Into Way You Do Job*

| <b>Variable</b> | <b>Variable Description</b>                     | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O46AG00M        | Significant Input Into Way You Do Job-Agreement | Means_OC         | 1-5                 | AG                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Get Assignments w/o Adequate Resources

**Description:** You receive assignments at work without adequate resources and materials to complete them properly.

**Content Model Key:** IV.B.2.b.3.a

IV. Occupational Requirements

B. Organizational Context

2. Social Processes

b. Roles

3. Role Overload

*a. Get Assignments w/o Adequate Resources*

| <b>Variable</b> | <b>Variable Description</b>                      | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| O42AG00M        | Get Assignments w/o Adequate Resources-Agreement | Means_OC         | 1-5                 | AG                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Given Enough Time to Do Work

**Description:** You are given enough time to do what is expected of you at work.

**Content Model Key:** IV.B.2.b.3.b

IV. Occupational Requirements

B. Organizational Context

2. Social Processes

b. Roles

3. Role Overload

*b. Given Enough Time to Do Work*

| <b>Variable</b> | <b>Variable Description</b>            | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| O43AG00M        | Given Enough Time to Do Work-Agreement | Means_OC         | 1-5                 | AG                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Too Much for One Person to Do

**Description:** It often seems like you have too much work for one person to do.

**Content Model Key:** IV.B.2.b.3.c

IV. Occupational Requirements

B. Organizational Context

2. Social Processes

b. Roles

3. Role Overload

*c. Too Much for One Person to Do*

| <b>Variable</b> | <b>Variable Description</b>             | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O44AG00M        | Too Much for One Person to Do-Agreement | Means_OC         | 1-5                 | AG                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Taking Chances; Going Out on a Limb

**Description:** Taking chances; going out on a limb

**Content Model Key:** IV.B.2.c.1.a.i

IV. Occupational Requirements

B. Organizational Context

2. Social Processes

c. Culture

1. Organizational Values

a. Guiding Principles of Organization

*i. Taking Chances; Going Out on a Limb*

| <b>Variable</b> | <b>Variable Description</b>                    | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| O22IM00M        | Taking Chances; Going Out on a Limb-Importance | Means_OC         | 1-5                 | IM, O                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Fairness; Justice

**Description:** Fairness; justice

**Content Model Key:** IV.B.2.c.1.a.ii

- IV. Occupational Requirements
  - B. Organizational Context
    - 2. Social Processes
      - c. Culture
        - 1. Organizational Values
          - a. Guiding Principles of Organization
            - ii. Fairness; Justice*

| <b>Variable</b> | <b>Variable Description</b>  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|------------------------------|------------------|---------------------|--------------------------|
| O23IM00M        | Fairness; Justice-Importance | Means_OC         | 1-5                 | IM, O                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Precision

**Description:** Precision; paying attention to even the smallest details

**Content Model Key:** IV.B.2.c.1.a.iii

- IV. Occupational Requirements
  - B. Organizational Context
    - 2. Social Processes
      - c. Culture
        - 1. Organizational Values
          - a. Guiding Principles of Organization
            - iii. Precision*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| O24IM00M        | Precision-Importance        | Means_OC         | 1-5                 | IM, O                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Stability

**Description:** Stability; keeping things on an even keel

**Content Model Key:** IV.B.2.c.1.a.iv

- IV. Occupational Requirements
  - B. Organizational Context
    - 2. Social Processes
      - c. Culture
        - 1. Organizational Values
          - a. Guiding Principles of Organization
            - iv. Stability*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| O25IM00M        | Stability-Importance        | Means_OC         | 1-5                 | IM, O                    |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Getting Things Done

**Description:** Getting things done; taking decisive or quick action

**Content Model Key:** IV.B.2.c.1.a.v

- IV. Occupational Requirements
  - B. Organizational Context
    - 2. Social Processes
      - c. Culture
        - 1. Organizational Values
          - a. Guiding Principles of Organization
            - v. *Getting Things Done*

| <b>Variable</b> | <b>Variable Description</b>    | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--------------------------------|------------------|---------------------|--------------------------|
| O26IM00M        | Getting Things Done-Importance | Means_OC         | 1-5                 | IM, O                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Caring About Employees

**Description:** Caring about employees; showing concern for their well-being

**Content Model Key:** IV.B.2.c.1.a.vi

- IV. Occupational Requirements
  - B. Organizational Context
    - 2. Social Processes
      - c. Culture
        - 1. Organizational Values
          - a. Guiding Principles of Organization
            - vi. *Caring About Employees*

| <b>Variable</b> | <b>Variable Description</b>       | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------------|------------------|---------------------|--------------------------|
| O27IM00M        | Caring About Employees-Importance | Means_OC         | 1-5                 | IM, O                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Innovation

**Description:** Innovation; finding new and better ways of doing things; openness to new ideas

**Content Model Key:** IV.B.2.c.1.a.vii

- IV. Occupational Requirements
  - B. Organizational Context
    - 2. Social Processes
      - c. Culture
        - 1. Organizational Values
          - a. Guiding Principles of Organization
            - vii. Innovation*

| Variable | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|----------|-----------------------|-----------|--------------|-------------------|
| O28IM00M | Innovation-Importance | Means_OC  | 1-5          | IM, O             |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Aggressiveness

**Description:** Aggressiveness; forcefully going after what you want

**Content Model Key:** IV.B.2.c.1.a.viii

- IV. Occupational Requirements
  - B. Organizational Context
    - 2. Social Processes
      - c. Culture
        - 1. Organizational Values
          - a. Guiding Principles of Organization
            - viii. Aggressiveness*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| O29IM00M        | Aggressiveness-Importance   | Means_OC         | 1-5                 | IM, O                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Valuing Customers

**Description:** Valuing customers; emphasizing customer service

**Content Model Key:** IV.B.2.c.1.a.ix

- IV. Occupational Requirements
  - B. Organizational Context
    - 2. Social Processes
      - c. Culture
        - 1. Organizational Values
          - a. Guiding Principles of Organization
            - ix. Valuing Customers*

| <b>Variable</b> | <b>Variable Description</b>  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|------------------------------|------------------|---------------------|--------------------------|
| O30IM00M        | Valuing Customers-Importance | Means_OC         | 1-5                 | IM, O                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Providing High Quality Products

**Description:** Providing high quality products or services; meeting high standards of excellence

**Content Model Key:** IV.B.2.c.1.a.x

- IV. Occupational Requirements
  - B. Organizational Context
    - 2. Social Processes
      - c. Culture
        - 1. Organizational Values
          - a. Guiding Principles of Organization
            - x. *Providing High Quality Products*

| <b>Variable</b> | <b>Variable Description</b>                | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| O31IM00M        | Providing High Quality Products-Importance | Means_OC         | 1-5                 | IM, O                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Openness and Honesty

**Description:** Openness; honesty; keeping employees well informed

**Content Model Key:** IV.B.2.c.1.a.xi

- IV. Occupational Requirements
  - B. Organizational Context
    - 2. Social Processes
      - c. Culture
        - 1. Organizational Values
          - a. Guiding Principles of Organization
            - xi. Openness and Honesty*

| <b>Variable</b> | <b>Variable Description</b>     | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---------------------------------|------------------|---------------------|--------------------------|
| O32IM00M        | Openness and Honesty-Importance | Means_OC         | 1-5                 | IM, O                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Flexibility, Adapting to Change

**Description:** Flexibility, adapting to change

**Content Model Key:** IV.B.2.c.1.a.xii

- IV. Occupational Requirements
  - B. Organizational Context
    - 2. Social Processes
      - c. Culture
        - 1. Organizational Values
          - a. Guiding Principles of Organization
            - xii. Flexibility, Adapting to Change*

| <b>Variable</b> | <b>Variable Description</b>                | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| O33IM00M        | Flexibility, Adapting to Change-Importance | Means_OC         | 1-5                 | IM, O                    |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Supervisor Friendly and Supportive

**Description:** To what extent does your supervisor act in a friendly and supportive manner? For example, does he/she show concern for members of your work group and respect for your ideas?

**Content Model Key:** IV.B.2.d.1

IV. Occupational Requirements

B. Organizational Context

2. Social Processes

d. Supervisor Role

*1. Supervisor Friendly and Supportive*

| <b>Variable</b> | <b>Variable Description</b>               | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O18ET00M        | Supervisor Friendly and Supportive-Extent | Means_OC         | 1-5                 | ET                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Supervisor Takes Active Role

**Description:** To what extent does your supervisor take an active role in directing your work group's activities by setting goals, planning and scheduling work, assigning tasks, and making sure that each person knows what he/she should be doing?

**Content Model Key:** IV.B.2.d.2

IV. Occupational Requirements

B. Organizational Context

2. Social Processes

d. Supervisor Role

2. *Supervisor Takes Active Role*

| <b>Variable</b> | <b>Variable Description</b>         | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-------------------------------------|------------------|---------------------|--------------------------|
| O19ET00M        | Supervisor Takes Active Role-Extent | Means_OC         | 1-5                 | ET                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Supervisor Provides Clear Vision

**Description:** To what extent does your supervisor provide members of your work group with a clear vision of where the group is going and keep everyone fully committed to the work at hand?

**Content Model Key:** IV.B.2.d.3

IV. Occupational Requirements

B. Organizational Context

2. Social Processes

d. Supervisor Role

3. *Supervisor Provides Clear Vision*

| <b>Variable</b> | <b>Variable Description</b>             | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| O20ET00M        | Supervisor Provides Clear Vision-Extent | Means_OC         | 1-5                 | ET                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Supervisor Solves Problems

**Description:** To what extent does your supervisor quickly and effectively solve problems, even difficult problems, that come up in your work group?

**Content Model Key:** IV.B.2.d.4

- IV. Occupational Requirements
  - B. Organizational Context
    - 2. Social Processes
      - d. Supervisor Role
        - 4. *Supervisor Solves Problems*

| <b>Variable</b> | <b>Variable Description</b>       | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------------|------------------|---------------------|--------------------------|
| O21ET00M        | Supervisor Solves Problems-Extent | Means_OC         | 1-5                 | ET                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Formality of Communication

**Description:** How formal is most of the job-related information that the worker gives and receives on this job?

**Content Model Key:** IV.C.1.a.1

IV. Occupational Requirements

C. Work Context

1. Interpersonal Relationships

a. Communication

*1. Formality of Communication*

| <b>Variable</b> | <b>Variable Description</b>          | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--------------------------------------|------------------|---------------------|--------------------------|
| W01FL00M        | Formality of Communication-Formality | Means_WC         | 1-7                 | FL                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Face-to-Face With Individuals

**Description:** Face-to-Face (individuals)

**Content Model Key:** IV.C.1.a.2.a

- IV. Occupational Requirements
  - C. Work Context
    - 1. Interpersonal Relationships
      - a. Communication
      - 2. Communication Methods
        - a. *Face-to-Face With Individuals*

| <b>Variable</b> | <b>Variable Description</b>             | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W02CM00M        | Face-to-Face With Individuals-Frequency | Means_WC         | 0-7                 | CM, W                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Face-to-Face With Groups

**Description:** Face-to-Face (group/team meetings)

**Content Model Key:** IV.C.1.a.2.b

- IV. Occupational Requirements
  - C. Work Context
    - 1. Interpersonal Relationships
      - a. Communication
      - 2. Communication Methods
        - b. Face-to-Face With Groups*

| <b>Variable</b> | <b>Variable Description</b>        | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|------------------------------------|------------------|---------------------|--------------------------|
| W03CM00M        | Face-to-Face With Groups-Frequency | Means_WC         | 0-7                 | CM, W                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Public speaking

**Description:** Public speaking

**Content Model Key:** IV.C.1.a.2.c

- IV. Occupational Requirements
  - C. Work Context
    - 1. Interpersonal Relationships
      - a. Communication
      - 2. Communication Methods
        - c. Public speaking*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| W04CM00M        | Public speaking-Frequency   | Means_WC         | 0-7                 | CM, W                    |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Video conference

**Description:** Video conference

**Content Model Key:** IV.C.1.a.2.d

- IV. Occupational Requirements
  - C. Work Context
    - 1. Interpersonal Relationships
      - a. Communication
        - 2. Communication Methods
          - d. Video conference*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| W05CM00M        | Video conference-Frequency  | Means_WC         | 0-7                 | CM, W                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Voice mail

**Description:** Voice mail

**Content Model Key:** IV.C.1.a.2.e

- IV. Occupational Requirements
  - C. Work Context
    - 1. Interpersonal Relationships
      - a. Communication
        - 2. Communication Methods
          - e. Voice mail*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| W06CM00M        | Voice mail-Frequency        | Means_WC         | 0-7                 | CM, W                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Telephone

**Description:** Telephone

**Content Model Key:** IV.C.1.a.2.f

- IV. Occupational Requirements
  - C. Work Context
    - 1. Interpersonal Relationships
      - a. Communication
        - 2. Communication Methods
          - f. Telephone*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| W07CM00M        | Telephone-Frequency         | Means_WC         | 0-7                 | CM, W                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Interactive

**Description:** Interactive (same-time) computer communication

**Content Model Key:** IV.C.1.a.2.g

- IV. Occupational Requirements
  - C. Work Context
    - 1. Interpersonal Relationships
      - a. Communication
      - 2. Communication Methods
        - g. Interactive*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| W08CM00M        | Interactive-Frequency       | Means_WC         | 0-7                 | CM, W                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Electronic Mail

**Description:** Electronic mail

**Content Model Key:** IV.C.1.a.2.h

- IV. Occupational Requirements
  - C. Work Context
    - 1. Interpersonal Relationships
      - a. Communication
        - 2. Communication Methods
          - h. Electronic Mail*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| W09CM00M        | Electronic Mail-Frequency   | Means_WC         | 0-7                 | CM, W                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Handwritten Notes or Messages

**Description:** Handwritten notes or messages

**Content Model Key:** IV.C.1.a.2.i

- IV. Occupational Requirements
  - C. Work Context
    - 1. Interpersonal Relationships
      - a. Communication
        - 2. Communication Methods
          - i. Handwritten Notes or Messages*

| <b>Variable</b> | <b>Variable Description</b>             | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W10CM00M        | Handwritten Notes or Messages-Frequency | Means_WC         | 0-7                 | CM, W                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Letters and Memos

**Description:** Letters and memos

**Content Model Key:** IV.C.1.a.2.j

- IV. Occupational Requirements
  - C. Work Context
    - 1. Interpersonal Relationships
      - a. Communication
        - 2. Communication Methods
          - j. Letters and Memos*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| W11CM00M        | Letters and Memos-Frequency | Means_WC         | 0-7                 | CM, W                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Written Reports

**Description:** Written reports

**Content Model Key:** IV.C.1.a.2.k

- IV. Occupational Requirements
  - C. Work Context
    - 1. Interpersonal Relationships
      - a. Communication
        - 2. Communication Methods
          - k. Written Reports*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| W12CM00M        | Written Reports-Frequency   | Means_WC         | 0-7                 | CM, W                    |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Objective or Subjective Information

**Description:** How objective or subjective is the information communicated in this job?

**Content Model Key:** IV.C.1.a.3

IV. Occupational Requirements

C. Work Context

1. Interpersonal Relationships

a. Communication

3. *Objective or Subjective Information*

| <b>Variable</b> | <b>Variable Description</b>                                 | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W13OS00M        | Objective or Subjective Information-Objective vs Subjective | Means_WC         | 1-7                 | OS                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Job-Required Social Interaction

**Description:** How much does this job require the worker to be in contact (face-to-face, by telephone, or otherwise) with others in order to perform it?

**Content Model Key:** IV.C.1.a.4

IV. Occupational Requirements

C. Work Context

1. Interpersonal Relationships

a. Communication

4. *Job-Required Social Interaction*

| <b>Variable</b> | <b>Variable Description</b>                       | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W14CN00M        | Job-Required Social Interaction-Amount of Contact | Means_WC         | 1-7                 | CN                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Privacy of Communications

**Description:** To what extent can an individual's work materials and communications (face-to-face, phone, fax, E-mail, etc.) be monitored by others?

**Content Model Key:** IV.C.1.a.5

- IV. Occupational Requirements
  - C. Work Context
    - 1. Interpersonal Relationships
      - a. Communication
        - 5. *Privacy of Communications*

| <b>Variable</b> | <b>Variable Description</b>                      | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| W15PV00M        | Privacy of Communications-Privacy-Communications | Means_WC         | 1-7                 | PV                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Supervise, Coach, Train Others

**Description:** Supervise, coach, train, or develop other employees?

**Content Model Key:** IV.C.1.b.1.a

IV. Occupational Requirements

C. Work Context

1. Interpersonal Relationships

b. Role Relationships

1. Job Interactions

*a. Supervise, Coach, Train Others*

| <b>Variable</b> | <b>Variable Description</b>               | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W16IJ00M        | Supervise, Coach, Train Others-Importance | Means_WC         | 0-5                 | IJ, W3                   |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Persuade Someone to a Course of Action

**Description:** Persuade someone to a course of action (informally) or influence others to buy something (to sell)?

**Content Model Key:** IV.C.1.b.1.b

IV. Occupational Requirements

C. Work Context

1. Interpersonal Relationships

b. Role Relationships

1. Job Interactions

*b. Persuade Someone to a Course of Action*

| <b>Variable</b> | <b>Variable Description</b>                       | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W17IJ00M        | Persuade Someone to a Course of Action-Importance | Means_WC         | 0-5                 | IJ, W3                   |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Provide a Service to Others

**Description:** Provide a service to others (e.g., customers)?

**Content Model Key:** IV.C.1.b.1.c

- IV. Occupational Requirements
  - C. Work Context
    - 1. Interpersonal Relationships
      - b. Role Relationships
        - 1. Job Interactions
          - c. Provide a Service to Others*

| <b>Variable</b> | <b>Variable Description</b>            | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| W18IJ00M        | Provide a Service to Others-Importance | Means_WC         | 0-5                 | IJ, W3                   |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Take a Position Opposed to Others

**Description:** Take a position opposed to coworkers or others?

**Content Model Key:** IV.C.1.b.1.d

IV. Occupational Requirements

C. Work Context

1. Interpersonal Relationships

b. Role Relationships

1. Job Interactions

*d. Take a Position Opposed to Others*

| <b>Variable</b> | <b>Variable Description</b>                  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| W19IJ00M        | Take a Position Opposed to Others-Importance | Means_WC         | 0-5                 | IJ, W3                   |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Work With Work Group or Team

**Description:** Work with or contribute to a work group or team to perform this job?

**Content Model Key:** IV.C.1.b.1.e

IV. Occupational Requirements

C. Work Context

1. Interpersonal Relationships

b. Role Relationships

1. Job Interactions

*e. Work With Work Group or Team*

| <b>Variable</b> | <b>Variable Description</b>             | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W20IJ00M        | Work With Work Group or Team-Importance | Means_WC         | 0-5                 | IJ, W3                   |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Deal With External Customers

**Description:** Deal with external customers (e.g., retail sales) or the public in general (e.g., police work)?

**Content Model Key:** IV.C.1.b.1.f

IV. Occupational Requirements

C. Work Context

1. Interpersonal Relationships

b. Role Relationships

1. Job Interactions

*f. Deal With External Customers*

| <b>Variable</b> | <b>Variable Description</b>             | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W21IJ00M        | Deal With External Customers-Importance | Means_WC         | 0-5                 | IJ, W3                   |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Coordinate or Lead Others

**Description:** Coordinate or lead others in accomplishing work activities (not supervision)?

**Content Model Key:** IV.C.1.b.1.g

IV. Occupational Requirements

C. Work Context

1. Interpersonal Relationships

b. Role Relationships

1. Job Interactions

*g. Coordinate or Lead Others*

| <b>Variable</b> | <b>Variable Description</b>          | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--------------------------------------|------------------|---------------------|--------------------------|
| W22IJ00M        | Coordinate or Lead Others-Importance | Means_WC         | 0-5                 | IJ, W3                   |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Responsible for Others' Health & Safety

**Description:** How responsible is the worker for others' health and safety on this job?

**Content Model Key:** IV.C.1.c.1

IV. Occupational Requirements

C. Work Context

1. Interpersonal Relationships

c. Responsibility for Others

*1. Responsible for Others' Health & Safety*

| <b>Variable</b> | <b>Variable Description</b>   | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W23HS00M        | Responsible for Others' Health & Safety-<br>Responsible for Health & Safety | Means_WC         | 0-7                 | HS                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Responsibility for Outcomes and Results

**Description:** How responsible is the worker for work outcomes and results of other workers?

**Content Model Key:** IV.C.1.c.2

IV. Occupational Requirements

C. Work Context

1. Interpersonal Relationships

c. Responsibility for Others

2. *Responsibility for Outcomes and Results*

| <b>Variable</b> | <b>Variable Description</b>                            | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| W24RE00M        | Responsibility for Outcomes and Results-Responsibility | Means_WC         | 0-7                 | RE                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Frequency in Conflict Situations

**Description:** How frequently do the job requirements place the worker in conflict situations?

**Content Model Key:** IV.C.1.d.1

IV. Occupational Requirements

C. Work Context

1. Interpersonal Relationships

d. Conflictual Contact

*1. Frequency in Conflict Situations*

| <b>Variable</b> | <b>Variable Description</b>                | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| W25CF00M        | Frequency in Conflict Situations-Frequency | Means_WC         | 0-4                 | CF                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Deal With Unpleasant/Angry People

**Description:** How frequently does the worker have to deal with unpleasant, angry, or discourteous individuals as part of the job requirements?

**Content Model Key:** IV.C.1.d.2

IV. Occupational Requirements

C. Work Context

1. Interpersonal Relationships

d. Conflictual Contact

2. *Deal With Unpleasant/Angry People*

| <b>Variable</b> | <b>Variable Description</b>                 | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W26CF00M        | Deal With Unpleasant/Angry People-Frequency | Means_WC         | 0-4                 | CF                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Deal With Physically Aggressive People

**Description:** How frequently does this job require the worker to deal with physical aggression of violent individuals?

**Content Model Key:** IV.C.1.d.3

IV. Occupational Requirements

C. Work Context

1. Interpersonal Relationships

d. Conflictual Contact

3. *Deal With Physically Aggressive People*

| <b>Variable</b> | <b>Variable Description</b>                      | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| W27CF00M        | Deal With Physically Aggressive People-Frequency | Means_WC         | 0-4                 | CF                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Indoors, Environmentally Controlled

**Description:** Indoors, environmentally controlled

**Content Model Key:** IV.C.2.a.1.a

IV. Occupational Requirements

C. Work Context

2. Physical Work Conditions

a. Work Setting

1. Frequency Required to Work:

*a. Indoors, Environmentally Controlled*

| <b>Variable</b> | <b>Variable Description</b>                   | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W28FW00M        | Indoors, Environmentally Controlled-Frequency | Means_WC         | 0-7                 | FW, W                    |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Indoors, Not Environmentally Controlled

**Description:** Indoors, not environmentally controlled (e.g., warehouse without air-conditioning)

**Content Model Key:** IV.C.2.a.1.b

IV. Occupational Requirements

C. Work Context

2. Physical Work Conditions

a. Work Setting

1. Frequency Required to Work:

*b. Indoors, Not Environmentally Controlled*

| <b>Variable</b> | <b>Variable Description</b>                       | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W29FW00M        | Indoors, Not Environmentally Controlled-Frequency | Means_WC         | 0-7                 | FW, W                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Outdoors, Exposed to Weather

**Description:** Outdoors, exposed to all weather conditions

**Content Model Key:** IV.C.2.a.1.c

IV. Occupational Requirements

C. Work Context

2. Physical Work Conditions

a. Work Setting

1. Frequency Required to Work:

*c. Outdoors, Exposed to Weather*

| <b>Variable</b> | <b>Variable Description</b>            | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| W30FW00M        | Outdoors, Exposed to Weather-Frequency | Means_WC         | 0-7                 | FW, W                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Outdoors, Under Cover

**Description:** Outdoors, under cover (e.g., open shed)

**Content Model Key:** IV.C.2.a.1.d

IV. Occupational Requirements

C. Work Context

2. Physical Work Conditions

a. Work Setting

1. Frequency Required to Work:

*d. Outdoors, Under Cover*

| <b>Variable</b> | <b>Variable Description</b>     | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---------------------------------|------------------|---------------------|--------------------------|
| W31FW00M        | Outdoors, Under Cover-Frequency | Means_WC         | 0-7                 | FW, W                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** In an Open Vehicle or Equipment

**Description:** In an open vehicle or operating open equipment (e.g., tractor)

**Content Model Key:** IV.C.2.a.1.e

IV. Occupational Requirements

C. Work Context

2. Physical Work Conditions

a. Work Setting

1. Frequency Required to Work:

*e. In an Open Vehicle or Equipment*

| <b>Variable</b> | <b>Variable Description</b>               | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W32FW00M        | In an Open Vehicle or Equipment-Frequency | Means_WC         | 0-7                 | FW, W                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** In an Enclosed Vehicle or Equipment

**Description:** In an enclosed vehicle or operating enclosed equipment (e.g., automobile)

**Content Model Key:** IV.C.2.a.1.f

IV. Occupational Requirements

C. Work Context

2. Physical Work Conditions

a. Work Setting

1. Frequency Required to Work:

*f. In an Enclosed Vehicle or Equipment*

| <b>Variable</b> | <b>Variable Description</b>                   | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W33FW00M        | In an Enclosed Vehicle or Equipment-Frequency | Means_WC         | 0-7                 | FW, W                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Indoors

**Description:** Indoors

**Content Model Key:** IV.C.2.a.1.g

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - a. Work Setting
        - 1. Frequency Required to Work:
          - g. Indoors*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| *W98FN00M       | Indoors-Frequency           | Means_WC         | 0-4                 | FN, W                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Outdoors

**Description:** Outdoors

**Content Model Key:** IV.C.2.a.1.h

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - a. Work Setting
        - 1. Frequency Required to Work:
          - h. Outdoors*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| *W99FN00M       | Outdoors-Frequency          | Means_WC         | 0-4                 | FN, W                    |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Privacy of Work Area

**Description:** How private is the work area for this job?

**Content Model Key:** IV.C.2.a.2

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - a. Work Setting
        - 2. *Privacy of Work Area*

| <b>Variable</b> | <b>Variable Description</b>       | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------------|------------------|---------------------|--------------------------|
| W34PA00M        | Privacy of Work Area-Privacy-Work | Means_WC         | 1-7                 | PA                       |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Physical Proximity

**Description:** To what extent does this job require the worker to perform job tasks in close physical proximity to other people?

**Content Model Key:** IV.C.2.a.3

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - a. Work Setting
        - 3. *Physical Proximity*

| <b>Variable</b> | <b>Variable Description</b>  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|------------------------------|------------------|---------------------|--------------------------|
| W35PX00M        | Physical Proximity-Proximity | Means_WC         | 1-7                 | PX                       |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Sounds, Noise Levels Are Distracting, etc.

**Description:** Sounds and noise levels that are distracting and uncomfortable?

**Content Model Key:** IV.C.2.b.1.a

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - b. Environmental Conditions
        - 1. Environmental Conditions
          - a. *Sounds, Noise Levels Are Distracting, etc.*

| <b>Variable</b> | <b>Variable Description</b>                              | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| *W36FN00M       | Sounds, Noise Levels Are Distracting, etc.-<br>Frequency | Means_WC         | 0-4                 | FN, W15                  |
| W36FW00M        | Sounds, Noise Levels Are Distracting, etc.-<br>Frequency | Means_WC         | 0-7                 | FW,<br>W15               |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Very Hot

**Description:** Very hot (above 90 F) or very cold (under 32 F) temperatures?

**Content Model Key:** IV.C.2.b.1.b

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - b. Environmental Conditions
        - 1. Environmental Conditions
          - b. Very Hot*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| *W37FN00M       | Very Hot-Frequency          | Means_WC         | 0-4                 | FN, W15                  |
| W37FW00M        | Very Hot-Frequency          | Means_WC         | 0-7                 | FW, W15                  |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Extremely Bright or Inadequate Lighting

**Description:** Extremely bright or inadequate lighting conditions?

**Content Model Key:** IV.C.2.b.1.c

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - b. Environmental Conditions
        - 1. Environmental Conditions
          - c. Extremely Bright or Inadequate Lighting*

| <b>Variable</b> | <b>Variable Description</b>                       | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| *W38FN00M       | Extremely Bright or Inadequate Lighting-Frequency | Means_WC         | 0-4                 | FN, W15                  |
| W38FW00M        | Extremely Bright or Inadequate Lighting-Frequency | Means_WC         | 0-7                 | FW, W15                  |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Contaminants

**Description:** Contaminants (pollutants, gases, dust, odors, etc.)?

**Content Model Key:** IV.C.2.b.1.d

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - b. Environmental Conditions
        - 1. Environmental Conditions
          - d. Contaminants*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| *W39FN00M       | Contaminants-Frequency      | Means_WC         | 0-4                 | FN, W15                  |
| W39FW00M        | Contaminants-Frequency      | Means_WC         | 0-7                 | FW, W15                  |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Cramped Work Space, Awkward Positions

**Description:** Cramped work space that requires getting into awkward positions?

**Content Model Key:** IV.C.2.b.1.e

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - b. Environmental Conditions
        - 1. Environmental Conditions
          - e. Cramped Work Space, Awkward Positions*

| <b>Variable</b> | <b>Variable Description</b>                     | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| *W40FN00M       | Cramped Work Space, Awkward Positions-Frequency | Means_WC         | 0-4                 | FN, W15                  |
| W40FW00M        | Cramped Work Space, Awkward Positions-Frequency | Means_WC         | 0-7                 | FW, W15                  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Whole Body Vibration

**Description:** Whole body vibration (e.g., operating a jackhammer or earthmoving equipment)?

**Content Model Key:** IV.C.2.b.1.f

IV. Occupational Requirements  
C. Work Context  
2. Physical Work Conditions  
b. Environmental Conditions  
1. Environmental Conditions  
*f. Whole Body Vibration*

| <b>Variable</b> | <b>Variable Description</b>    | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--------------------------------|------------------|---------------------|--------------------------|
| *W41FN00M       | Whole Body Vibration-Frequency | Means_WC         | 0-4                 | FN, W15                  |
| W41FW00M        | Whole Body Vibration-Frequency | Means_WC         | 0-7                 | FW, W15                  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Radiation

**Description:** Radiation

**Content Model Key:** IV.C.2.c.1.a

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - c. Job Hazards
        - 1. Frequency of Exposure to Job Hazards
          - a. *Radiation*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| *W42FN00M       | Radiation-Frequency         | Means_WC         | 0-4                 | FN, EXP                  |
| W42FW00M        | Radiation-Frequency         | Means_WC         | 0-7                 | FW, EXP                  |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Diseases/Infections

**Description:** Diseases/Infections (e.g., patient care, some laboratory work, sanitation control, etc.)

**Content Model Key:** IV.C.2.c.1.b

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - c. Job Hazards
        - 1. Frequency of Exposure to Job Hazards
          - b. Diseases/Infections*

| Variable  | Variable Description          | File Name | Field Values | Scale, Ques Codes |
|-----------|-------------------------------|-----------|--------------|-------------------|
| *W43FN00M | Diseases/Infections-Frequency | Means_WC  | 0-4          | FN, DIS           |
| W43FW00M  | Diseases/Infections-Frequency | Means_WC  | 0-7          | FW, DIS           |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** High Places

**Description:** High Places (e.g., heights above 8 feet on ladders, poles, scaffolding, catwalks, etc.)

**Content Model Key:** IV.C.2.c.1.c

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - c. Job Hazards
        - 1. Frequency of Exposure to Job Hazards
          - c. High Places*

| Variable  | Variable Description  | File Name | Field Values | Scale, Ques Codes |
|-----------|-----------------------|-----------|--------------|-------------------|
| *W44FN00M | High Places-Frequency | Means_WC  | 0-4          | FN, HPL           |
| W44FW00M  | High Places-Frequency | Means_WC  | 0-7          | FW, HPL           |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Hazardous Conditions

**Description:** Hazardous Conditions (e.g., high voltage electricity, combustibles, explosives, chemicals; do not include hazardous equipment or situations)

**Content Model Key:** IV.C.2.c.1.d

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - c. Job Hazards
        - 1. Frequency of Exposure to Job Hazards
          - d. Hazardous Conditions*

| Variable  | Variable Description           | File Name | Field Values | Scale, Ques Codes |
|-----------|--------------------------------|-----------|--------------|-------------------|
| *W45FN00M | Hazardous Conditions-Frequency | Means_WC  | 0-4          | FN,<br>HAZ        |
| W45FW00M  | Hazardous Conditions-Frequency | Means_WC  | 0-7          | FW,<br>HAZ        |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Hazardous Equipment

**Description:** Hazardous Equipment (e.g., saws, machinery/mechanical parts include exposure to vehicular traffic, but not driving a vehicle)

**Content Model Key:** IV.C.2.c.1.e

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - c. Job Hazards
        - 1. Frequency of Exposure to Job Hazards
          - e. Hazardous Equipment*

| Variable  | Variable Description          | File Name | Field Values | Scale, Ques Codes |
|-----------|-------------------------------|-----------|--------------|-------------------|
| *W46FN00M | Hazardous Equipment-Frequency | Means_WC  | 0-4          | FN, HZE           |
| W46FW00M  | Hazardous Equipment-Frequency | Means_WC  | 0-7          | FW, HZE           |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Hazardous Situations

**Description:** Hazardous Situations involving likely cuts, bites, stings, or minor burns

**Content Model Key:** IV.C.2.c.1.f

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - c. Job Hazards
        - 1. Frequency of Exposure to Job Hazards
          - f. Hazardous Situations*

| <b>Variable</b> | <b>Variable Description</b>    | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--------------------------------|------------------|---------------------|--------------------------|
| *W47FN00M       | Hazardous Situations-Frequency | Means_WC         | 0-4                 | FN, HZS                  |
| W47FW00M        | Hazardous Situations-Frequency | Means_WC         | 0-7                 | FW, HZS                  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Radiation

**Description:** Radiation

**Content Model Key:** IV.C.2.c.2.a

IV. Occupational Requirements

C. Work Context

2. Physical Work Conditions

c. Job Hazards

2. Likelihood of Injury From Job Hazards

*a. Radiation*

| <b>Variable</b> | <b>Variable Description</b>    | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--------------------------------|------------------|---------------------|--------------------------|
| W42LI00M        | Radiation-Likelihood of Injury | Means_WC         | 0-7                 | LI, EXP                  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Diseases/Infections

**Description:** Diseases/Infections (e.g., patient care, some laboratory work, sanitation control, etc.)

**Content Model Key:** IV.C.2.c.2.b

IV. Occupational Requirements

C. Work Context

2. Physical Work Conditions

c. Job Hazards

2. Likelihood of Injury From Job Hazards

*b. Diseases/Infections*

| <b>Variable</b> | <b>Variable Description</b>              | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| W43LI00M        | Diseases/Infections-Likelihood of Injury | Means_WC         | 0-7                 | LI, DIS                  |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** High Places

**Description:** High Places (e.g., heights above 8 feet on ladders, poles, scaffolding, catwalks, etc.)

**Content Model Key:** IV.C.2.c.2.c

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - c. Job Hazards
        - 2. Likelihood of Injury From Job Hazards
          - c. *High Places*

| <b>Variable</b> | <b>Variable Description</b>      | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|----------------------------------|------------------|---------------------|--------------------------|
| W44LI00M        | High Places-Likelihood of Injury | Means_WC         | 0-7                 | LI, HPL                  |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Hazardous Conditions

**Description:** Hazardous Conditions (e.g., high voltage electricity, combustibles, explosives, chemicals; do not include hazardous equipment or situations)

**Content Model Key:** IV.C.2.c.2.d

IV. Occupational Requirements

C. Work Context

2. Physical Work Conditions

c. Job Hazards

2. Likelihood of Injury From Job Hazards

*d. Hazardous Conditions*

| <b>Variable</b> | <b>Variable Description</b>               | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W45LI00M        | Hazardous Conditions-Likelihood of Injury | Means_WC         | 0-7                 | LI, HAZ                  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Hazardous Equipment

**Description:** Hazardous Equipment (e.g., saws, machinery/mechanical parts include exposure to vehicular traffic, but not driving a vehicle)

**Content Model Key:** IV.C.2.c.2.e

IV. Occupational Requirements

C. Work Context

2. Physical Work Conditions

c. Job Hazards

2. Likelihood of Injury From Job Hazards

*e. Hazardous Equipment*

| <b>Variable</b> | <b>Variable Description</b>              | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| W46LI00M        | Hazardous Equipment-Likelihood of Injury | Means_WC         | 0-7                 | LI, HZE                  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Hazardous Situations

**Description:** Hazardous Situations involving likely cuts, bites, stings, or minor burns

**Content Model Key:** IV.C.2.c.2.f

IV. Occupational Requirements

C. Work Context

2. Physical Work Conditions

c. Job Hazards

2. Likelihood of Injury From Job Hazards

*f. Hazardous Situations*

| <b>Variable</b> | <b>Variable Description</b>               | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W47LI00M        | Hazardous Situations-Likelihood of Injury | Means_WC         | 0-7                 | LI, HZS                  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Radiation

**Description:** Radiation

**Content Model Key:** IV.C.2.c.3.a

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - c. Job Hazards
        - 3. Degree of Injury
          - a. *Radiation*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| W42DI00M        | Radiation-Degree of Injury  | Means_WC         | 0-5                 | DI, EXP                  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Diseases/Infections

**Description:** Diseases/Infections (e.g., patient care, some laboratory work, sanitation control, etc.)

**Content Model Key:** IV.C.2.c.3.b

IV. Occupational Requirements

C. Work Context

2. Physical Work Conditions

c. Job Hazards

3. Degree of Injury

*b. Diseases/Infections*

| <b>Variable</b> | <b>Variable Description</b>          | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--------------------------------------|------------------|---------------------|--------------------------|
| W43DI00M        | Diseases/Infections-Degree of Injury | Means_WC         | 0-5                 | DI, DIS                  |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** High Places

**Description:** High Places (e.g., heights above 8 feet on ladders, poles, scaffolding, catwalks, etc.)

**Content Model Key:** IV.C.2.c.3.c

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - c. Job Hazards
        - 3. Degree of Injury
          - c. *High Places*

| <b>Variable</b> | <b>Variable Description</b>  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|------------------------------|------------------|---------------------|--------------------------|
| W44DI00M        | High Places-Degree of Injury | Means_WC         | 0-5                 | DI, HPL                  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Hazardous Conditions

**Description:** Hazardous Conditions (e.g., high voltage electricity, combustibles, explosives, chemicals; do not include hazardous equipment or situations)

**Content Model Key:** IV.C.2.c.3.d

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - c. Job Hazards
        - 3. Degree of Injury
          - d. Hazardous Conditions*

| <b>Variable</b> | <b>Variable Description</b>           | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---------------------------------------|------------------|---------------------|--------------------------|
| W45DI00M        | Hazardous Conditions-Degree of Injury | Means_WC         | 0-5                 | DI, HAZ                  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Hazardous Equipment

**Description:** Hazardous Equipment (e.g., saws, machinery/mechanical parts include exposure to vehicular traffic, but not driving a vehicle)

**Content Model Key:** IV.C.2.c.3.e

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - c. Job Hazards
        - 3. Degree of Injury
          - e. Hazardous Equipment*

| Variable | Variable Description                 | File Name | Field Values | Scale, Ques Codes |
|----------|--------------------------------------|-----------|--------------|-------------------|
| W46DI00M | Hazardous Equipment-Degree of Injury | Means_WC  | 0-5          | DI, HZE           |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Hazardous Situations

**Description:** Hazardous Situations involving likely cuts, bites, stings, or minor burns

**Content Model Key:** IV.C.2.c.3.f

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - c. Job Hazards
        - 3. Degree of Injury
          - f. Hazardous Situations*

| <b>Variable</b> | <b>Variable Description</b>           | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---------------------------------------|------------------|---------------------|--------------------------|
| W47DI00M        | Hazardous Situations-Degree of Injury | Means_WC         | 0-5                 | DI, HZS                  |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Sitting

**Description:** Sitting?

**Content Model Key:** IV.C.2.d.1.a

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - d. Body Positioning
        - 1. Body Positioning
          - a. *Sitting*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| *W60FN00M       | Sitting-Frequency           | Means_WC         | 0-4                 | FN, W22                  |
| W60PS00M        | Sitting-Time in Position    | Means_WC         | 0-5                 | PS, W22                  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Standing

**Description:** Standing?

**Content Model Key:** IV.C.2.d.1.b

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - d. Body Positioning
        - 1. Body Positioning
          - b. Standing*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| *W61FN00M       | Standing-Frequency          | Means_WC         | 0-4                 | FN, W22                  |
| W61PS00M        | Standing-Time in Position   | Means_WC         | 0-5                 | PS, W22                  |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Climbing Ladders, Scaffolds, Poles, etc.

**Description:** Climbing ladders, scaffolds, poles, etc?

**Content Model Key:** IV.C.2.d.1.c

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - d. Body Positioning
        - 1. Body Positioning
          - c. *Climbing Ladders, Scaffolds, Poles, etc.*

| <b>Variable</b> | <b>Variable Description</b>                                  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| *W62FN00M       | Climbing Ladders, Scaffolds, Poles, etc.-<br>Frequency       | Means_WC         | 0-4                 | FN, W22                  |
| W62PS00M        | Climbing Ladders, Scaffolds, Poles, etc.-Time<br>in Position | Means_WC         | 0-5                 | PS, W22                  |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Walking or Running

**Description:** Walking or running?

**Content Model Key:** IV.C.2.d.1.d

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - d. Body Positioning
        - 1. Body Positioning
          - d. Walking or Running*

| <b>Variable</b> | <b>Variable Description</b>         | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-------------------------------------|------------------|---------------------|--------------------------|
| *W63FN00M       | Walking or Running-Frequency        | Means_WC         | 0-4                 | FN, W22                  |
| W63PS00M        | Walking or Running-Time in Position | Means_WC         | 0-5                 | PS, W22                  |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Kneeling, Crouching or Crawling

**Description:** Kneeling, stooping, crouching or crawling?

**Content Model Key:** IV.C.2.d.1.e

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - d. Body Positioning
        - 1. Body Positioning
          - e. Kneeling, Crouching or Crawling*

| <b>Variable</b> | <b>Variable Description</b>                      | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| *W64FN00M       | Kneeling, Crouching or Crawling-Frequency        | Means_WC         | 0-4                 | FN, W22                  |
| W64PS00M        | Kneeling, Crouching or Crawling-Time in Position | Means_WC         | 0-5                 | PS, W22                  |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Keeping or Regaining Balance

**Description:** Keeping or regaining balance?

**Content Model Key:** IV.C.2.d.1.f

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - d. Body Positioning
        - 1. Body Positioning
          - f. Keeping or Regaining Balance*

| <b>Variable</b> | <b>Variable Description</b>                   | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| *W65FN00M       | Keeping or Regaining Balance-Frequency        | Means_WC         | 0-4                 | FN, W22                  |
| W65PS00M        | Keeping or Regaining Balance-Time in Position | Means_WC         | 0-5                 | PS, W22                  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Using Hands on Objects, Tools, Controls

**Description:** Using hands to handle, control, or feel objects, tools or controls?

**Content Model Key:** IV.C.2.d.1.g

IV. Occupational Requirements

C. Work Context

2. Physical Work Conditions

d. Body Positioning

1. Body Positioning

*g. Using Hands on Objects, Tools, Controls*

| Variable  | Variable Description                                     | File Name | Field Values | Scale, Ques Codes |
|-----------|--|-----------|--------------|-------------------|
| *W66FN00M | Using Hands on Objects, Tools, Controls-Frequency        | Means_WC  | 0-4          | FN, W22           |
| W66PS00M  | Using Hands on Objects, Tools, Controls-Time in Position | Means_WC  | 0-5          | PS, W22           |



**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Bending or Twisting the Body

**Description:** Bending or twisting the body?

**Content Model Key:** IV.C.2.d.1.h

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - d. Body Positioning
        - 1. Body Positioning
          - h. Bending or Twisting the Body*

| <b>Variable</b> | <b>Variable Description</b>                   | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| *W67FN00M       | Bending or Twisting the Body-Frequency        | Means_WC         | 0-4                 | FN, W22                  |
| W67PS00M        | Bending or Twisting the Body-Time in Position | Means_WC         | 0-5                 | PS, W22                  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Making Repetitive Motions

**Description:** Making repetitive motions?

**Content Model Key:** IV.C.2.d.1.i

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - d. Body Positioning
        - 1. Body Positioning
          - i. Making Repetitive Motions*

| <b>Variable</b> | <b>Variable Description</b>                | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| *W68FN00M       | Making Repetitive Motions-Frequency        | Means_WC         | 0-4                 | FN, W22                  |
| W68PS00M        | Making Repetitive Motions-Time in Position | Means_WC         | 0-5                 | PS, W22                  |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Business Clothes

**Description:** Business clothes, such as neckties and dresses that are often worn in offices?

**Content Model Key:** IV.C.2.e.1.a

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - e. Work Attire
        - 1. Work Attire
          - a. *Business Clothes*

| <b>Variable</b> | <b>Variable Description</b>       | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------------|------------------|---------------------|--------------------------|
| W69AT00M        | Business Clothes-Attire Frequency | Means_WC         | 0-5                 | AT, AT                   |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Special Uniform

**Description:** A special uniform, such as that of a commercial pilot, nurse, police officer, or military personnel?

**Content Model Key:** IV.C.2.e.1.b

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - e. Work Attire
        - 1. Work Attire
          - b. Special Uniform*

| <b>Variable</b> | <b>Variable Description</b>      | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|----------------------------------|------------------|---------------------|--------------------------|
| W70AT00M        | Special Uniform-Attire Frequency | Means_WC         | 0-5                 | AT, AT                   |
| *W70FN00M       | Special Uniform-Frequency        | Means_WC         | 0-4                 | FN, AT                   |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Work Clothing

**Description:** Work clothing such as that worn by production or maintenance workers?

**Content Model Key:** IV.C.2.e.1.c

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - e. Work Attire
        - 1. Work Attire
          - c. *Work Clothing*

| <b>Variable</b> | <b>Variable Description</b>    | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--------------------------------|------------------|---------------------|--------------------------|
| W71AT00M        | Work Clothing-Attire Frequency | Means_WC         | 0-5                 | AT, AT                   |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Common Protective or Safety Attire

**Description:** Common protective or safety attire, such as safety shoes, glasses, gloves, hearing protection, hard-hat, or personal flotation device?

**Content Model Key:** IV.C.2.e.1.d

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - e. Work Attire
        - 1. Work Attire
          - d. Common Protective or Safety Attire*

| Variable  | Variable Description                         | File Name | Field Values | Scale, Ques Codes |
|-----------|--|-----------|--------------|-------------------|
| *W72FN00M | Common Protective or Safety Attire-Frequency | Means_WC  | 0-4          | FN, AT            |
| W72FW00M  | Common Protective or Safety Attire-Frequency | Means_WC  | 0-7          | FW, AT            |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Specialized Protective or Safety Attire

**Description:** Specialized protective or safety attire, such as breathing apparatus, safety harness, full protection suit, or radiation protection?

**Content Model Key:** IV.C.2.e.1.e

- IV. Occupational Requirements
  - C. Work Context
    - 2. Physical Work Conditions
      - e. Work Attire
        - 1. Work Attire
          - e. Specialized Protective or Safety Attire*

| Variable  | Variable Description                              | File Name | Field Values | Scale, Ques Codes |
|-----------|---|-----------|--------------|-------------------|
| *W73FN00M | Specialized Protective or Safety Attire-Frequency | Means_WC  | 0-4          | FN, AT            |
| W73FW00M  | Specialized Protective or Safety Attire-Frequency | Means_WC  | 0-7          | FW, AT            |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Consequence of Error

**Description:** How serious would the result usually be if the worker made a mistake that was not readily correctable?

**Content Model Key:** IV.C.3.a.1

- IV. Occupational Requirements
  - C. Work Context
    - 3. Structural Job Characteristics
      - a. Criticality of Position
        - 1. *Consequence of Error*

| <b>Variable</b> | <b>Variable Description</b>      | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|----------------------------------|------------------|---------------------|--------------------------|
| W74SR00M        | Consequence of Error-How Serious | Means_WC         | 1-7                 | SR                       |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Level

**Description:** What results do the worker's decisions usually have on other people, the financial resources, and/or the image or reputation of the organization?

**Content Model Key:** IV.C.3.a.2.a

- IV. Occupational Requirements
  - C. Work Context
    - 3. Structural Job Characteristics
      - a. Criticality of Position
        - 2. Impact of Decisions
          - a. *Level*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| W75IP00M        | Level-Impact of Decisions   | Means_WC         | 1-7                 | IP                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Frequency

**Description:** How frequently is the worker required to make decisions that affect other people, the financial resources, and/or the image and reputation of the organization?

**Content Model Key:** IV.C.3.a.2.b

- IV. Occupational Requirements
  - C. Work Context
    - 3. Structural Job Characteristics
      - a. Criticality of Position
        - 2. Impact of Decisions
          - b. Frequency*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| W76FW00M        | Frequency-Frequency         | Means_WC         | 0-7                 | FW                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Responsibility/Accountability

**Description:** To what extent is this job assigned accountability for final work outcomes or results?

**Content Model Key:** IV.C.3.a.3

IV. Occupational Requirements

C. Work Context

3. Structural Job Characteristics

a. Criticality of Position

3. *Responsibility/Accountability*

| <b>Variable</b> | <b>Variable Description</b>                  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| W77AN00M        | Responsibility/Accountability-Accountability | Means_WC         | 1-7                 | AN                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Decision Latitude

**Description:** Indicate the amount of freedom the worker has to make decisions without supervision.

**Content Model Key:** IV.C.3.a.4

- IV. Occupational Requirements
  - C. Work Context
    - 3. Structural Job Characteristics
      - a. Criticality of Position
        - 4. *Decision Latitude*

| <b>Variable</b> | <b>Variable Description</b>         | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-------------------------------------|------------------|---------------------|--------------------------|
| W78FM00M        | Decision Latitude-Amount of Freedom | Means_WC         | 1-7                 | FM                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Frustrating Circumstances

**Description:** To what extent do frustrating circumstances ("road blocks" to work that are beyond the worker's control) hinder the accomplishment of this job?

**Content Model Key:** IV.C.3.b.1

- IV. Occupational Requirements
  - C. Work Context
    - 3. Structural Job Characteristics
      - b. Routine versus Challenging Work
        - 1. *Frustrating Circumstances*

| <b>Variable</b> | <b>Variable Description</b>                     | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W79FC00M        | Frustrating Circumstances-Extent of Frustration | Means_WC         | 1-7                 | FC                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Degree of Automation

**Description:** Indicate the level of automation of this job.

**Content Model Key:** IV.C.3.b.2

- IV. Occupational Requirements
  - C. Work Context
    - 3. Structural Job Characteristics
      - b. Routine versus Challenging Work
        - 2. *Degree of Automation*

| <b>Variable</b> | <b>Variable Description</b>     | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---------------------------------|------------------|---------------------|--------------------------|
| W80AO00M        | Degree of Automation-Automation | Means_WC         | 1-7                 | AO                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Task Clarity

**Description:** To what extent is the worker clear about what is to be done on this job and how work performance is to be evaluated?

**Content Model Key:** IV.C.3.b.3

- IV. Occupational Requirements
  - C. Work Context
    - 3. Structural Job Characteristics
      - b. Routine versus Challenging Work
        - 3. *Task Clarity*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| W81CL00M        | Task Clarity-Task Clarity   | Means_WC         | 1-7                 | CL                       |

**O\*NET Data Dictionary : Occupational Requirements**

**Element:** Importance of Being Exact or Accurate

**Description:** How important is being very exact or highly accurate in performing this job?

**Content Model Key:** IV.C.3.b.4

- IV. Occupational Requirements
  - C. Work Context
    - 3. Structural Job Characteristics
      - b. Routine versus Challenging Work
        - 4. *Importance of Being Exact or Accurate*

| <b>Variable</b> | <b>Variable Description</b>                      | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| W82IJ00M        | Importance of Being Exact or Accurate-Importance | Means_WC         | 0-5                 | IJ                       |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Importance of Being Sure All Is Done

**Description:** How important is it to be sure that all the details of this job are performed and everything is done completely?

**Content Model Key:** IV.C.3.b.5

- IV. Occupational Requirements
  - C. Work Context
    - 3. Structural Job Characteristics
      - b. Routine versus Challenging Work
        - 5. *Importance of Being Sure All Is Done*

| <b>Variable</b> | <b>Variable Description</b>                     | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W83IJ00M        | Importance of Being Sure All Is Done-Importance | Means_WC         | 0-5                 | IJ                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Importance of Being Aware of New Events

**Description:** How important is being constantly aware of either frequently changing events (e.g. security guard watching for shoplifters) or infrequent events (e.g. radar operator watching for tornadoes) to performing this job?

**Content Model Key:** IV.C.3.b.6

IV. Occupational Requirements

C. Work Context

3. Structural Job Characteristics

b. Routine versus Challenging Work

6. *Importance of Being Aware of New Events*

| <b>Variable</b> | <b>Variable Description</b>                        | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| W84IJ00M        | Importance of Being Aware of New Events-Importance | Means_WC         | 0-5                 | IJ                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Importance of Repeating Same Tasks

**Description:** How important is repeating the same physical activities (e.g., key entry) or mental activities (e.g., checking entries in a ledger) over and over, without stopping, to performing this job?

**Content Model Key:** IV.C.3.b.7

IV. Occupational Requirements

C. Work Context

3. Structural Job Characteristics

b. Routine versus Challenging Work

7. *Importance of Repeating Same Tasks*

| <b>Variable</b> | <b>Variable Description</b>                   | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W85IJ00M        | Importance of Repeating Same Tasks-Importance | Means_WC         | 0-5                 | IJ                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Structured versus Unstructured Work

**Description:** To what extent is this job structured for the worker, rather than allowing the worker to determine tasks, priorities, and goals?

**Content Model Key:** IV.C.3.b.8

- IV. Occupational Requirements
  - C. Work Context
    - 3. Structural Job Characteristics
      - b. Routine versus Challenging Work
        - 8. *Structured versus Unstructured Work*

| <b>Variable</b> | <b>Variable Description</b>                        | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| W86ST00M        | Structured versus Unstructured Work-How Structured | Means_WC         | 1-7                 | ST                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Level of Competition

**Description:** To what extent does this job require the worker to compete or to be aware of competitive pressures?

**Content Model Key:** IV.C.3.c.1

- IV. Occupational Requirements
  - C. Work Context
    - 3. Structural Job Characteristics
      - c. Level of Competition
        - 1. *Level of Competition*

| <b>Variable</b> | <b>Variable Description</b>               | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W87LC00M        | Level of Competition-Level of Competition | Means_WC         | 1-7                 | LC                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Time Pressure

**Description:** How often does this job require the worker to meet strict deadlines?

**Content Model Key:** IV.C.3.d.1

- IV. Occupational Requirements
  - C. Work Context
    - 3. Structural Job Characteristics
      - d. Pace and Scheduling
        - 1. *Time Pressure*

| <b>Variable</b> | <b>Variable Description</b> | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|-----------------------------|------------------|---------------------|--------------------------|
| W88FW00M        | Time Pressure-Frequency     | Means_WC         | 0-7                 | FW                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Work Under Frequent Distractions

**Description:** How important is working under frequent distractions or interruptions to performing this job?

**Content Model Key:** IV.C.3.d.2

- IV. Occupational Requirements
  - C. Work Context
    - 3. Structural Job Characteristics
      - d. Pace and Scheduling
        - 2. *Work Under Frequent Distractions*

| <b>Variable</b> | <b>Variable Description</b>                 | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W89II00M        | Work Under Frequent Distractions-Importance | Means_WC         | 0-5                 | II                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Pace Determined by Speed of Equipment

**Description:** How important is it to this job that the pace is determined by the speed of equipment or machinery? (This does not refer to keeping busy at all times on this job.)

**Content Model Key:** IV.C.3.d.3

IV. Occupational Requirements

C. Work Context

3. Structural Job Characteristics

d. Pace and Scheduling

*3. Pace Determined by Speed of Equipment*

| <b>Variable</b> | <b>Variable Description</b>                      | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| W90IJ00M        | Pace Determined by Speed of Equipment-Importance | Means_WC         | 0-5                 | IJ                       |



## O\*NET Data Dictionary : Occupational Requirements

**Element:** Work Schedules

**Description:** Usual work schedule for this job

**Content Model Key:** IV.C.3.d.4

- IV. Occupational Requirements
  - C. Work Context
    - 3. Structural Job Characteristics
      - d. Pace and Scheduling
        - 4. *Work Schedules*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| W91CO01P | Work Schedules-% Chosen<br>Regular work - (established routine, with set schedule)                                 | Means_WC  | 0-100%       | CO                |
| W91CO02P | Work Schedules-% Chosen<br>Irregular work - (subject to weather conditions, production demands, contract duration) | Means_WC  | 0-100%       | CO                |
| W91CO03P | Work Schedules-% Chosen<br>Seasonal basis - (only work during certain times of year)                               | Means_WC  | 0-100%       | CO                |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Work Shift

**Description:** Usual work shift for this job

**Content Model Key:** IV.C.3.d.5

- IV. Occupational Requirements
  - C. Work Context
    - 3. Structural Job Characteristics
      - d. Pace and Scheduling
        - 5. *Work Shift*

| <b>Variable</b> | <b>Variable Description</b>   | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| W92CO01P        | Work Shift-% Chosen<br>Day Shift  | Means_WC         | 0-100%              | CO                       |
| W92CO02P        | Work Shift-% Chosen<br>Other Than Day Shift - (i.e., evening shift or night shift)                          | Means_WC         | 0-100%              | CO                       |
| W92CO03P        | Work Shift-% Chosen<br>Split or Variable Shift - (work busy times or shift changes due to staffing demands) | Means_WC         | 0-100%              | CO                       |
| W92CO04P        | Work Shift-% Chosen<br>Rotating Shift - (rotate days, evenings, nights)                                     | Means_WC         | 0-100%              | CO                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Work Shift Duration

**Description:** Usual work shift duration

**Content Model Key:** IV.C.3.d.6

- IV. Occupational Requirements
  - C. Work Context
    - 3. Structural Job Characteristics
      - d. Pace and Scheduling
        - 6. *Work Shift Duration*

| <b>Variable</b> | <b>Variable Description</b>                                | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| W93CO01P        | Work Shift Duration-% Chosen<br>Paid for less than 8 hours | Means_WC         | 0-100%              | CO                       |
| W93CO02P        | Work Shift Duration-% Chosen<br>Paid for 8 hours           | Means_WC         | 0-100%              | CO                       |
| W93CO03P        | Work Shift Duration-% Chosen<br>Paid for more than 8 hours | Means_WC         | 0-100%              | CO                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Type of Overtime (if any)

**Description:** Usual overtime work

**Content Model Key:** IV.C.3.d.7

- IV. Occupational Requirements
  - C. Work Context
    - 3. Structural Job Characteristics
      - d. Pace and Scheduling
        - 7. *Type of Overtime (if any)*

| Variable | Variable Description   | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| W94CA01P | Type of Overtime (if any)-Check All that Apply<br>None                                     | Means_WC  | 0-100%       | CA                |
| W94CA02P | Type of Overtime (if any)-Check All that Apply<br>Overtime at request of employer          | Means_WC  | 0-100%       | CA                |
| W94CA03P | Type of Overtime (if any)-Check All that Apply<br>Available for call-in to work            | Means_WC  | 0-100%       | CA                |
| W94CA04P | Type of Overtime (if any)-Check All that Apply<br>Weekend work (not part of regular shift) | Means_WC  | 0-100%       | CA                |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Duration of Typical Work Week

**Description:** Number of hours typically worked in one week

**Content Model Key:** IV.C.3.d.8

- IV. Occupational Requirements
  - C. Work Context
    - 3. Structural Job Characteristics
      - d. Pace and Scheduling
        - 8. *Duration of Typical Work Week*

| <b>Variable</b> | <b>Variable Description</b>                                  | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| W95CO01P        | Duration of Typical Work Week-% Chosen<br>Less than 40 hours | Means_WC         | 0-100%              | CO                       |
| W95CO02P        | Duration of Typical Work Week-% Chosen<br>40 hours           | Means_WC         | 0-100%              | CO                       |
| W95CO03P        | Duration of Typical Work Week-% Chosen<br>More than 40 hours | Means_WC         | 0-100%              | CO                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Work Cycle

**Description:** Usual work cycle for this job

**Content Model Key:** IV.C.3.d.9

- IV. Occupational Requirements
  - C. Work Context
    - 3. Structural Job Characteristics
      - d. Pace and Scheduling
        - 9. *Work Cycle*

| <b>Variable</b> | <b>Variable Description</b>                      | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|--|------------------|---------------------|--------------------------|
| W96CO01P        | Work Cycle-% Chosen<br>1 week                    | Means_WC         | 0-100%              | CO                       |
| W96CO02P        | Work Cycle-% Chosen<br>2 weeks                   | Means_WC         | 0-100%              | CO                       |
| W96CO03P        | Work Cycle-% Chosen<br>1 month (28 or more days) | Means_WC         | 0-100%              | CO                       |

## O\*NET Data Dictionary : Occupational Requirements

**Element:** Length of Work Cycle

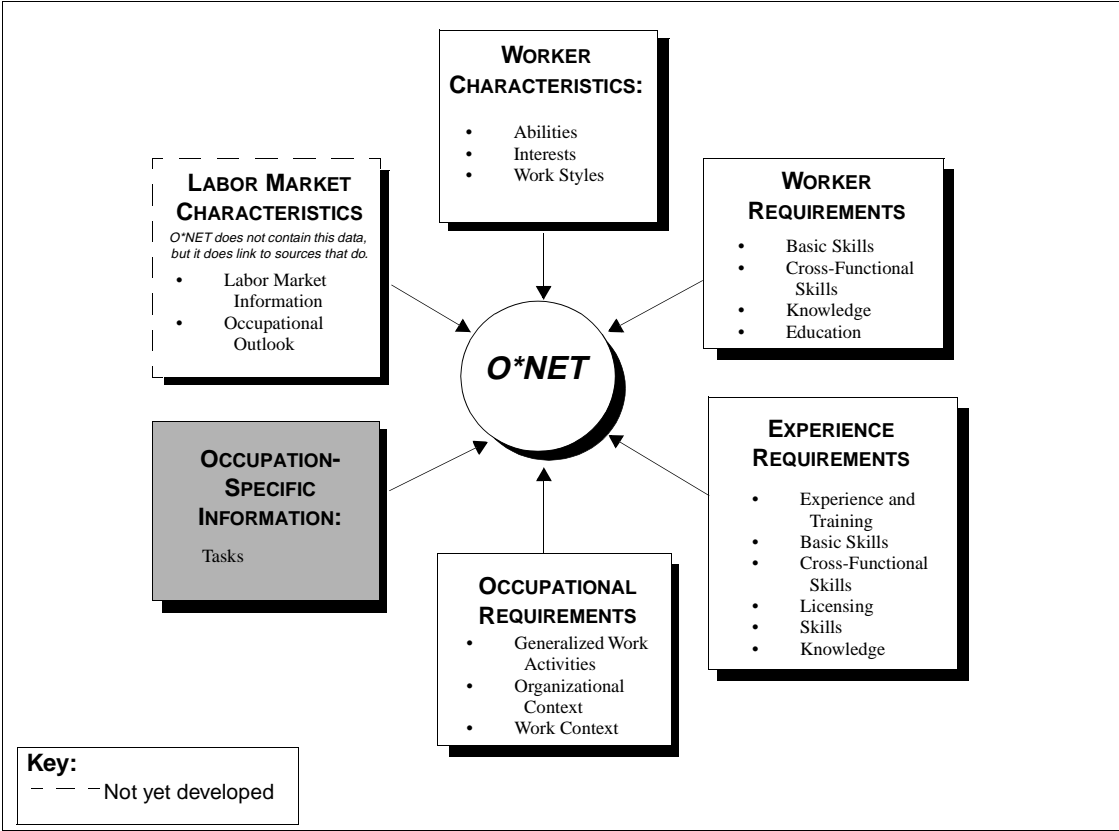
**Description:** Number of days usually worked in the cycle

**Content Model Key:** IV.C.3.d.10

IV. Occupational Requirements  
 C. Work Context  
 3. Structural Job Characteristics  
 d. Pace and Scheduling  
 10. *Length of Work Cycle*

| Variable | Variable Description                               | File Name | Field Values | Scale, Ques Codes |
|----------|--|-----------|--------------|-------------------|
| W97DY00I | Length of Work Cycle-# of Days: Median             | Means_MD  | 1-10         | DY                |
| W97CO01P | Length of Work Cycle-% Chosen<br>Less than 3 days  | Means_WC  | 0-100%       | CO                |
| W97CO02P | Length of Work Cycle-% Chosen<br>3 days            | Means_WC  | 0-100%       | CO                |
| W97CO03P | Length of Work Cycle-% Chosen<br>4 days            | Means_WC  | 0-100%       | CO                |
| W97CO04P | Length of Work Cycle-% Chosen<br>5 days            | Means_WC  | 0-100%       | CO                |
| W97CO05P | Length of Work Cycle-% Chosen<br>6 days            | Means_WC  | 0-100%       | CO                |
| W97CO06P | Length of Work Cycle-% Chosen<br>7 days            | Means_WC  | 0-100%       | CO                |
| W97CO07P | Length of Work Cycle-% Chosen<br>8-10 days         | Means_WC  | 0-100%       | CO                |
| W97CO08P | Length of Work Cycle-% Chosen<br>11-14 days        | Means_WC  | 0-100%       | CO                |
| W97CO09P | Length of Work Cycle-% Chosen<br>15-20 days        | Means_WC  | 0-100%       | CO                |
| W97CO10P | Length of Work Cycle-% Chosen<br>More than 20 days | Means_WC  | 0-100%       | CO                |

# Occupation-Specific Information





## O\*NET Data Dictionary : Occupation-Specific Tasks

### V. Occupation-Specific Tasks

## O\*NET Data Dictionary : Occupation-Specific Tasks

**Element:** Occupation-Specific Tasks

**Description:** Occupation-Specific Tasks

**Content Model Key:** V

| <b>Variable</b> | <b>Variable Description</b>                 | <b>File Name</b> | <b>Field Values</b> | <b>Scale, Ques Codes</b> |
|-----------------|---|------------------|---------------------|--------------------------|
| T00FT00M        | Occupation-Specific Tasks-Frequency of Task | Means_TS         | 1-7, 0(NR)          | FT, T                    |
| T00IM00M        | Occupation-Specific Tasks-Importance        | Means_TS         | 1-5                 | IM, T                    |

# *Appendix A*

## *O\*NET™ Database Structure*



# Appendix A

## *O\*NET™ Database Structure*

### **Purpose**

The purpose of this appendix is to introduce the reader to the concept of *normal forms* for databases and to explain how the O\*NET data have been distributed among the various tables. We assume that the reader is familiar with the concepts of *relational database*, *table*, *relation*, *record*, *field* and *key*. We will define the other terms that we will be using in this appendix as we proceed.

Informally, a *primary key* in a table is a minimal set of fields that *uniquely* identifies a record. Therefore, a primary key determines all other fields in a record. For example, in a table containing data for people, a person's social security number can act as the primary key for a table. Each table must have a primary key, and a primary key can consist of more than one field. Tables can have multiple primary keys which are called *alternate* or *candidate keys*.

When a primary key for one table appears in another table it is called a *foreign key*. Foreign keys are very common and are the fundamental method for relating tables.

### **Normalizing Data**

*Normalizing* a database is the process of structuring it to minimize redundancy and reduce the chances for inconsistencies developing as a result of incorrect updates. We have chosen to deliver the O\*NET Database in normalized form for convenience and to help ensure the correctness of the database. It is up to each developer to reshape the database into the form most appropriate for a given application.

A normalized database is optimized for maximal update efficiency and minimal size. For performance reasons, databases are sometimes denormalized for retrieval applications, especially when the data are static in nature. As an example of where denormalization might be desirable, note that any given crosswalk code from another classification system might occur many times in the XWALK table. However, only one copy of the title corresponding to that code is stored (in XWALKTTL). In order to retrieve the crosswalk titles associated with a particular O\*NET occupation, it is necessary to join XWALK and XWALKTTL. Some developers might prefer to combine these tables. This will result in a substantial increase in size (as multiple copies of the crosswalk titles will be present) but may also result in a substantial increase in speed (as it is no longer necessary to join the two tables).

Normalizing data is done by dividing it into appropriate tables and putting the tables into appropriate normal forms. Numerous normal forms have been developed, but we will focus our attention on four of them. The four forms that we will discuss are called *first normal form (1NF)*, *second normal form (2NF)*, *third normal form (3NF)*, and *Boyce-Codd normal form (BCNF)*. For more information about normal forms, consult *Principles of Database Systems* by Jeffrey D. Ullman, Computer Science Press, 1982.

## Important Types of Normal Forms

A table is in *first normal form* if each field in it contains a single value. For example, occupations can have multiple tasks associated with them. Trying to create a field that has all these tasks in it, violates the requirements of first normal form.

A table is in *second normal form* if it is in first normal form and the entire primary key is needed to determine every other field in the table. A table not in second normal form will contain redundant data. Tables whose primary key consists of a single field are in second normal form by definition.

A table is in *third normal form* if it is in second normal form and it has no *transitive dependencies*. A transitive dependency occurs between three fields A, B and C when A determines B and B determines C. In a table that is not in third normal form, there are some attributes that do not contribute to a description of the primary key because of a transitive dependency. These attributes (C) should be moved out of the table into a new table whose primary key is the determinant (B).

A table is in *Boyce-Codd normal form (BCNF)* if it is in second normal form and all determinants are candidate keys. A determinant is a field that uniquely determines another field. Boyce-Codd normal form is a slightly stronger version of third normal form.

The stand-alone O\*NET Database is in Boyce-Codd normal forms. In addition, the tables are in fourth and fifth normal forms.

## The O\*NET 98 Data

The O\*NET Database is based on data supplied by occupational analysts who studied 1,122 O\*NET occupations and derived information on 483 descriptors for each occupation. More details on how the data were derived and how it relates to other data are available in Appendix D, describing the development of the Analysts' Database. The Department of Labor intends to collect data on over 1,200 descriptors for the O\*NET occupations for the update to be released in 2001. The O\*NET Database Tables

Figure 1 shows the O\*NET Database normalized. The main boxes in the figure represent the various tables. Each line in a box represents a field, and bold lines represent parts of the key field. The links between boxes show tables that have common fields. The symbol  $\infty$  is used to represent the term *many*. Thus, the sequence "1- $\infty$ " means that one record in a particular table can be linked to many records in the other table.

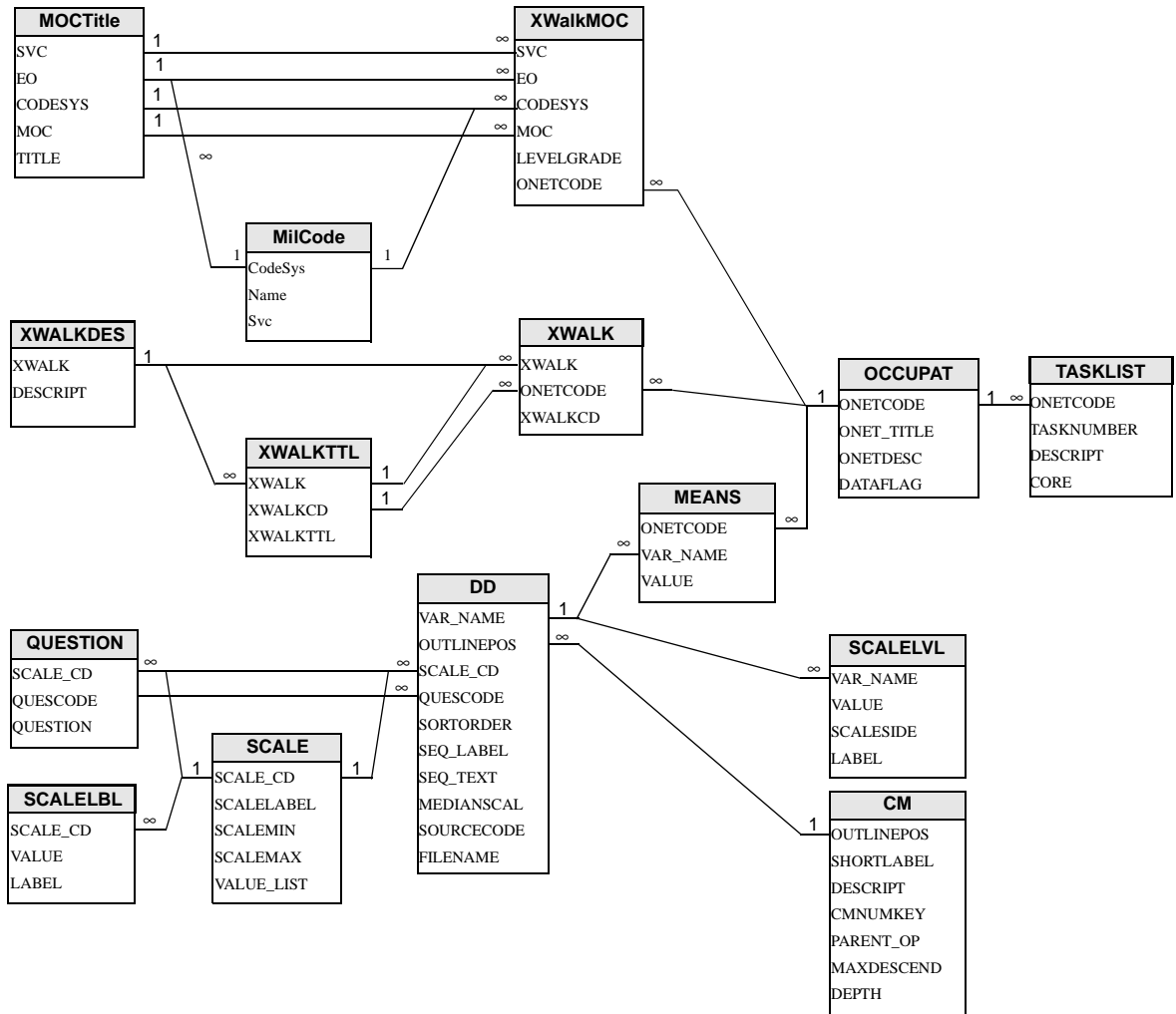


Figure 1. O\*NET Database Normalized



## Individual Tables That Make Up the Database

We will now briefly describe the 15 tables that comprise the normalized form of the O\*NET Database. Two tables (MOCTITLE, and XWALKMOC) are not in third normal form. One table (CM) contains computed columns. These exceptions are explained below.

### DOCUMENTATION CONVENTIONS

Field Types are shown using the following abbreviations:

|           |      |  |
|-----------|------|--|
| Character | Cnn  | character field of length nn   |
| Numeric   | Nw.d | where “w” denotes the total field width and “d” the number of decimal places. Thus N2.0 is an integer with value up to 99 and N9.4 is a decimal number with values up to 9999.9999. All numeric values in the O*NET Database are non-negative. |
| Logical   | L    |  |
| Memo      | M    |  |

The Primary Key for each table below is shown with an asterisk following the type designation, e.g. C20\*.

The information for each of the fifteen tables is summarized in three columns. The first column contains the name of the field, the second column lists the type of the field, and the third column gives some notes about the field.

Numeric values are stored as shown in the .dbf (dBASE IV) format tables. For the .db (Paradox 5) and the .mdb (Access 2.0) formats, numeric types are stored as follows:

|                | .db                     | .mdb                    |
|----------------|-------------------------|-------------------------|
| Floating-Point | Number                  | Numeric-Double          |
| Integer        | Integer or Long Integer | Integer or Long Integer |

The only columns where long integers are used are the CMNUMKEY and MAXDESCEND columns in the CM table.

## CONTENT MODEL TABLE (CM)

This table describes the Content Model Hierarchy (CMH). Separate documentation is available that describes this hierarchy in much greater detail.

Note that the fields OUTLINEPOS, SHORTLABEL and DESCRIPT together completely describe the Content Model for display purposes. The remaining fields are included for internal application usage only. MAXDESCEND can be used to quickly select all descendants of a given level. PARENT\_OP gives the Outline Position of the parent of the current level, and DEPTH can be used to select all rows at a selected depth in the model. These are all computed fields, but are extremely useful to application developers. As the table is static from the developer's perspective, there is no risk of update anomalies entailed by the inclusion of these fields.

| Field Name | Type | Description  |
|------------|------|--|
| OUTLINEPOS | C20* | Gives the outline level of the given element in the Content Model hierarchy, e.g., II.C.4.a.   |
| SHORTLABEL | C42  | Gives a short description of the given element in the Content Model.   |
| DESCRIPT   | M    | Gives a longer description of the given element in the Content Model.  |
| CMNUMKEY   | N8.0 | A numeric alternate key. OUTLINEPOS will not sort correctly for the full content model, whereas the numeric key will.  |
| MAXDESCEND | N8.0 | Gives CMNUMKEY of the last descendant of the given element.  |
| DEPTH      | N1.0 | Gives the depth of the current element in the Content Model tree. Can be computed from Outline Position.   |
| PARENT_OP  | C20  | Gives the outline position of the parent if the current element has one. No parent is indicated by null. Only elements I, II, III, IV and V have no parents. |

### DATA DICTIONARY TABLE (DD)

This table contains the list of descriptors that describe an occupation. Note that the table contains all 1,298 descriptors used by O\*NET, but data are currently available for only 483 descriptors. The descriptors that have associated data in this release are identified by SOURCECODE values “C” and “B”.

| Field Name  | Type | Description   |
|-------------|------|---|
| VAR_NAME    | C8*  | The alphanumeric code assigned to each variable in the data set. Appendix C explains how the name is constructed.   |
| OUTLINEPOS  | C20  | Gives the level of the given element in the Content Model hierarchy.  |
| SCALE_CD    | C2   | Foreign key for the scale used for this variable.   |
| QUESCODE    | C3   | In combination with SCALE_CD, relates this variable to a question from Question. The same scale may have different question wording for different variables.  |
| SEQ_LABEL   | C40  | A short label that identifies a variable within a particular group with the same scale at a single Content Model Hierarchy level. Used only with scales CO, CA, and JS.   |
| SEQ_TEXT    | M    | Contains text that would not fit in the SEQ_LABEL field.  |
| MEDIANSICAL | N2.0 | For percentage variables that are also contained in a median variable scale, identifies the particular value to which the variable corresponds.   |
| SOURCECODE  | C1   | B, C, or I only. I indicates that the variable will have data collected from employees only; C indicates that the variable has current data collected from occupational analysts, and B indicates that the variable has data from both sources. |
| FILENAME    | C8   | Indicates in which of the MEANSxx tables the variable values can be found.  |
| SORTORDER   | N2.0 | Indicates the order in which this descriptor appears in the data collection questionnaires.   |

### MEANS TABLE (MEANS)

This table contains the data for each of the O\*NET descriptors of an O\*NET Occupational Unit (OU). Note that this structure is quite inefficient for many purposes; hence, the means are also supplied in a set of five tables where VAR\_NAME values are used as a field names.

| Field Name | Type | Description   |
|------------|------|---|
| ONETCODE   | C6*  | O*NET Occupational Unit (OU).   |
| VAR_NAME   | C8*  | The alphanumeric code assigned to each variable in the data set. Appendix B explains how the name is constructed. |
| VALUE      | N9.4 | Gives the mean value determined for that variable.  |

### MEANS TABLES (MEANS\_xx)

The means tables all have ONETCODE as the primary key, and variable names from DD as field names. Since the Distribution table format has a limitation of 255 fields, the data have been split into several tables, each corresponding to a particular element of the Content Model.

The following tables are included in this release:

|          |                             |
|----------|-----------------------------|
| MEANS_AB | Abilities                   |
| MEANS_GW | Generalized Work Activities |
| MEANS_IN | Interests                   |
| MEANS_KN | Knowledges                  |
| MEANS_OV | Occupational Values         |
| MEANS_SK | Skills                      |
| MEANS_WC | Work Context                |

| Field Name | Type | Description                        |
|------------|------|------------------------------------|
| ONETCODE   | C6*  | O*NET Occupational Unit (OU).      |
| VAR 1      | N9.4 | The mean value for variable Var 1. |
| VAR 2      | N9.4 | The mean value for variable Var 2. |
| .....      | N9.4 | .....                              |
| VAR K      | N9.4 | The mean value for variable Var K. |

### MILITARY CODING SYSTEMS TABLE (MILCODE)

This table contains the names of the military occupational classification systems from which the military occupational codes (MOC) derive.

| Field Name | Type | Description   |
|------------|------|---|
| CODESYS    | C10* | Coding System. Identifies the particular military coding system (for example, Navy Enlisted Classification) from which a MOC derives. |
| NAME       | C50  | Name of the occupational coding system.   |
| SVC        | C1   | Service Branch (A = Army, C = Coast Guard, F = Air Force, M = Marine Corps, N = Navy).  |

### MILITARY TITLES TABLE (MOCTITLE)

This table contains titles associated with the military occupational codes (MOC) used in the O\*NET military crosswalks. Because O\*NET may combine several pay grades or skill levels into a single linkage in XWALKMOC where there is no occupational distinction in O\*NET terms, titles are not pay-grade or skill-level specific. This table is not in second normal form, because Coding System (CODESYS) determines Service Branch (SVC). In a normalized table SVC would not be present at all. The denormalized form is used because Service Branch is of much greater interest for most applications than is Coding System.

| Field Name   | Type        | Description  |
|--------------|-------------|--|
| SVC          | C1*         | Service Branch (A = Army, C = Coast Guard, F = Air Force, M = Marine Corps, N = Navy).   |
| EO           | C1*         | Enlisted/Officer Code (E = Enlisted, O = Commissioned Officer, W = Warrant Officer).   |
| CODESYS      | C10*        | Coding System. Identifies the particular military coding system (for example, Navy Enlisted Classification) from which the MOC derives. See MILCODE table for names associated with these codes. |
| MOC<br>TITLE | C9*<br>C135 | Military Occupational Code.<br>Occupational Title  |

### OCCUPATIONS TABLE (OCCUPAT)

This table contains the core information about each occupation.

| Field Name | Type | Description  |
|------------|------|--|
| ONETCODE   | C6*  | O*NET Occupational Unit (OU).  |
| ONET_TITLE | C115 | O*NET Occupational Title.  |
| DESCRIPT   | M    | O*NET Occupational Description.  |
| DATAFLAG   | L    | Indicates whether or not data are present for this occupation. There are 50 occupations that have crosswalks but no data. These occupations all have titles that start with "All Other..." |

### QUESTIONS TABLE (QUESTION)

This table contains the text of the questions used in the data collection instruments.

| Field Name | Type | Description  |
|------------|------|--|
| SCALE_CD   | C2*  | Scale to use for this question.                        |
| QUESCODE   | C3*  | Used to differentiate questions within the same scale. |
| QUESTION   | C240 | Text of the question or description.                   |

**SCALES TABLE (SCALE)**

The scale header table provides information about the scale associated with each descriptor, such as minimum and maximum values, as well as some descriptive text.

| Field Name | Type | Description   |
|------------|------|---|
| SCALE_CD   | C2*  | Key code identifying the scale (Importance, Level, etc.). |
| SCALELABEL | C30  | Descriptive label used for displaying a question/value.   |
| SCALEMIN   | N4.1 | Minimum value for this scale.                             |
| SCALEMAX   | N4.1 | Maximum value for this scale.                             |
| VALUE_LIST | C10  | Display string of acceptable values (e.g., "1-7 0(NR)").  |

**SCALE DESCRIPTION TABLE (SCALELBL)**

This table contains descriptions for each scale value. Together with SCALE and (for variables with scale LV) SCALELVL, this table describes the values that a variable in the DD table can take on.

| Field Name | Type  | Description                                       |
|------------|-------|---|
| SCALE_CD   | C2*   | 2-character code identifier for the scale.        |
| VALUE      | N4.1* | The scale value that has an associated label.     |
| LABEL      | M     | The label to display with the value on the scale. |

**LEVEL SCALES TABLE (SCALELVL)**

This table contains scale text descriptions associated directly with a variable name, rather than via the scale code. It is currently used only for variables with the Level (LV) scale. Together with SCALELBL and SCALE, this table describes the values that a variable in the DD table can take on.

| Field Name | Type  | Description   |
|------------|-------|---|
| VAR_NAME   | C8*   | The alphanumeric code assigned to each variable in the data set. Appendix B explains how the name is constructed. |
| VALUE      | N4.1* | A numeric value associated with a descriptive value   |
| SCALESIDE  | C1*   | L (Left) or R (Right). Describes on which side of the scale the label is displayed.                               |
| LABEL      | M     | The text associated with a particular level value for the descriptor  |

**TASKS TABLE (TASKLIST)**

This table contains a list of tasks for each occupation. These tasks form the data associated with Content Model Element V.

| <b>Field Name</b> | <b>Type</b> | <b>Description</b>              |
|-------------------|-------------|---------------------------------|
| ONETCODE          | C6*         | O*NET Occupational Unit (OU).   |
| TASKNUMBER        | N2.0*       | Gives number of indicated task. |
| DESCRIPT          | C218        | Description of indicated task.  |

**CROSSWALK TABLE (XWALK)**

This table contains crosswalk information seven of the eight classification systems crosswalked to the O\*NET OUs. Crosswalks currently available include AIMS, CEN, CIP, DOT, GOE, MOC, OPM and SOC. Crosswalks to military occupations (MOC) are stored in the XWALKMOC table. Note that some crosswalks into O\*NET lead to occupations without data (the 50 “All Other” occupations).

| <b>Field Name</b> | <b>Type</b> | <b>Description</b>                              |
|-------------------|-------------|---|
| XWALK             | C3*         | Three character code identifying the crosswalk. |
| ONETCODE          | C6*         | O*NET Occupational Unit (OU).                   |
| XWALKCD           | C9*         | The crosswalk occupation code.                  |

**CROSSWALK DESCRIPTION TABLE (XWALKDES)**

This table contains a descriptive name for each 3-character crosswalk code; for example, DOT is Dictionary of Occupational Titles.

| <b>Field Name</b> | <b>Type</b> | <b>Description</b>                              |
|-------------------|-------------|---|
| XWALK             | C3*         | Three character code identifying the crosswalk. |
| XWALKNAME         | C45         | Name for a particular crosswalk.                |

### MILITARY CROSSWALK TABLE (XWALKMOC)

This table contains crosswalk information for the military occupational classification systems, jointly called the Military Occupational Codes. This table is not in second normal form, because Coding System (CODESYS) determines Service Branch (SVC). In a normalized table SVC would not be present at all. The denormalized form is used because Service Branch is of much greater interest for most applications than is Coding System.

| Field Name | Type | Description  |
|------------|------|--|
| SVC        | C1*  | Service Branch (A = Army, C = Coast Guard, F = Air Force, M = Marine Corps, N = Navy).   |
| EO         | C1*  | Enlisted/Officer Code (E=Enlisted, O = Commissioned Officer, W = Warrant Officer).   |
| CODESYS    | C10* | Coding System. Identifies the particular military coding system (for example, Navy Enlisted Classification) from which the MOC derives. See MILCODE table for names associated with these codes. |
| MOC        | C9*  | Military Occupational Code.  |
| LEVELGRADE | C4*  | Skill Level or Pay Grade Range. Where there is no occupational distinction in O*NET terms between different pay grades or skill levels occupations are grouped together in a single linkage.     |
| ONETCODE   | C6*  | O*NET Occupational Unit (OU).  |

### CROSSWALK TITLES TABLE (XWALKTTL)

This table contains the occupational title associated with each code from the seven of the eight classification systems currently crosswalked to O\*NET. Military titles are stored in the MOCTITLE table.

| Field Name | Type | Description                                     |
|------------|------|---|
| XWALK      | C3*  | Three character code identifying the crosswalk. |
| XWALKCD    | C9*  | The crosswalk occupation code.                  |
| XWALKTTL   | C70  | The crosswalk occupation title.                 |



# *Appendix B*

## *Scale Formats*



**Scale Code <Description> :** AC<Accuracy>

| Value | Scale Label         |
|-------|---------------------|
| 1     | Very Inaccurate     |
| 2     | Somewhat Inaccurate |
| 3     | Uncertain           |
| 4     | Somewhat Accurate   |
| 5     | Very Accurate       |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 10          |

**Scale Code <Description> :** AG<Agreement>

| Value | Scale Label                |
|-------|----------------------------|
| 1     | Strongly Disagree          |
| 2     | Disagree                   |
| 3     | Neither Agree nor Disagree |
| 4     | Agree                      |
| 5     | Strongly Agree             |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 11          |

**Scale Code <Description> :** AM<Required Amount of Experience>

| Value | Scale Label                                 |
|-------|---|
| 0     | not applicable or none                      |
| 1     | up to and including 1 month                 |
| 2     | over 1 month, up to and including 3 months  |
| 3     | over 3 months, up to and including 6 months |
| 4     | over 6 months, up to and including 1 year   |
| 5     | over 1 year, up to and including 2 years    |
| 6     | over 2 years, up to and including 4 years   |
| 7     | over 4 years, up to and including 6 years   |
| 8     | over 6 years, up to and including 8 years   |
| 9     | over 8 years, up to and including 10 years  |
| 10    | over 10 years                               |

| Ques Code | Question  | # Variables |
|-----------|---|-------------|
| X         | If someone were hired to perform this job, how much of the following would be required? | 4           |

*Appendix B: Scale Formats*

**Scale Code <Description> :** AN<Accountability>

| Value | Scale Label   |
|-------|---|
| 1     | Very Limited-Responsible for immediate outcomes of specific tasks   |
| 2     |   |
| 3     |   |
| 4     | Intermediate-Moderate responsibility for effects of job performance on other individuals or related work groups |
| 5     |   |
| 6     |   |
| 7     | Very Substantial-High responsibility for effects of job performance on the organization as a whole or beyond    |

|                  |                        |                    |
|------------------|------------------------|--------------------|
| <b>Ques Code</b> | <b>Question</b>        | <b># Variables</b> |
|                  | Question Text Not Used | 1                  |

**Scale Code <Description> :** AO<Automation>

| Value | Scale Label  |
|-------|--|
| 1     | Low Automation-Minimal automation; tasks are performed manually or without automated machinery           |
| 2     |  |
| 3     |  |
| 4     | Moderate Automation-Some automation  |
| 5     |  |
| 6     |  |
| 7     | High Automation-Complete automation; tasks involve mainly monitoring and verifying machines or equipment |

|                  |                        |                    |
|------------------|------------------------|--------------------|
| <b>Ques Code</b> | <b>Question</b>        | <b># Variables</b> |
|                  | Question Text Not Used | 1                  |

**Scale Code <Description> :** AT<Attire Frequency>

| Value | Scale Label                                    |
|-------|--|
| 0     | Never (or does not apply)                      |
| 1     | Once per year or less                          |
| 2     | More than once per year, but less than monthly |
| 3     | More than once per month, but less than weekly |
| 4     | More than once per week, but less than daily   |
| 5     | Daily  |

|                  |                                 |                    |
|------------------|---------------------------------|--------------------|
| <b>Ques Code</b> | <b>Question</b>                 | <b># Variables</b> |
| AT               | How often does the worker wear: | 3                  |

**Scale Code <Description> :** AU<Autonomy>

| Value | Scale Label          |
|-------|----------------------|
| 1     | Very Little Autonomy |
| 2     |                      |
| 3     | Moderate Autonomy    |
| 4     |                      |
| 5     | Very Much Autonomy   |

**Ques Code Question # Variables**  
 Question Text Not Used 1

**Scale Code <Description> :** AV<Frequency>

| Value | Scale Label               |
|-------|---------------------------|
| 0     | Never                     |
| 1     | Once a year               |
| 2     | Twice a year              |
| 3     | Three times a year        |
| 4     | Four times a year or more |

**Ques Code Question # Variables**  
 Question Text Not Used 1

**Scale Code <Description> :** CA<Check All that Apply>

| Value | Scale Label |
|-------|-------------|
| 0     | %           |
| 50    | %           |
| 100   | % Selected  |

**Ques Code Question # Variables**  
 Question Text Not Used 117

**Scale Code <Description> :** CF<Frequency>

| Value | Scale Label               |
|-------|---------------------------|
| 0     | Never (or does not apply) |
| 1     | Almost Never              |
| 2     | Sometimes                 |
| 3     | Often                     |
| 4     | Always                    |

**Ques Code Question # Variables**  
 Question Text Not Used 3

*Appendix B: Scale Formats*

**Scale Code <Description> :** CH<Change>

| Value | Scale Label     |
|-------|-----------------|
| 0     | Never           |
| 1     | Once            |
| 2     | Twice           |
| 3     | 3-5 times       |
| 4     | 6 times or more |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 3           |

**Scale Code <Description> :** CL<Task Clarity>

| Value | Scale Label   |
|-------|---|
| 1     | Low Clarity-Extreme uncertainty; tasks and expectations are very unclear                      |
| 2     |   |
| 3     |   |
| 4     | Moderate Clarity-Some guidance is given, but some uncertainty about what is to be done exists |
| 5     |   |
| 6     |   |
| 7     | High Clarity-All tasks and expectations are clear   |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 1           |

**Scale Code <Description> :** CM<Frequency>

| Value | Scale Label                                  |
|-------|--|
| 0     | Never or less than once a month              |
| 1     | Once or more per month, but less than weekly |
| 2     | Once or more per week, but less than daily   |
| 3     | Daily (once or twice a day)                  |
| 4     | Several times per day                        |
| 5     | Hourly                                       |
| 6     | More than hourly                             |
| 7     | Continually                                  |

| Ques Code | Question   | # Variables |
|-----------|--|-------------|
| W         | How frequently does this job require the use of the following communication methods? | 11          |

**Scale Code <Description> :** CN<Amount of Contact>

| Value | Scale Label   |
|-------|---|
| 1     | Very Little Contact-Almost no contact with others is required   |
| 2     |   |
| 3     |   |
| 4     | Moderate Contact-Some contact with others is required; about half of work time spent in contact with others |
| 5     |   |
| 6     |   |
| 7     | Very Extensive Contact-Constant contact with others is required   |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 1           |

**Scale Code <Description> :** CO<% Chosen>

| Value | Scale Label |
|-------|-------------|
| 0     | %           |
| 50    | %           |
| 100   | %           |

| Ques Code | Question  | # Variables |
|-----------|---|-------------|
|           | Question Text Not Used  | 77          |
| E         | Highest level of educational coursework required for entry into this job                | 75          |
| X         | If someone were hired to perform this job, how much of the following would be required? | 44          |

*Appendix B: Scale Formats*

**Scale Code <Description> :** CY<% Yes>

| Value | Scale Label |
|-------|-------------|
| 0     | %           |
| 50    | %           |
| 100   | % Yes       |

| <b>Ques Code</b> | <b>Question</b>   | <b># Variables</b> |
|------------------|---|--------------------|
| L04              | Which of the following are required to receive these licenses, certificates, or registrations?  | 5                  |
| L07              | To retain a license, certifications, or registration, is it necessary to take additional coursework?  | 1                  |
| L08              | To perform this job, does the law (federal, state, or local law) require you to possess one or more licenses, certificates, or registrations/ | 1                  |
| L09              | To perform this job, are you required by your employer to possess a license, certificate, or registration?                                    | 1                  |
| L10              | Does a job-related union, or professional association require you to possess a license, certificate, or registration?                         | 1                  |
| L11              | Is a commercial vehicle operator's license required to perform this job?  | 1                  |
| L12              | Is a license, certificate, or registration (other than a driver's or vehicle operator's license) required to perform this job?                | 1                  |



**Scale Code <Description> :** DI<Degree of Injury>

| Value | Scale Label  |
|-------|--|
| 0     | No treatment required                                |
| 1     | Injury requiring first aid                           |
| 2     | Injury resulting in loss of up to one work day       |
| 3     | Injury resulting in loss of more than one work day   |
| 4     | Injury resulting in permanent partial impairment     |
| 5     | Injury resulting in permanent total impairment/death |

| Ques Code | Question  | # Variables |
|-----------|---|-------------|
| DIS       | If injury, due to exposure to diseases/infection, were to occur while performing this job, how serious would be the likely outcome?   | 1           |
| EXP       | If injury, due to exposure to radiation, were to occur while performing this job, how serious would be the likely outcome?            | 1           |
| HAZ       | If injury, due to exposure to hazardous conditions, were to occur while performing this job, how serious would be the likely outcome? | 1           |
| HPL       | If injury, due to exposure to high places, were to occur while performing this job, how serious would be the likely outcome?          | 1           |
| HZE       | If injury, due to exposure to hazardous equipment, were to occur while performing this job, how serious would be the likely outcome?  | 1           |
| HZS       | If injury, due to exposure to hazardous situations, were to occur while performing this job, how serious would be the likely outcome? | 1           |

**Scale Code <Description> :** DY<# of Days>

| Value | Scale Label  |
|-------|--------------|
| 1     | Less than 3  |
| 2     | 3            |
| 3     | 4            |
| 4     | 5            |
| 5     | 6            |
| 6     | 7            |
| 7     | 8-10         |
| 8     | 11-14        |
| 9     | 15-20        |
| 10    | More than 20 |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 1           |

*Appendix B: Scale Formats*

**Scale Code <Description> :** EN<Extent>

| Value | Scale Label              |
|-------|--------------------------|
| 1     | To a very small extent   |
| 2     | To a limited extent      |
| 3     | To a moderate extent     |
| 4     | To a considerable extent |
| 5     | To a great extent        |

| <b>Ques Code</b> | <b>Question</b>   | <b># Variables</b> |
|------------------|---|--------------------|
|                  | Question Text Not Used  | 6                  |
| A                | To what extent do workers on this job make use of their individual abilities?                               | 1                  |
| B                | To what extent do workers on this job get a feeling of accomplishment?                                      | 1                  |
| C                | To what extent are workers on this job busy all of the time?  | 1                  |
| D                | To what extent do workers on this job have opportunities for advancement?                                   | 1                  |
| E                | To what extent do workers on this job give directions and instructions to others?                           | 1                  |
| F                | To what extent are workers on this job treated fairly by the company?                                       | 1                  |
| G                | To what extent are workers on this job paid well in comparison with other workers?                          | 1                  |
| H                | To what extent do workers on this job have coworkers that are easy to get along with?                       | 1                  |
| I                | To what extent do workers on this job try out their own ideas?  | 1                  |
| J                | To what extent do workers on this job do their work alone?  | 1                  |
| K                | To what extent are workers on this job never pressured to do things against their sense of right and wrong? | 1                  |
| L                | To what extent do workers on this job receive recognition for the work they do?                             | 1                  |
| M                | To what extent do workers on this job make decisions on their own?  | 1                  |
| N                | To what extent do workers on this job have steady employment?   | 1                  |
| O                | To what extent do workers on this job have work where they do things for other people?                      | 1                  |
| P                | To what extent are workers on this job looked up to by others in their company and their community?         | 1                  |

|   |   |   |
|---|---|---|
| Q | To what extent do workers on this job have supervisors who back up their workers with management? | 1 |
| R | To what extent do workers on this job have supervisors who train their workers well?              | 1 |
| S | To what extent do workers on this job have something different to do every day?                   | 1 |
| T | To what extent do workers on this job have good working conditions?                               | 1 |
| U | To what extent do workers on this job plan their work with little supervision?                    | 1 |

**Scale Code <Description> :** ER<Educational Level Required>

| Value | Scale Label  |
|-------|--|
| 0     | not required   |
| 1     | high school  |
| 2     | post-secondary technical training                    |
| 3     | college  |
| 4     | graduate school or other post undergraduate training |

|                  |  |                    |
|------------------|--|--------------------|
| <b>Ques Code</b> | <b>Question</b>  | <b># Variables</b> |
| E                | Highest level of educational coursework required for entry into this job | 15                 |

**Scale Code <Description> :** ET<Extent>

| Value | Scale Label            |
|-------|------------------------|
| 1     | Not at all             |
| 2     | To a limited extent    |
| 3     | To some extent         |
| 4     | To a moderate extent   |
| 5     | To a very great extent |

|                  |                        |                    |
|------------------|------------------------|--------------------|
| <b>Ques Code</b> | <b>Question</b>        | <b># Variables</b> |
|                  | Question Text Not Used | 4                  |

*Appendix B: Scale Formats*

**Scale Code <Description> :** EX<Extent>

| Value | Scale Label          |
|-------|----------------------|
| 1     | Not at all           |
| 2     | To a limited extent  |
| 3     | To some extent       |
| 4     | To a moderate extent |
| 5     | To great extent      |

| Ques Code | Question  | # Variables |
|-----------|---|-------------|
|           | Question Text Not Used                                | 1           |
| O42       | To what extent do you perform the following activity? | 4           |

**Scale Code <Description> :** FB<Extent Feedback>

| Value | Scale Label       |
|-------|-------------------|
| 1     | Very Little       |
| 2     |                   |
| 3     | A Moderate Amount |
| 4     |                   |
| 5     | Very Much         |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 1           |

**Scale Code <Description> :** FC<Extent of Frustration>

| Value | Scale Label   |
|-------|---|
| 1     | Low Extent-Few work activities are hindered                     |
| 2     |   |
| 3     |   |
| 4     | Moderate Extent-Some work activities are delayed or interrupted |
| 5     |   |
| 6     |   |
| 7     | High Extent-Important work activities cannot be completed       |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 1           |

**Scale Code <Description> :** FG<Frequency>

| Value | Scale Label  |
|-------|--------------|
| 1     | Almost Never |
| 2     | Sometimes    |
| 3     | Often        |
| 4     | Always       |

| Ques Code | Question  | # Variables |
|-----------|---|-------------|
| G         | How often is this activity performed on this job? | 42          |

**Scale Code <Description> :** FL<Formality>

| Value | Scale Label   |
|-------|---|
| 1     | Very Informal-Casual conversation, or communication on a personal basis                         |
| 2     |   |
| 3     |   |
| 4     | Moderately Formal-Personal letters, informal reports, or brief memos                            |
| 5     |   |
| 6     |   |
| 7     | Very Formal-In writing formal reports or official statements, or orally in formal presentations |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 1           |

**Scale Code <Description> :** FM<Amount of Freedom>

| Value | Scale Label   |
|-------|---|
| 1     | Very Little Freedom-All decisions must be approved by supervisor  |
| 2     |   |
| 3     |   |
| 4     | Some Freedom-May make some decisions using general guidelines; other decisions are subject to supervisor approval |
| 5     |   |
| 6     |   |
| 7     | Extensive Freedom-May make any and all decisions without approval   |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 1           |

*Appendix B: Scale Formats*

**Scale Code <Description> :** FN<Frequency>

| Value | Scale Label  |
|-------|--------------|
| 0     | Never        |
| 1     | Almost Never |
| 2     | Sometimes    |
| 3     | Often        |
| 4     | Always       |

| <b>Ques Code</b> | <b>Question</b>   | <b># Variables</b> |
|------------------|---|--------------------|
| AT               | How often does the worker wear:   | 3                  |
| DIS              | How often does this job require the worker to be exposed to diseases/infection?         | 1                  |
| EXP              | How often does this job require the worker to be exposed to radiation?                  | 1                  |
| HAZ              | How often does this job require the worker to be exposed to hazardous conditions?       | 1                  |
| HPL              | How often does this job require the worker to be exposed to high places?                | 1                  |
| HZE              | How often does this job require the worker to be exposed to harardous equipment?        | 1                  |
| HZS              | How often does this job require the worker to be exposed to harardous situations?       | 1                  |
| W                | How frequently does this job require the worker to work:                                | 2                  |
| W15              | How often during a usual work period is the worker exposed to the following conditions: | 6                  |
| W22              | How much time in a usual work period does the worker spend:                             | 9                  |

**Scale Code <Description> :** FR<Frequency>

| Value | Scale Label              |
|-------|--------------------------|
| 1     | Once per year or less    |
| 2     | More than once per year  |
| 3     | More than once per month |
| 4     | More than once per week  |
| 5     | Daily                    |
| 6     | Several times per day    |
| 7     | Hourly or more often     |

| <b>Ques Code</b> | <b>Question</b>                                   | <b># Variables</b> |
|------------------|---|--------------------|
| G                | How often is this activity performed on this job? | 42                 |

**Scale Code <Description> :** FT<Frequency of Task>

| Value | Scale Label              |
|-------|--------------------------|
| 0     | Not Relevant             |
| 1     | Once per year or less    |
| 2     | More than once per year  |
| 3     | More than once per month |
| 4     | More than once per week  |
| 5     | Daily                    |
| 6     | Several times per day    |
| 7     | Hourly or more often     |

| Ques Code | Question   | # Variables |
|-----------|--|-------------|
| T         | Is the task Relevant? If relevant, how often is this task performed on this job? | 1           |

*Appendix B: Scale Formats*

**Scale Code <Description> :** FW<Frequency>

| Value | Scale Label                                    |
|-------|--|
| 0     | Never (or does not apply)                      |
| 1     | Once per year or less                          |
| 2     | More than once per year, but less than monthly |
| 3     | More than once per month, but less than weekly |
| 4     | More than once per week, but less than daily   |
| 5     | Daily (once or twice per day)                  |
| 6     | Several times per day                          |
| 7     | Hourly or more often (including continually)   |

| Ques Code | Question  | # Variables |
|-----------|---|-------------|
|           | Question Text Not Used  | 2           |
| AT        | How often does the worker wear:   | 2           |
| DIS       | How often does this job require the worker to be exposed to diseases/infection?         | 1           |
| EXP       | How often does this job require the worker to be exposed to radiation?                  | 1           |
| HAZ       | How often does this job require the worker to be exposed to hazardous conditions?       | 1           |
| HPL       | How often does this job require the worker to be exposed to high places?                | 1           |
| HZE       | How often does this job require the worker to be exposed to harardous equipment?        | 1           |
| HZS       | How often does this job require the worker to be exposed to harardous situations?       | 1           |
| W         | How frequently does this job require the worker to work:                                | 6           |
| W15       | How often during a usual work period is the worker exposed to the following conditions: | 6           |

**Scale Code <Description> :** GL<Frequency of Goals>

| Value | Scale Label                                  |
|-------|--|
| 0     | You are not required to set individual goals |
| 1     | None   |
| 2     | Few  |
| 3     | Some   |
| 4     | Most   |
| 5     | All  |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 2           |



**Scale Code <Description> :** HS<Responsible for Health & Safety>

| Value | Scale Label  |
|-------|--|
| 0     | None-No responsibility for the health and safety of others   |
| 1     | Very Limited Responsibility-Has little responsibility for others' health and safety                    |
| 2     |  |
| 3     |  |
| 4     | Moderate Responsibility-Must be careful to avoid injury to others                                      |
| 5     |  |
| 6     |  |
| 7     | Very Substantial Responsibility-Others' health and safety depends almost entirely on actions of worker |

**Ques Code Question # Variables**  
 Question Text Not Used 1

**Scale Code <Description> :** IG<% Achieve Goals>

| Value | Scale Label                                  |
|-------|--|
| 0     | You are not required to set individual goals |
| 1     | Less than 20%                                |
| 2     | 21% to 40%                                   |
| 3     | 41% to 60%                                   |
| 4     | 61% to 80%                                   |
| 5     | 81% to 100%                                  |

**Ques Code Question # Variables**  
 Question Text Not Used 1

**Scale Code <Description> :** IH<Occupational Interest High-Point>

| Value | Scale Label                          |
|-------|--------------------------------------|
| 0     | No second or third high-point exists |
| 1     | Realistic                            |
| 2     | Investigative                        |
| 3     | Artistic                             |
| 4     | Social                               |
| 5     | Enterprising                         |
| 6     | Conventional                         |

**Ques Code Question # Variables**  
 Question Text Not Used 3

*Appendix B: Scale Formats*

**Scale Code <Description> :** II<Importance>

| Value | Scale Label         |
|-------|---------------------|
| 0     | Does not apply      |
| 1     | Not important       |
| 2     | Somewhat important  |
| 3     | Important           |
| 4     | Very important      |
| 5     | Extremely important |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 1           |

**Scale Code <Description> :** IJ<Importance>

| Value | Scale Label         |
|-------|---------------------|
| 0     | Does not apply      |
| 1     | Minimally important |
| 2     | Somewhat important  |
| 3     | Important           |
| 4     | Very important      |
| 5     | Extremely important |

| Ques Code | Question  | # Variables |
|-----------|---|-------------|
|           | Question Text Not Used                                  | 5           |
| W3        | How important are interactions requiring the worker to: | 7           |

**Scale Code <Description> :** IM<Importance>

| Value | Scale Label         |
|-------|---------------------|
| 1     | Not Important       |
| 2     | Somewhat Important  |
| 3     | Important           |
| 4     | Very Important      |
| 5     | Extremely Important |

| Ques Code | Question   | # Variables |
|-----------|--|-------------|
| A         | How important is this ability to performance on this job?                              | 52          |
| B         | How important is this skill to performance on this job?                                | 10          |
| C         | How important is this skill to performance on this job?                                | 36          |
| G         | How important is this activity to performance on this job?                             | 42          |
| K         | How important is this knowledge to performance on this job?                            | 33          |
| O         | How important is this concept as a guiding principle for your organization as a whole? | 12          |
| S         | How important is this characteristic to performance on this job?                       | 17          |
| T         | If relevant, how important is this task to performance on this job?                    | 1           |

**Scale Code <Description> :** IP<Impact of Decisions>

| Value | Scale Label  |
|-------|--|
| 1     | Very Minor Results-Decisions do not affect others or the reputation of the organization                |
| 2     |  |
| 3     |  |
| 4     | Moderate Results-Decisions may affect some others  |
| 5     |  |
| 6     |  |
| 7     | Extreme Results-Decisions affect several departments and may result in large financial losses or gains |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 1           |

*Appendix B: Scale Formats*

**Scale Code <Description> :** JE<% Required for Job Entry>

| Value | Scale Label |
|-------|-------------|
| 0     | %           |
| 50    | %           |
| 100   | % Yes       |

| Ques Code | Question   | # Variables |
|-----------|--|-------------|
| B         | Is this level of skill required for entry into this job? | 10          |
| C         | Is this level of skill required for entry into this job? | 36          |

**Scale Code <Description> :** JS<Job Specialty>

| Value | Scale Label |
|-------|-------------|
| 0     | %           |
| 50    | %           |
| 100   | % Relevant  |

| Ques Code | Question   | # Variables |
|-----------|--|-------------|
| K         | Which of the following specialties are relevant to this job? | 231         |

**Scale Code <Description> :** LC<Level of Competition>

| Value | Scale Label  |
|-------|--|
| 1     | Low Competition-Requires the worker to be generally aware of competitive pressures on the organization   |
| 2     |  |
| 3     |  |
| 4     | Moderate Competition-Requires the worker to contribute to group effort to improve performance or efficiency to levels exceeding those attained by other groups within the organization                         |
| 5     |  |
| 6     |  |
| 7     | High Competition-Requires the worker to compete directly with coworkers or counterparts in other organizations for sales, customers, efficiency, productivity, new product development, or financial resources |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 1           |

**Scale Code <Description> :** LE<Education Level Required>

| Value | Scale Label   |
|-------|---|
| 1     | Less than a High School Diploma   |
| 2     | High School Diploma (or High School Equivalence Certificate)  |
| 3     | Post-Secondary Certificate - awarded for training completed after high school (e.g., in Personal Services, Engineering-Related Technologies, Vocational Home Economics, Construction Trades, Mechanics and Repairers, Precision Production Trades)  |
| 4     | Some college Courses  |
| 5     | Associate's Degree (or other 2-year degree)   |
| 6     | Bachelor's Degree   |
| 7     | Post-Baccalaureate Certificate - awarded for completion of an organized program of study requiring 30 credit hours beyond the Bachelor's degree; designed for persons who have completed a Baccalaureate degree, but do not meet the requirements of academic degrees carrying the title of Master.             |
| 8     | Master's Degree   |
| 9     | Post-Master's Certificate - awarded for completion of an organized program of study of 60 credit hours beyond the Master's degree, but does not meet the requirements of academic degrees at the Doctoral level.  |
| 10    | First Professional Degree - awarded for completion of a program that: requires at least 2 years of college work before entrance into the program; includes a total of at least 6 academic years of college work to complete and; provides all remaining academic requirements to begin practice in a profession |
| 11    | Doctoral Degree   |
| 12    | Post-Doctoral Certificate   |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 1           |

*Appendix B: Scale Formats*

**Scale Code <Description> :** LI<Likelihood of Injury>

| Value | Scale Label              |
|-------|--------------------------|
| 0     | No possibility           |
| 1     | Almost no possibility    |
| 2     | Very limited possibility |
| 3     | Limited possibility      |
| 4     | Some possibility         |
| 5     | Fairly high possibility  |
| 6     | High possibility         |
| 7     | Very high possibility    |

| <b>Ques Code</b> | <b>Question</b>   | <b># Variables</b> |
|------------------|---|--------------------|
| DIS              | What is the likelihood that the worker would be injured as a result of being exposed to diseases/infections while performing this job?  | 1                  |
| EXP              | What is the likelihood that the worker would be injured as a result of being exposed to radiation while performing this job?            | 1                  |
| HAZ              | What is the likelihood that the worker would be injured as a result of being exposed to hazardous conditions while performing this job? | 1                  |
| HPL              | What is the likelihood that the worker would be injured as a result of being exposed to high places while performing this job?          | 1                  |
| HZE              | What is the likelihood that the worker would be injured as a result of being exposed to hazardous equipment while performing this job?  | 1                  |
| HZS              | What is the likelihood that the worker would be injured as a result of being exposed to hazardous situations while performing this job? | 1                  |

**Scale Code <Description> :** LV<Level>

| Value | Scale Label                                     |
|-------|---|
| 0     | Not relevant at all for performance on this job |
| 1     | Low   |
| 2     |   |
| 3     |   |
| 4     |   |
| 5     |   |
| 6     |   |
| 7     | High  |

| Ques Code | Question   | # Variables |
|-----------|--|-------------|
| A         | What level of this ability is needed to perform this job?        | 52          |
| B         | What level of this skill is needed to perform this job?          | 10          |
| C         | What level of this skill is needed to perform this job?          | 36          |
| G         | What level of this activity is needed to perform this job?       | 42          |
| K         | What level of this knowledge is needed to perform this job?      | 33          |
| S         | What level of this characteristic is needed to perform this job? | 17          |

**Scale Code <Description> :** NS<Number of Supervisors>

| Value | Scale Label    |
|-------|----------------|
| 0     | Not applicable |
| 1     | Only 1         |
| 2     | 2              |
| 3     | 3              |
| 4     | 4 or more      |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 1           |

**Scale Code <Description> :** OI<Occupational Interests>

| Value | Scale Label               |
|-------|---------------------------|
| 1     | Not at all characteristic |
| 4     | Moderately characteristic |
| 7     | Extremely characteristic  |

| Ques Code | Question  | # Variables |
|-----------|---|-------------|
| C         | How descriptive and characteristic is the Holland work environment of this Occupational Unit? | 6           |

*Appendix B: Scale Formats*

**Scale Code <Description> :** OS<Objective vs Subjective>

| Value | Scale Label  |
|-------|--|
| 1     | Very Objective-Very concrete and deals with observable data, behaviors, or events    |
| 2     |  |
| 3     |  |
| 4     | Moderate Objectivity-Includes both concrete and subjective or judgmental information |
| 5     |  |
| 6     |  |
| 7     | Very Subjective-Deals mostly with feelings, thoughts, or ideas                       |

**Ques Code Question # Variables**  
 Question Text Not Used 1

**Scale Code <Description> :** PA<Privacy-Work>

| Value | Scale Label   |
|-------|---|
| 1     | Little Privacy-Work is with others in a non-private area, such as a typing pool, food preparation, or production area |
| 2     |   |
| 3     |   |
| 4     | Moderate Privacy-Work is conducted in a semi-private area, such as a cubicle  |
| 5     |   |
| 6     |   |
| 7     | Substantial Privacy-Work is performed in a private work space or office   |

**Ques Code Question # Variables**  
 Question Text Not Used 1

**Scale Code <Description> :** PC<Part of Work>

| Value | Scale Label  |
|-------|--|
| 1     | My job is only part of the work                                  |
| 2     |  |
| 3     | My job is a moderate sized "chunk" of the overall piece of work  |
| 4     |  |
| 5     | My job involves doing a whole piece of work from start to finish |

**Ques Code Question # Variables**  
 Question Text Not Used 1



**Scale Code <Description> :** PS<Time in Position>

| Value | Scale Label                      |
|-------|----------------------------------|
| 0     | Never (or does not apply)        |
| 1     | Under 1/10 of the time           |
| 2     | Between 1/10 and 1/3 of the time |
| 3     | Between 1/3 and 2/3 of the time  |
| 4     | Over 2/3 of the time             |
| 5     | Almost continually               |

**Ques Code Question # Variables**  
W22 How much time in a usual work period does the worker spend: 9

**Scale Code <Description> :** PV<Privacy-Communications>

| Value | Scale Label   |
|-------|---|
| 1     | Little Privacy-Most communications and materials are monitored by others  |
| 2     |   |
| 3     |   |
| 4     | Moderate Privacy-Communications and materials for this job are not monitored, but others can easily access communications (community printer, fax and/or materials) |
| 5     |   |
| 6     |   |
| 7     | Substantial Privacy-No one has access to communications or materials for this job without the worker's consent  |

**Ques Code Question # Variables**  
Question Text Not Used 1

**Scale Code <Description> :** PX<Proximity>

| Value | Scale Label  |
|-------|--|
| 1     | Not Close-Work does not require close physical contact with others (e.g., forest ranger)                               |
| 2     |  |
| 3     |  |
| 4     | Moderately Close-Work requires infrequent physical contact and allows some distance (e.g. sharing office space)        |
| 5     |  |
| 6     |  |
| 7     | Very Close-Work design requires working very close to or in contact with others (e.g., commercial pilots in a cockpit) |

**Ques Code Question # Variables**  
Question Text Not Used 1

*Appendix B: Scale Formats*

**Scale Code <Description> :** RE<Responsibility>

| Value | Scale Label  |
|-------|--|
| 0     | None-No responsibility for work results of others                                      |
| 1     | Very Limited Responsibility-Minimum responsibility for the work results of others      |
| 2     |  |
| 3     |  |
| 4     | Intermediate Responsibility-Considerable responsibility for the work results of others |
| 5     |  |
| 6     |  |
| 7     | Very Substantial Responsibility-Complete responsibility for the work results of others |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 1           |

**Scale Code <Description> :** SG<Significance>

| Value | Scale Label            |
|-------|------------------------|
| 1     | Not very Significant   |
| 2     |                        |
| 3     | Moderately Significant |
| 4     |                        |
| 5     | Highly Significant     |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 1           |

**Scale Code <Description> :** SR<How Serious>

| Value | Scale Label   |
|-------|---|
| 1     | Mildly Serious-Minimal loss of time or effort or minor inconvenience to customers   |
| 2     |   |
| 3     |   |
| 4     | Moderately Serious-Some loss of time, money, or damage to equipment   |
| 5     |   |
| 6     |   |
| 7     | Extremely Serious-Substantial costs, loss of reputation, damage to physical plant, or serious injury or death to self, other workers, or the public |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 1           |

**Scale Code <Description> :** ST<How Structured>

| Value | Scale Label   |
|-------|---|
| 1     | Very Structured-Very fixed job activities with little chance to vary tasks, priorities, or goals              |
| 2     |   |
| 3     |   |
| 4     | Moderately Structured-Some leeway in work routine, but certain limits apply                                   |
| 5     |   |
| 6     |   |
| 7     | Very Unstructured-Extremely high flexibility in selecting methods, setting goals, and establishing priorities |

**Ques Code Question # Variables**  
 Question Text Not Used 1

**Scale Code <Description> :** TI<% Time>

| Value | Scale Label   |
|-------|---------------|
| 0     | None          |
| 1     | Less than 25% |
| 2     | 25%-50%       |
| 3     | 51%-75%       |
| 4     | More than 75% |

**Ques Code Question # Variables**  
 Question Text Not Used 1

**Scale Code <Description> :** TM<Number of Teams>

| Value | Scale Label |
|-------|-------------|
| 0     | None        |
| 1     | 1           |
| 2     | 2-3         |
| 3     | 4-6         |
| 4     | 7-10        |
| 5     | 11 or more  |

**Ques Code Question # Variables**  
 Question Text Not Used 1

*Appendix B: Scale Formats*

**Scale Code <Description> :** TR<Frequency Training>

| Value | Scale Label     |
|-------|-----------------|
| 0     | Never           |
| 1     | Only once       |
| 2     | Twice           |
| 3     | More than twice |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 1           |

**Scale Code <Description> :** VR<Job Variety>

| Value | Scale Label         |
|-------|---------------------|
| 1     | Very Little Variety |
| 2     |                     |
| 3     | Moderate Variety    |
| 4     |                     |
| 5     | Very Much Variety   |

| Ques Code | Question               | # Variables |
|-----------|------------------------|-------------|
|           | Question Text Not Used | 1           |

# *Appendix C*

## *Variable Code Information*



# Appendix C

## Variable Code Information

This appendix describes how the variable names in the DD table are interpreted. In the current release, there are 1,298 rows in DD. Six of these rows represent aggregate variables, whose value is calculated or derived from other variables in the database. The coding scheme for aggregate variables is described following the section on standard variables.

### Standard Variables:

#### Position 1: Prefixes (corresponding to the second level of the O\*NET content model hierarchy)

---

|          |  |          |                                  |
|----------|--|----------|----------------------------------|
| <b>A</b> | <b>Abilities</b>                               | <b>K</b> | <b>Knowledges</b>                |
| <b>B</b> | <b>Basic Skills</b>                            | <b>L</b> | <b>Licensure</b>                 |
| <b>C</b> | <b>Cross-Functional Skills</b>                 | <b>O</b> | <b>Organizational Context</b>    |
| <b>E</b> | <b>Education and Training</b>                  | <b>S</b> | <b>Work Styles</b>               |
| <b>G</b> | <b>Generalized Work Activities</b>             | <b>T</b> | <b>Occupation-Specific Tasks</b> |
| <b>H</b> | <b>Holland</b>                                 | <b>W</b> | <b>Work Context</b>              |
| <b>I</b> | <b>Occupational Values, formerly Interests</b> | <b>X</b> | <b>Experience</b>                |

---

### Positions 2-3: Question Group

Typically, a Question Group contains all of the questions associated with a particular level of the O\*NET content model hierarchy. Occupation-specific tasks are assigned 00.

### Positions 4-5: Scale Codes

|          |    |          |    |          |    |
|----------|----|----------|----|----------|----|
| Account  | AN | Feedback | FB | Lev_Comp | LC |
| Accuracy | AC | Formal   | FL | Level    | LV |
| Achieve  | AV | Freedom  | FM | Level_Ed | LE |
| Agree    | AG | FreqRelC | CF | LikInjr  | LI |
| Amount   | AM | FreqRelG | FG | Num_Sups | NS |
| Attire   | AT | FreqRelW | FN | Obj_Subj | OS |
| Auto     | AO | FreqTask | FT | Piece    | PC |
| Autonomy | AU | Freq_Wk  | FW | Position | PS |
| CATA     | CA | Frequenc | FR | Pri_Area | PA |
| Change   | CH | Frus_Cir | FC | Privacy  | PV |
| ChoseYes | CY | Goals    | GL | Prximty  | PX |
| Circ_One | CO | Hlth_Saf | HS | Results  | RE |
| Clarity  | CL | Holland  | HC | Serious  | SR |
| Com_Meth | CM | Impact   | IP | Signific | SG |
| Contact  | CN | Import_2 | II | Structur | ST |
| Days     | DY | Import_3 | IJ | Teams    | TM |
| DegrInjr | DI | Importnc | IM | Time     | TI |
| Ed_Req   | ER | Ind_Goal | IG | Training | TR |
| Extent   | ET | JobSpec  | JS | Variety  | VR |
| Extent_2 | EX | Jobentry | JE |          |    |



**Positions 6-7: Sequence Numbers**

When more than one question for a scale occurs with the same scale code in a content model group, this number is assigned sequentially.

**Position 8: Statistic Type**

H Interest High-Point

I Median value

M Mean

N\* Number

P Percentage picked value

S\* Standard deviation

\* Not in current version

**Aggregate Variables:**

**Position 1: Prefix**

Same as Standard Variables

**Positions 2-3: Aggregate Indicator**

The literal text "AG."

**Positions 4-5: Scale Code,**

Same as Standard Variables

**Positions 5-6: Sequence Number**

An arbitrary 2-character sequence that distinguishes variables within a Prefix code. Sequence Numbers can range from "00" to "ZZ".

**Position 8: Statistic Type.**

Currently only "M" (Mean) is used.

The six aggregate variables in the current release are VAGEN01M - VAGE06M. These are found in Occupational Values.

## *Appendix D*

### *The Development of the Occupational Information (O\*NET™) Analyst Database*



# *Appendix D*

## *The Development of the Occupational Information (O\*NET™) Analyst Database*

### **Transition from the Dictionary of Occupational Titles (DOT) to the O\*NET System**

#### **Overview**

The database for O\*NET 98 is based largely on data supplied by occupational analysts. Thus, it is known as the *Analyst Database*. To develop data for the O\*NET Analyst Database, analysts evaluated and refined existing occupational data, then extrapolated these data to the O\*NET content model. Development of the database involved four phases:

***Phase I: Developing Homogeneous Occupations for O\*NET.*** First, the 11,761 *Dictionary of Occupational Titles* (DOT) occupations were grouped into categories based on Occupational Employment Statistics (OES) occupations. Because some of the 852 OES occupations were too broad, however, statistical clustering was used to divide some of them into two or more new categories that were more homogeneous in terms of required skills. Review and modification of the preliminary categories resulted in 1,122 defined O\*NET Occupational Units (OUs).

***Phase II: Developing Task Statements to Describe the OUs.*** To develop descriptive task statements for each OU, analysts began by examining the task statements for the DOT occupations that were grouped under the OU. The analysts combined and condensed the DOT statements, extracting a list of more general task statements to describe the OU.

***Phase III: Rating OUs in Terms of O\*NET Content Model Descriptors.***

In order to relate the OUs to the content model that forms the conceptual framework for O\*NET, analysts rated each OU in terms of selected descriptors drawn from the content model. Ratings were based on examination of the OU task statements developed in Phase II. A particular descriptor was included *only* if non-incumbents would be able to determine a rating based solely on the task statements.

***Phase IV: Evaluating the OU Task Statements.*** To evaluate the currency, relevance, and face validity of the OU task statements, analysts compared OU task statements to task data from existing occupational databases.

The results suggested that the OU task statements are consistent with task content from widely used sources of occupational information.

This appendix describes these phases in more detail.

## **Phase I: Developing Homogeneous Occupations for O\*NET**

The first phase of database development required analysts to group over 11,000 very specific DOT occupations into broader occupational categories that could be used for O\*NET. The purpose of this regrouping of occupations was to make the O\*NET more manageable and useful than the DOT by placing greater emphasis on the meaningful differences between occupations. Thus, it was essential to accurately group the DOT occupations and to ensure that the categories themselves were meaningful. In particular, each grouping of DOT occupations needed to display

- ***Belongingness***—the work activities of each DOT occupation had to match the definition of the occupational category under which it was grouped; and
- ***Homogeneity***—differences within a single category had to be less than differences between categories and all the DOT occupations within a single category had to show consistency of skill transferability.

### **Initial Crosswalking of DOT and OES Occupations**

To ensure that the new O\*NET System could be linked to current labor market information, a common taxonomy of occupations was needed as its developmental foundation. The OES provided the most feasible taxonomy for this purpose. Then, by linking, or “crosswalking” the OES taxonomy to other taxonomies, the O\*NET System could have increased application.

To initiate the O\*NET development process, job analysts evaluated the National Occupational Information Coordinating Committee (NOICC) Master Crosswalk. The NOICC crosswalk, which was created by the Bureau of Labor Statistics (BLS), identifies the relationships among individual DOT occupations and OES occupational categories and establishes direct links between the two classification systems.

In some cases, the DOT occupations linked to an OES occupation were not sufficiently similar, with regard to skill requirements or work activities, to develop homogeneous occupations for O\*NET. For many potential O\*NET users, these broad OES occupations were too diverse to be meaningful or functional. Therefore, it was anticipated that some modification of the OES occupations would be needed. In general, however, the analysts agreed that the OES and the corresponding NOICC crosswalk could be used as a starting point to develop an occupation structure for O\*NET.

To ensure that the linkages established between the DOT occupations and the OES occupations were sound, job analysts used a two-stage process: In the first stage, analysts evaluated OES occupations that were linked to four or fewer DOT occupations. In the second stage, they evaluated OES occupations that were linked to more than four DOT occupations.

### **Direct Analysis of Relatively Narrow OES Occupations**

Analysts selected 220 OES occupations that they determined were accurately matched with DOT occupations and were linked to four or fewer DOT occupations. Of the 220, 140 of the OES occupations were crossed with only one DOT occupation. The remaining 80 OESs were crossed with two to four DOT occupations.

To confirm this crosswalk evaluation, the list of the OES and the associated DOT occupations was distributed to four additional job analysts. In this stage of the evaluation, analysts were provided with the OES and DOT codes, titles, and definitions, as well as supplemental information from the DOT for each occupation. This information included codes for General Educational Development (GED) and Specific Vocational Preparation (SVP), as well as the date when the occupational information was last updated. The analysts were asked to read the OES definition and DOT definitions and indicate the degree of match between the OES and DOT definition (where there was a 1:1 correspondence) or the degree of match between the OES title and group of DOT titles (where there were multiple DOT occupations matched to an OES occupation). Analysts rated these using the following rating scale: 1= “Very poor”; 2= “Poor”; 3= “Moderate”; 4= “Good”; 5= “Very Good.”

Out of the 220 linkages, 207 were found to be classified appropriately, yielding either “Good” or “Very Good” match ratings. The remaining 13 OES occupations were not represented in O\*NET because the available DOT information was not sufficient to adequately represent the OES category.

### **Generation of Subclusters within Broad OES Occupations**

Because of the complexity of the information involved, instances where more than four DOT occupations were linked with an OES occupation required a different method of evaluation. Thus, statistical clustering was performed to generate subclusters for each OES occupation that had more than four DOT occupations associated with it. Once the cluster analysis was conducted, three teams of three job analysts assessed the homogeneity and belongingness of the DOT occupations within each subcluster. The analysts then compared the subclusters and made final decisions on occupational structure. A detailed description of the methodology follows.

**Selecting the variables.** Table 1 shows the 28 variables used in the clustering procedure. These variables were based on job analysis components commonly used in the DOT to describe the dimensions of jobs. Specific variables were selected because of their relationships to specific parts of the O\*NET content model as well as their usefulness in classifying occupations.



**Table 1. Variables Used in Cluster Analysis<sup>1</sup>**

| <b>Variable</b>   | <b>DOT Job Component</b>                          |
|---|---|
| Reasoning<br>Mathematical<br>Language   | General Educational Development (GED)             |
| Specific Vocational Preparation   | Specific Vocational Preparation (SVP)             |
| Data<br>People<br>Things  | Worker Function                                   |
| General Learning Ability<br>Verbal Aptitude<br>Numerical Aptitude<br>Spatial Aptitude<br>Form Perception<br>Clerical Perception<br>Motor Coordination<br>Finger Dexterity<br>Manual Dexterity<br>Eye-Hand-Foot Coordination<br>Color Discrimination | Aptitude  |
| Materials, Products, Subject Matter, and Services (3 Codes)   | Materials, Products, Subject Matter, And Services |
| Work Fields   | Work Fields                                       |
| Directing<br>People<br>Influencing  | Temperament                                       |

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1. Scales for each variable are explained in detail in the Occupational Outlook Handbook (DOL, 1990).

|            |
|------------|
| Expressing |
|------------|

Some variables (i.e., the GED dimensions, the SVP measure, the Worker Functions, and the Aptitudes) were selected because they were most closely related to skills. Others (i.e., the Materials, Products, Subject Matter, and Services [MPSMS] codes, the Work Field codes, and the Temperament variables) were selected because they provided necessary information about work context. Temperament variables most closely related to interpersonal skills, as defined in the content model, were actually included in the cluster analysis. These were Directing, People, Influencing, and Expressing. Data for all the cluster variables came directly from the DOT.

**Selecting the proximity measure.** To indicate the amount of similarity between individual occupations, a proximity or distance measure was used. Any one of several different types of similarity measures could have been used. The Euclidean distance measure was chosen because it tends to be less affected by potential anomalies often associated with categorical variables.

**Selecting the method of analysis.** Proximity measures for the 28 profile variables were cluster analyzed using Ward's Minimum Variance procedure. Twelve clustering trials, using a sample DOT data set, were conducted to select the most appropriate method. Observational analyses and comparisons of the results revealed that the Ward's procedures best represented the data. This algorithm also supported the primary objectives of the project. Ward's emphasizes clusters with small, roughly equal numbers of observations (SAS, 1989, pp. 56, 536) but minimizes the tendency to create single member clusters. A large number of single member clusters within an OES category would pose problems for this study, so a clustering procedure that minimized single member clusters was preferred. Further, Ward's has been widely used in the clustering literature, has been shown to be superior for recovering known spherical clusters (SAS, 1989, p. 56), and accepts a wide variety of similarity measures.

**Determining whether to use raw or standardized profile variables.** Additionally, analysts needed to determine whether raw (i.e., unstandardized) or standardized profile variables should be used in the computation of the Euclidean distance measure. To determine which method provided the most meaningful cluster structures, cluster analyses were conducted for a subset of 31 OES units using both methods. While

the results for both methods were similar, some differences were apparent. A set of five analysts examined the solutions and determined that the use of raw unstandardized profiles yielded the most meaningful information.

**Generating the subclusters.** The clustering procedure described above (i.e., Ward's Minimum Variance, using Euclidean distance and unstandardized profile variables) was used to generate subclusters for each OES occupation with more than four associated DOT occupations. For each OES occupation, results were organized by DOT codes and titles under each resulting cluster number. These results were given to job analysts for subclustering review.

### **Review and Modification of the Subclusters**

A group of three job analysts was presented with the OES code and definition, the DOT codes and titles, arranged by cluster results, and the DOT occupational definitions. Initially, the analysts reviewed the DOT definitions, familiarizing themselves with the definitions for all job titles within each subcluster. They focused on occupation-specific skills and knowledges (e.g., tasks performed, equipment used, subject-matter, etc.), noting the differences between the occupations. The *Occupational Outlook Handbook* (1990) was consulted, as needed, for information regarding training requirements.

**Evaluating belongingness.** After reviewing the DOT definitions, each analyst evaluated the belongingness of the DOT occupations, noting any DOT occupations that did not match the OES definition. These titles were discussed with the group and a consensus was reached as to whether or not to remove the DOT from the OES. If recommended for removal, a rationale for removal was included on a group worksheet along with a recommendation of the OES occupation to which the DOT title should be linked.

**Evaluating homogeneity.** After removing the mismatched DOT occupational titles from the list, the analysts then selected a seed DOT occupation (i.e., the most representative DOT occupation) for each subcluster. This occupational title was the one that most closely represented the OES definition. If more than one DOT title reflected the OES, then skill level was used as a second criterion. In these cases, the occupational title representing the highest appropriate skill level (based

on GED and SVP rating) for all DOT occupations in the subcluster was selected. After recording their individual responses, the group discussed their selections until they reached a consensus on the seed DOT designation. This selection was then recorded on the group worksheet.

Next, each analyst estimated the amount of retraining time required to make a career move from each DOT within the subcluster to the seed DOT. Retraining time was defined as the amount of time required by a worker to acquire—through either vocational or on-the-job training—the additional occupation-specific skills and knowledges needed to perform proficiently in the seed DOT. Retraining time estimates were used to assess the relative similarity of groups of DOTs within each subcluster. These estimates were not considered predictors of actual retraining time.

Analysts estimated retraining times using task statements and ratings from the DOT and training requirement information from the *Occupational Outlook Handbook*. Analysts were asked to: 1) identify the overlap of occupation-specific skills and knowledges; 2) identify the additional occupation-specific skills and knowledges required to perform proficiently in the seed DOT; and 3) estimate how much retraining time is required to gain these additional occupation-specific skills and knowledges. Retraining time was rated using the following scale: 1= “1 day up to 1 week”; 2= “1 week up to 1 month”; 3= “1 month up to 3 months”; 4= “3 months up to 6 months”; 5= “6 months up to 1 year”; 6= “1 year up to 2 years”; 7= “more than 2 years.”

Individual estimates of retraining time were recorded on the individual worksheets. After group members made individual estimates, the group discussed the individual estimates until they reached a consensus on a retraining time estimate, which they recorded on the group worksheet.

The group then compared retraining times of the DOT occupations within each subcluster to determine if the occupations had similar retraining time estimates. If a given DOT occupation differed significantly in terms of retraining time from the other occupations in the subcluster, the group estimated the time required to retrain to the seed occupation in each of the remaining subclusters of that OES occupation. The analysts then determined if the retraining time for the discrepant DOT occupation was closer to the retraining times of the occupational titles within any of the remaining subclusters. The DOT occupation was moved to the subcluster in which the retraining time to the seed occupation was the lowest.

If an occupation did not fit any subcluster, the group re-evaluated belongingness to the OES occupational category. If the DOT occupation matched the OES occupational category (i.e., “belonged”), but did not fit any of the subclusters, it formed a cluster by itself. In contrast, if the DOT occupation did not match the OES category, the DOT occupation was moved to a more suitable OES category.

Finally, the group evaluated the subclusters once more. They compared the retraining times within subclusters of the OES units to retraining times across subclusters. The criteria for comparison was that there should be lower retraining time estimates within OES subclusters than between OES subclusters. The group determined if there was sufficient justification to maintain occupational subclusters or if the OES should form only one cluster. For cases in which there were no retraining time differences between and within OES subclusters, the subclusters were collapsed back into single clusters. On the group worksheet provided, the group stated the rationale for the formation of final subclusters, including estimates of retraining times within and across subclusters.

**Defining the preliminary Occupational Units (OUs).** The group was asked to name and provide a short definition for the subclusters. Each resulting subcluster was defined as an Occupational Unit (OU). These OUs, formed to maintain consistent levels of within group skills transferability between the DOT occupations, were homogeneous groupings of DOT occupations. Figure 1, on the next page, shows an example of an OES category that was subclustered.

**Conducting a final review of the OU structure.** As a result of the initial subcluster reviews described above, about one-third of the original OES categories were subclustered, yielding 1,350 OUs. One final review of the new OU structure was then conducted. Based on expected relevance and usage level, several single-member OUs were placed on a low priority list for inclusion in O\*NET. These OUs were evaluated and 1) reassigned to a related OU, 2) reassigned to an “All Other” residual OU, or 3) targeted for further review. For example, the OU “Mule Team Driver” was expected to have relatively low employment and to be slightly dated. OUs such as this are now pending additional study before future inclusion in O\*NET.

**Assigning titles and definitions to the final OUs.** The final version of the new OU structure included a total of 1,122 OUs, each with DOT occupations linked to it. Some of these OUs are identical to the OES occupation. If this process determined that an original OES occupation was homogeneous, the 5-digit code, title and definition were adopted as the OU code, title, and definition. If the clustering process resulted in a subclustered OES, then each subcluster became a separate OU. These OUs were assigned the original OES 5-digit code with an alphabetical suffix. This created a 6-character OU code for all subclustered OUs. The titles and definitions of these OUs were then developed in a manner consistent with the 1995 OES occupational titles and definitions. This naming convention made it easy to identify subclusters of the OES and show the relationship of OESs to OUs.

**Figure 1. Example of a Subclustered OES Occupational Unit****Original OES Occupational Unit**

OES 15026 FOOD SERVICE AND LODGING MANAGERS: Plan, organize, direct, control, or coordinate activities of an organization or department that serves food and beverages and/or provides lodging and other accommodations. Include Food and Beverage Directors.

185.137-010 MANAGER, FAST FOOD SERVICES  
 187.117-038 MANAGER, HOTEL OR MOTEL  
 187.137-018 MANAGER, FRONT OFFICE  
 187.161-010 EXECUTIVE CHEF  
 187.167-026 DIRECTOR, FOOD SERVICES  
 187.167-050 MANAGER, AGRICULTURAL-LABOR CAMP  
 187.167-066 MANAGER, CAMP  
 187.167-106 MANAGER, FOOD SERVICE  
 187.167-126 MANAGER, LIQUOR ESTABLISHMENT  
 187.167-206 DIETARY MANAGER  
 187.167-210 DIRECTOR, FOOD AND BEVERAGE  
 319.137-014 MANAGER, FLIGHT KITCHEN  
 319.137-018 MANAGER, INDUSTRIAL CAFETERIA  
 320.137-010 MANAGER, BOARDING HOUSE  
 320.137-014 MANAGER, LODGING FACILITIES

**Subclusters Created From Evaluation of OES Occupational Unit**

Cluster I: Lodging Managers: Plan, organize, direct, control, or coordinate activities of an organization or department that provides lodging and other accommodations.

187.117-038 MANAGER, HOTEL OR MOTEL  
 187.137-018 MANAGER, FRONT OFFICE  
 320.137-014 MANAGER, LODGING FACILITIES

Cluster II: Food Service Managers: Plan, organize, direct, control, or coordinate activities of an organization or department that serves food and beverages.

185.137-010 MANAGER, FAST FOOD SERVICES  
 187.161-010 EXECUTIVE CHEF  
 187.167-026 DIRECTOR, FOOD SERVICES  
 187.167-050 MANAGER, AGRICULTURAL-LABOR CAMP  
 187.167-066 MANAGER, CAMP  
 187.167-106 MANAGER, FOOD SERVICE  
 187.167-126 MANAGER, LIQUOR ESTABLISHMENT  
 187.167-206 DIETARY MANAGER  
 187.167-210 DIRECTOR, FOOD AND BEVERAGE  
 319.137-014 MANAGER, FLIGHT KITCHEN  
 319.137-018 MANAGER, INDUSTRIAL CAFETERIA  
 320.137-010 MANAGER, BOARDING HOUSE

## The Resulting OU Structure

A total of 1,122 OUs were developed and crosswalked to the original DOT occupations.<sup>2</sup> In general, these OUs are more homogenous, and thus, are more meaningful groupings for presentation of occupational information than the original OES structure.

## Phase II: Developing Task Statements to Describe the OUs

In the second phase of database development, job analysts integrated narrative DOT occupational information into the new OU structure. Specifically, the analysts revised and aggregated DOT task statements to form task descriptions for the new OUs.

### Training and Guidelines for Analysts

To maintain consistency across the OU task lists, all analysts participated in a half-day workshop. This workshop familiarized analysts with the process of extracting key tasks from DOT task statements and gave them practice writing aggregated task statements for the OUs. To develop OU task lists, the job analysts used the following guidelines: 1) each OU should be described by less than 20 tasks to keep the OU descriptions at a reasonable length; 2) each task statement should contain 20 or fewer words to keep them from being too complex; 3) where possible, task statements should be written to reflect modern technology; 4) task statements should be ordered roughly by perceived importance to the OU; and 5) task statements should follow the general writing guidelines found in the U.S. Department of Labor's *Revised Handbook for Analyzing Jobs* (1991) to ensure standardization.

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2. The final list of DOT occupations crosswalked to the new OUs was slightly different than the list published in the 4th edition (1991) DOT. A series of unpublished DOT revisions had been compiled for release at a later date. These revisions were incorporated into the development of O\*NET. The current OU-DOT crosswalk contains 12,761 unique DOT occupations with 12,797 individual linkages to OUs. There are more linkages than DOTs because some DOT occupations are linked to multiple OUs. Any OES Codes (the first five positions of the OU Code) which do not appear in this crosswalk do not have any DOT occupations linked to them and thus, were excluded from O\*NET.



## Extraction of OU Tasks from DOT Task Statements

To derive the tasks for the OUs, all DOT task statements were placed into a database. Task statements that described the DOT occupations grouped into each OU were compiled and provided to assigned analysts. For the OUs that were crossed with many DOT occupations, the task statements were placed into a data file that could be accessed using the database software ALPHA4. ALPHA4 software was used by analysts to sort task statements based on common or similar action verbs. To further facilitate the aggregation and extraction of information, job analysts were also given a list and count of the action verbs that were found within all task statements. From these comprehensive lists, analysts extracted the most commonly cited DOT tasks for each OU. These task statements were deemed to be the most representative of the OU. In addition, they reviewed each set of task statements for redundancy. Tasks with nearly the same meaning were combined and re-written into an aggregated task statement. The result was a condensed list of more general task statements describing each OU. Figure 2 shows an example of an aggregated task.

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### Figure 2. Example of a Task Extracted for an OU

#### Tasks from Four DOT Occupations Classified Under One Occupational Unit

1. Advises customer on selection of apparel and on coordination of accessories, such as handbags, belts, and boots.
2. Suggests furniture size, period style, color, fabric, and wood that will complement customer's home and other furnishings.
3. Suggests trees and shrubbery suitable for specified growing conditions.
4. Advises customer on style of organ or piano to harmonize with other furniture.

#### Resulting O\*NET Occupational Unit Task

Selects and recommends merchandise based on customer needs and desires.

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### Quality Control

After task extraction, each OU task list was submitted to two levels of quality control. First, other O\*NET team analysts reviewed the OU tasks.

Second, a quality control analyst conducted a final review of the comprehensiveness and quality of the OU description and tasks. In both stages of quality control, reviewers had access to original task extraction information as well as all subsequent OU revisions and modifications.

### **The Resulting OU Task Statements**

This effort resulted in the development of a complete set of task statements, derived from the DOT, to describe each OU. These tasks provided qualitative information about each OU from which ratings, in terms of O\*NET descriptors, could be generated.

### **Phase III: Rating OUs in Terms of O\*NET Descriptors**

In the final phase of the development effort, analysts drew direct connections between the OUs and the O\*NET content model, which forms the structural base of O\*NET. Specifically, DOT narratives had been used as the foundation for developing OU tasks and definitions. Now analysts expanded upon that task information by rating the OUs in terms of selected content model descriptors.

#### **Feasibility Study**

Job analysts began this phase by estimating the ease of describing the OUs in terms of various content model descriptors and by prioritizing the domains of the content model. Occupation-specific tasks and duties could, of course, be easily derived from the OU task lists. An examination of the content model suggested that the following domains could be rated by analysts based on the tasks: Generalized Work Activities (GWAs), Abilities, Knowledges, Skills, and Work Context.

Using the newly developed OU descriptions, a short pilot study was conducted to identify which scales and items presented rating problems for analysts. Twenty-nine of the more abstract content model descriptors were selected for the sample. Table 2, on the next page, lists the descriptors and the corresponding domains included in the sample. These descriptors were chosen because, due to the level of abstraction, rating them was expected to be more difficult and to require more interpretation. During a half-day workshop, 15 analysts were asked to complete ratings for the selected descriptors. To assess the relative ease of the rating task, analysts received only minimal instructions. After the rating exercise, analysts, led by an O\*NET team facilitator, discussed the process. The

facilitator guided the discussion to concentrate on particular rating problems, such as difficulties with items, scales, or anchors.

### **Survey Instrument Modifications<sup>3</sup>**

Close examination of the domain descriptors and pilot testing by job analysts indicated that the OU tasks could be used to directly rate the OUs on the descriptors. However, there were potential problem areas. As a result of analysts' responses to the pilot, minor changes were made to some O\*NET survey instruments.

The Level and Importance scales were retained for the Skills, Knowledges, and GWAs domains. The Job Entry Requirement scale was eliminated from the Skills questionnaire. The Job Specialty Requirements scale (Knowledges questionnaire) was maintained; however, analysts did not note "Other" specialty areas.

As a result of the pilot testing, which indicated that precise ratings of Frequency were too difficult to make given only the OU definition and tasks, two Frequency scales were revised: the GWA Frequency scale and the Work Context Frequency scale. The original GWA Frequency scale required precise ratings of Frequency ranging from 1= "Once per year or less" to 7= "Hourly or more often." In contrast, the revised scale was a 1-4 scale in which 1= "Almost Never" and 4= "Always." Similarly, in the Work Context domain, the Frequency rating scale originally ranged from 0= "Never (or does not apply)" to 7= "Hourly or more often (including continually)." This scale was changed to a 0-4 scale in which 0= "Never" and 4= "Always." Analyst data are reported on these revised scales.

Additionally, multiple items in the Work Context domain were dropped. An item was eliminated if it was determined that the response to the item would vary considerably as a function of organization and/or location.

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3. These modifications were made when it was thought that task information would be insufficient to allow inferences to a rating on the original O\*NET survey item. These modifications were made for the Analyst data collection only and thus incumbent data collections were not affected.

**Table 2. Descriptors and Corresponding Domains Selected for Direct Rating Feasibility Study**

| <b>Content Model Domain</b> | <b>Construct</b>  |
|-----------------------------|---|
| Skills                      | Science<br>Critical Thinking<br>Active Learning<br>Learning Strategies<br>Monitoring<br>Social Perceptiveness<br>Problem Identification<br>Idea Generation<br>Implementation Planning<br>Visioning<br>Identification of Downstream Consequences<br>Objective Evaluation |
| Knowledges                  | Technical Drawing<br>Safety and Security  |
| Generalized Work Activities | Identifying Objects, Actions, and Events<br>Compliance<br>Analyzing Data or Information<br>Thinking Creatively<br>Developing and Using Job-relevant Knowledge   |
| Work Context                | Formality of Communication<br>Responsibility of Work Outcomes and Failures<br>Consequences of Error<br>Impact of Decisions<br>Structured vs. Unstructured Work  |
| Abilities                   | Fluency of Ideas<br>Originality<br>Memorization<br>Problem Sensitivity<br>Inductive Reasoning   |

### **Rater Training**

25 Occupational Analysts and 32 Industrial/Organizational Psychology graduate students were selected to participate as analysts in the rating project. A three-day rater training session was conducted to familiarize these analysts with the content model and instruct them on how to complete the occupational survey. An analyst also received information about the process of making ratings and tips to help avoid rating errors. Analysts were trained in groups of 8 to 10. Each domain of the content model comprised a separate training module or session.

As a post-training check of the rater training, all analysts rated five practice OUs. Interrater reliabilities were calculated for the mean of the analyst ratings on each descriptor. The reliabilities for each descriptor mean in this post training check were all above .60.

### **Direct Rating**

A strategy was then developed to rate the 1,122 OUs. These OUs were divided into groups of 130. Each group was to be rated within a 30-day time frame, termed a rating cycle. The trained raters were randomly assigned to rating groups of six raters and subsequently assigned a domain for each rating cycle. Each rater rated one domain during each cycle to minimize contrast effects across different domains. In addition, domain assignment was rotated through successive rating cycles to reduce any potential biases resulting from over-familiarity with a particular domain. To eliminate any presentation order effects, the OU order within each domain was also randomized for each rater.

Each rater received a packet of rating materials that included: 1) detailed instructions for rating the assigned domain; 2) a randomized list of that cycle's OUs, including titles, definitions, and tasks; and 3) domain-specific response sheets on which to record ratings. Figures 3 and 4, respectively, show sample rater instructions and answer sheets.

Although the first rating cycle consisted of 130 OUs and had six assigned raters per domain, subsequent cycles contained 125 OUs and only five raters. This is because evaluation of domain reliabilities revealed that teams of five raters could provide adequate rating consistency.

Between eight and ten cycles of ratings were conducted for each domain. The mean reliabilities across the cycles for each domain and scale type are listed in table 3.

**Table 3. Mean reliability of ratings across cycles for each domain and scale type**

| Domain, Scale Type                      | Mean $r$ |
|---|----------|
| Ability, Level                          | .74      |
| Ability, Importance                     | .71      |
| Generalized Work Activities, Level      | .88      |
| Generalized Work Activities, Importance | .84      |
| Knowledges, Level                       | .83      |
| Knowledges, Importance                  | .83      |
| Skills, Level                           | .87      |
| Skills, Importance                      | .84      |
| Work Context                            | .80      |

Note: The statistic reported here is the mean of  $r_{xx}$ , where  $r_{xx}$  is the reliability of the mean of analyst ratings on a given descriptor for a given occupation. This reliability coefficient is calculated using the formula  $r_{xx} = \frac{[BMS - WMS]}{BMS}$  (Shrout & Fleiss, 1979), where BMS and WMS are the between mean squares and within mean squares respectively, from an Analysis of Variance where the rating is modeled with a “Descriptor” main effect. BMS corresponds to the Descriptor effect and WMS corresponds to the error.

### The Resulting Database

The result of these steps was a database of occupational information (for 1,122 OUs) in terms of selected O\*NET content model descriptors. This information was used as the basis for the O\*NET Analyst Database.

### Phase IV: Evaluating the OU Task Statements

As part of the O\*NET planning cycle, a study was designed to evaluate the OU task statements created during the development process. The goal was to evaluate the currency, relevance, and face-validity of the tasks that were extracted from DOT occupational information. The study compared the newly created OU tasks with tasks from existing data sources to determine the degree of overlap or representation in content. Task data were contributed to this study from the occupational databases of the Office of Personnel Management (OPM), the Department of Defense (DoD), and the Vocational-Education Consortium of States (V-TECS).

The majority of the source data contributed to this project had been collected within the previous three to five years. All source data were collected for various purposes—none of which included evaluation of O\*NET OU tasks.

### **Crosswalk Development**

In order to create a crosswalk, occupations from these three databases were matched to the O\*NET Occupational Units (OUs). An Occupational Analyst and an Industrial/Organizational Psychologist reviewed the occupational titles from each source and attempted to match OUs to other source occupations based on title. Then, these analysts reviewed each match and selected the 10 to 15 percent (best matches) from each OES division (Managerial and Administrative; Professional, Para-professional, and Technical; Sales and Related; Clerical and Administrative Support; Services; Agricultural, Forestry, Fishing, and Related; and Production, Construction, Operating, Maintenance, and Material Handling). One-to-one occupational matches were preferred over one-to-many or many-to-one matches to minimize the complexity of interpreting representation of source task content by OU tasks. The variance in the way occupational titles are used and developed limited precision with which occupations could be matched.

### **Rater Training and Rating**

Five Occupational Analysts and an Industrial /Organizational Psychology graduate student were selected as analysts and trained to evaluate the extent of coverage on task-to-task comparisons. For each source task/OU task pair, the analysts used a five-point rating scale to rate degree of coverage. Rating scale values ranged from 0= “Not at all—The source task is not at all represented by the OU task”; 1= “Minimally—The source task is minimally represented by the OU task”; 2= “Moderately—The source task is moderately represented by the OU task”; 3= “Great Extent—The source task is represented to a great extent by the OU task”; 4= “Completely—The source task is completely represented by the OU task.” In addition, analysts were instructed to rate representation of each source task in the entire OU task set for each given OU. An identical scale was used for this global rating. Thus, for each OU, each analyst provided task-to-task ratings (one for each source task/OU task combination) and global ratings (one for each source task).

As part of rater training, analysts rated a practice set of seven OU to source occupation matches. Intraclass correlation coefficients (ICCs) (Shrout & Fleiss, 1979) were calculated to indicate the reliability of the mean of analyst global ratings for each OU-to-source task match. These reliabilities were all above .70, indicating that the ratings could be made with reasonable reliability.

After completing training, six raters were assigned to one of two teams. Each team of three raters then independently rated coverage of OPM, DoD, and V-TECS task content by the OU task statements from 199 OUs over two rating cycles. Each rater received a packet containing the title, definition, and task list for each OU to be rated and similar information for the source occupation(s) it was linked to.

### **Analysis**

Means of analysts' global ratings of source task coverage for each OU to OPM/DoD/V-TECS match were computed. Source tasks with mean ratings greater than 2.5 were counted and divided by the total number of source tasks. An OU was determined to provide sufficient coverage of task content when 65 percent or more of the source tasks had a mean of 2.5 or above.

Intraclass correlation coefficients (ICCs) (Shrout & Fleiss, 1979) were calculated to indicate the reliability of the mean of analyst global ratings for each OU-to-source task match. Median reliability across both three-member rating groups and all OU-to-source task matches was .81.



Of the 199 matches, 145, or 73 percent of the OUs provided sufficient representation (65 percent or more of the source tasks received a global rating of 2.5 or higher) of task content in matched occupations. To assist in interpreting these results, the 54 remaining matches were examined more closely. This review revealed that 43 of the OUs were initially matched inappropriately (i.e., the information provided for the matching was insufficient to make a proper match). For example, the OU Construction Carpenter (87102A) was initially linked to the DoD occupation Construction Specialist (6412991). However, the occupations differ greatly in terms of the tasks and skills needed. Construction Carpenters build a variety of structures directly from plans and layouts, while Construction Specialists tend to do the manual labor needed to build one type of simple structure. Considering only the 156 more appropriate occupational matches, the percentage of the OUs with sufficient representation of task content in matched occupations rises to 92 percent. The task content of the remaining 11 OUs was either inadequate or out of date.

### **Discussion**

Results from the study were generally positive and suggest that the tasks written for the OUs during the development process are consistent with task content from widely used sources of occupational information. This study points up the continuing need to keep task lists up to date. One way to do this is to use other existing sources for comparison and evaluation. However, it was observed that different sources maintain tasks at different levels of specificity according to the purpose of the source. This makes some sources more useful than others for updating task lists.

**Figure 3. Example of Rater Instructions**

**INSTRUCTIONS FOR MAKING KNOWLEDGE RATINGS**

In this section of the survey you will be presented with a list of 33 *Knowledges*. *Knowledges* are sets of facts and principles needed to address problems and issues in particular parts of a job.

For each *knowledge*, please make the following three ratings:

**(1) LEVEL**

Read the definition of the *knowledge* being rated and identify the essential rating elements. Read the high and low level descriptions and the task anchors that illustrate how tasks or activities relate to the *knowledge* and various points on the scale.

Review the list of tasks and select the tasks that best typify the *knowledge*. Identify the single task or group of tasks requiring the highest level of the *knowledge*.

Using the selected task or group of tasks, make a tentative rating on the scale. If no tasks are identified, rate NR (not relevant).

Check your rating by comparing your rating with the task anchors above and/or below and adjust your rating accordingly.

**(2) IMPORTANCE**

Using all of the tasks identified above, evaluate the importance of the *knowledge* for performance in these tasks. Assign a rating on the importance scale, taking into consideration the relative importance of these tasks in overall performance in the occupational unit.

**(3) JOB SPECIALTY REQUIREMENTS**

Using all of the tasks identified above, rate whether the *Job Specialty Requirements* are relevant (R) or not relevant (NR) for performance of the occupational unit.

**Figure 4. Example of Rating Response Sheet**

## RESPONSE SHEET - SKILLS

Rater: \_\_\_\_\_ OU: \_\_\_\_\_ Cycle: \_\_\_\_\_  
 Date: \_\_\_\_\_ Time Start: \_\_\_\_\_ am/pm Time Stop: \_\_\_\_\_ am/pm

|    | <b>CONSTRUCT</b>         | <b>LEVEL</b> | <b>IMP</b> |
|----|--------------------------|--------------|------------|
| 1  | Reading Comprehension    |              |            |
| 2  | Active Listening         |              |            |
| 3  | Writing                  |              |            |
| 4  | Speaking                 |              |            |
| 5  | Mathematics              |              |            |
| 6  | Science                  |              |            |
| 7  | Critical Thinking        |              |            |
| 8  | Active Learning          |              |            |
| 9  | Learning Strategies      |              |            |
| 10 | Monitoring               |              |            |
| 11 | Social Perceptiveness    |              |            |
| 12 | Coordination             |              |            |
| 13 | Persuasion               |              |            |
| 14 | Negotiation              |              |            |
| 15 | Instructing              |              |            |
| 16 | Service Orientation      |              |            |
| 17 | Problem Identification   |              |            |
| 18 | Information Gathering    |              |            |
| 19 | Information Organization |              |            |
| 20 | Synthesis/Reorganization |              |            |
| 21 | Idea Generation          |              |            |
| 22 | Idea Evaluation          |              |            |
| 23 | Implementation Planning  |              |            |
| 24 | Solution Appraisal       |              |            |

*Appendix D*

|    |   |  |  |
|----|---|--|--|
| 25 | Operations Analysis                       |  |  |
| 26 | Technical Design                          |  |  |
| 27 | Equipment Selection                       |  |  |
| 28 | Installation                              |  |  |
| 29 | Programming                               |  |  |
| 30 | Testing                                   |  |  |
| 31 | Operation Monitoring                      |  |  |
| 32 | Operation and Control                     |  |  |
| 33 | Product Inspection                        |  |  |
| 34 | Equipment Maintenance                     |  |  |
| 35 | Troubleshooting                           |  |  |
| 36 | Repairing                                 |  |  |
| 37 | Visioning                                 |  |  |
| 38 | Systems Perceptions                       |  |  |
| 39 | Identification of Downstream Consequences |  |  |
| 40 | Identification of Key Causes              |  |  |
| 41 | Judgment and Decisionmaking               |  |  |
| 42 | Systems Evaluation                        |  |  |
| 43 | Time Management                           |  |  |
| 44 | Management of Financial Resources         |  |  |
| 45 | Management of Material Resources          |  |  |
| 46 | Management of Personnel Resources         |  |  |

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# *Appendix E*

*Changes to the O\*NET™ Database 1.0  
From Beta Release 0.9*





# *Appendix E*

## *Changes to the O\*NET™ Database 1.0 From Beta Release 0.9*

This document describes changes in the O\*NET Database since the Beta Release 0.9. Changes include addition of new data, changes to existing data, changes to table structures, the addition of several new tables and changes to file formats.

It is recommended that all Beta Release users perform complete database replacements for all tables rather than attempt piecemeal updates. If data has been imported or transformed in the process of incorporating into an application or another database, then the import or transformation process should be redone with the new data. Because there are several structure changes, some changes to import or transformation processes may be necessary.

### **Overview of Major Changes**

- Data is now available for Occupational Interests.
- Data is now available for Occupational Work Values and Needs.
- Job Zone Data is now available.
- Two crosswalks have been extensively revised; one new crosswalk has been added.
- Occupational Titles, Definitions and Occupation-Specific Tasks have been revised.
- Data is available in three different formats: dBASE IV (.dbf); Paradox 5.0 (.db); and Access 2.0 (.mdb)

## **Additional Changes Expected in the Near Future**

The Military (MOC) and Office of Personnel Management (OPM) crosswalks may be revised in the near future, due to problems known at the time of release.

The MOC crosswalk is based on the very latest data available from the Defense Manpower Data Center (DMDC). However, the Air Force occupations have yet to be grouped into skill level or pay grade ranges, because the level or grade is encoded in the occupational code itself.

The OPM crosswalk is based on a 1993 OPM-to-OES crosswalk which is outdated with respect to current OPM occupations. An effort is underway to update this crosswalk with newer data.

The National O\*NET Consortium is working with the OES program to develop a consistent set of DOT-to-OES linkages. When the O\*NET classifications were originally derived from the OES system, the linkages between the OES and the DOT were reviewed by a panel of analysts in order to derive the DOT to O\*NET linkages. The review process led to a number of changes in these linkages as they were incorporated into the O\*NET to DOT crosswalk. Consequently, the crosswalks between O\*NET and the DOT and OES and the DOT are inconsistent with one another.

The development of a consistent set of OES to DOT linkages is expected to have little (if any) effect on the O\*NET Database. There is however a possibility that a few of the O\*NET to DOT linkages may change, which could impact all O\*NET crosswalks.

The Standard Occupational Classification (SOC) Revision Policy Committee is currently in the final stages of gathering public comment on the 1998 SOC revision. All Federal agencies that collect occupational data will use the new system; similarly, all State and local government agencies are strongly encouraged to use this national system to promote a common language for categorizing occupations in the world of work. The new SOC system will be used by the Occupational Employment Statistics (OES) program of the Bureau of Labor Statistics (BLS) for gathering occupational information. It will also replace the Bureau of the Census' 1990 occupational classification system and will be used for the 2000 Census.

Once the new SOC Is finalized, it will serve as the framework for information being gathered through O\*NET, replacing the current OES-based structure. A target date for converting O\*NET Occupational Units to the new SOC has not yet been set. However, a new OU-to-SOC crosswalk will be released shortly after the 1998 SOC is finalized.

## Database Format

O\*NET Database tables are now available in three different formats. Formerly the database was supplied in dBASE III+ format only.

The three formats available are:

- 1) dBASE IV (.dbf)
- 2) Paradox 5.0 (.db)
- 3) Access 2.0 (.mdb)

### dBASE IV (.dbf)

The only difference between this and the dBASE III+ format is in the way that memo fields are structured.

In this format, only the .DBF (and where applicable, the memo field .DBT files) are supplied. No indexes or other structures are included.

### Paradox 5.0 (.db)

Most of the tables are actually in Paradox 4.0 format. The exceptions and the reasons for the exceptions are:

|            |   |
|------------|---|
| CM.DB      | Uses Long Integer data type for CMNUMKEY and MAXDESCEND columns |
| OCCUPAT.DB | Uses Logical data type for DATAFLAG column                      |

If the entire database is needed in Paradox 4.0 format, the dBASE IV CM.DBF and OCCUPAT.DBF tables can be exported to Paradox 4 format by many different applications. CMNUMKEY and MAXDESCEND

should use the Numeric data type and the DATAFLAG column can use Integer or Alphanumeric.

Paradox tables are supplied with Primary Index (.PX) files. Referential integrity and relationships are not supplied with the database.

### **Access 2.0 (.mdb)**

The entire database is supplied in a single .MDB file, including primary indexes, relationships and referential integrity. Users requiring the database in a later .MDB format (such as the Access 7.0 or Access 97 formats) can use the appropriate version Microsoft Access to convert the .MDB to the desired format.

### **Special Note on MEANS Tables:**

The MEANS tables are supplied in two structures

- 1) The "Short" Structure - MEANS\_XX

In this structure, the means are divided among seven tables:

---

|          |                             |
|----------|-----------------------------|
| MEANS_AB | Abilities                   |
| MEANS_GW | Generalized Work Activities |
| MEANS_KN | Knowledges                  |
| MEANS_IN | Interests                   |
| MEANS_SK | Skills                      |
| MEANS_OV | Occupational Values         |
| MEANS_WC | Work Context                |

---

Each table has 1,122 rows, with primary key ONETCODE. Thus each row contains the ratings for one occupation. The column names are the variable names from the DD table (for example, A01LV00M and A01IM00M)

The reason that multiple tables are provided is that most microcomputer database management systems limit the number of columns in a single table to 255.

## 2) The "Long" Structure - MEANS

In this structure, all ratings are contained in a single table, with the following structure:

|          |      |
|----------|------|
| ONETCODE | C6*  |
| VAR_NAME | C8*  |
| VALUE    | N9.4 |

Here the variable names from the DD table are data values rather than column names.

This table therefore has 541,926 rows (1,122 occupations times 483 variables). Because each row requires 23 bytes, this table requires about 12MB for data alone, without primary or secondary indexes. Addition of indexes and/or referential integrity can easily double or triple the storage requirements.

Because it is anticipated that few users will require the "long" MEANS table, this table has been supplied in dBASE IV format only. This table has a simple fixed-width structure without memo fields and the table can be easily converted to other formats by many applications.

## Summary of Changes By Table

### Content Model Table (CM)

- Several new descriptors have been added, including six aggregated descriptors. Data is available for all new descriptors.
- Capitalization or punctuation has been changed for some element labels.
- Descriptions, element labels and some outline positions have changed for Interest and Needs branches.

### **Data Dictionary Table (DD)**

- New variables have been added for new Content Model elements. There are now 1298 descriptors in DD. Of these, 483 are populated with data.
- Scales have changed for Interests and Work Values.

### **Means Tables (Means\_XX)**

- Two new tables (Interests - Means\_IN and Occupational Values - Means\_OV) have been added.
- Two new variables have been added to Work Context (Means\_WC).
- Corrections have been made to some variable values.

### **Occupations Table (OCCUPAT)**

- Titles and Descriptions have been revised.

### **Questions Table (QUESTION)**

- Questions have been added and deleted to accommodate changes in Interests, Occupational Values, and Work Context.

### **Scale Table (SCALE)**

- Scales have been added and deleted to accommodate changes in Interests, Occupational Values, and Work Context.

### **Scale Labels Table (SCALELBL)**

- Scale Labels have been added and deleted to accommodate changes in Interests, Occupational Values, and Work Context.

### **Tasks Table (TASKLIST)**

- The "Core" column has been removed.
- Task lists have been revised.

### **Crosswalk Tables (XWALK, XWALKDES, AND XWALKTTL)**

- Military Occupations (MOC) and Office of Personnel Management (OPM) crosswalks have been extensively revamped.
- A new crosswalk to the Apprenticeship Information Management System has been added.
- The military crosswalk has been restructured and now has a different structure from other crosswalks, resulting in the addition of three new tables (XWALKMOC, MOCTITLE, and MILCODE).

### **Job Zones**

- A transitional data set has been added as a substitute for the DOT Specific Vocational Preparation (SVP) ratings.

## **Major Areas of Change**

### **Occupational Interests**

Variables for Content Model Section I.B.1 (Occupational Interests, formerly Holland Occupational Classification) have been added to the database. These are the "RIASEC" (Realistic, Investigative, Artistic, Social, Enterprising, Conventional) variables. In addition to the six mean analyst ratings for each occupation, three "high-point" variables have been added to provide an occupational interest profile. The high-point variables indicate the first, second and third significant interests for the occupation. All occupations have at least one interest high-point.

The description of Occupational Interests from the Content Model is:

"Occupational Interest Profiles (OIPs) are compatible with Holland's (1985,1997) model of personality types and work environments. Six interest categories are used to describe the work environment of occupations: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. An OIP consists of six numerical scores indicating how descriptive and characteristic each work environment (or interest area) is for an O\*NET Occupational Unit (OU). In addition, a high-point profile has been assigned indicating which interests are most characteristic of an O\*NET OU. A high-point profile consists of one to three interest codes, depending on how many interest categories meet a minimum degree of descriptiveness for the O\*NET OU."

The criterion for determining a high-point is that the mean score for an interest area is greater than .17 of the sum of the six interest scores. Ordering of tied high-points was determined by expert judgment. For six OUs, however, the cutoff rules were overridden by expert judgement.

High-points are coded numerically in the database as follows:

---

|   |                                      |
|---|--------------------------------------|
| 0 | No Second or Third High-Point exists |
| 1 | Realistic                            |
| 2 | Investigative                        |
| 3 | Artistic                             |
| 4 | Social                               |
| 5 | Enterprising                         |
| 6 | Conventional                         |

---

The language associated with this section of the Content Model has changed significantly. See detailed discussion below under "Content Model Table".

### **Occupational Needs and Work Values Variables**

Analyst ratings for Content Model Section I.B.2 (Occupational Values) have been added to the database. Twenty-seven (27) variables have been added. Of these, 21 are the "needs" variables that were already present in the Data Dictionary. The remaining six Work Values variables are



aggregated variables at the next level up in the Content Model. Each Work Value is the mean of its component Needs. These are currently the only aggregated variables present in O\*NET.

The description of Occupational Values from the Content Model is:

"Occupational Reinforcer Patterns (ORPs) indicate which work values and needs are likely to be reinforced or satisfied by a particular O\*NET Occupational Unit (OU). The use of work values to describe occupations is based on the Theory of Work Adjustment (TWA) developed during the Work Adjustment Project at the University of Minnesota under Research Grants from the U.S. Department of Health, Education and Welfare (Dawis, R.V., England, G.W., & Lofquist, L.H., 1964; Dawis, R.V., & Lofquist L. H., 1984). This theory proposes that job satisfaction is directly related to the degree to which a person's values and corresponding needs are satisfied by his or her work environment. The TWA identifies six work values each with a corresponding set of needs. Every O\*NET OU has an ORP consisting of: 1) 6 numerical scores indicating the mean extent to which each work value is reinforced; and 2) 21 numerical scores indicating the extent to which each need is reinforced."

The variable names for the aggregate variables are VAGEN01M - VAGEN06M. The variable name coding for aggregates is similar to the coding described in Appendix C of the Beta Release Data Dictionary:

---

|               |  |
|---------------|--|
| Position 1    | Content Model Level 2 Prefix                                 |
| Positions 2-3 | "AG" indicates aggregate descriptor                          |
| Positions 4-5 | Scale Code   |
| Positions 6-7 | Sequence Numbers. Aggregates will be numbered 00 -- ZZ.      |
| Position 8    | Statistic Type. Currently the only code used is "M" = "Mean" |

---

## Job Zones

Job Zone data is now included with the O\*NET Database. The Job Zones are a transitional data set intended to serve the same general function as the Specific Vocational Preparation (SVP) ratings in the DOT. Job Zones, however, have discrete values ranging from 1 to 5 rather than the

continuous scale from 0 to 9 used by SVP ratings. A report describing how Job Zones were developed appears in Appendix G.

Descriptive language is associated with each Job Zone. Descriptive language includes a title, descriptions of experience requirements, educational requirements, training requirements, and examples typical occupations. In addition, an SVP range is associated with each occupation. Descriptions of Job Zones are shown in Appendix A of this report.

Job Zones are not included in the Content Model because they are intended to be used as a transitional descriptor. They are derived from DOT SVP ratings and will disappear from the O\*NET Database sometime in the future.

A Job Zone represents a group of occupations that are similar in these ways:

- how most people get into the job,
- how much overall experience people need to do the job,
- how much education people need to do the job, and
- how much on-the-job training people need to do the job.

Occupations in a Job Zone require similar amounts of preparation. The five Job Zones are:

- Job Zone 1 -- occupations that need Little or No preparation
- Job Zone 2 -- occupations that need Some preparation
- Job Zone 3 -- occupations that need Medium preparation
- Job Zone 4 -- occupations that need Considerable preparation
- Job Zone 5 -- occupations that need Extensive preparation

Job Zones for O\*NET occupations are found in the JOB\_ZONE table. The structure of this table is as follows:

|          |     |                         |
|----------|-----|-------------------------|
| ONETCODE | C6* | O*NET Occupational Unit |
| ZONE     | C1  | Job Zone (1-5)          |

Descriptive language is found in the JZDEFS table. The structure of this table is as follows:

|            |     |   |
|------------|-----|---|
| ZONE       | C1* | Job Zone (1-5)  |
| TITLETEXT  | C50 | Job Zone Title  |
| EXPERIENCE | M   | Description of experience requirements for this job zone  |
| EDUCATION  | M   | Description of educational requirements for this job zone |
| TRAINING   | M   | Description of training requirements for this job zone    |
| EXAMPLES   | M   | Examples of occupations in this job zone                  |
| SVPRANGE   | C20 | SVP Range corresponding to this job zone                  |

## Crosswalks

Two crosswalks have been extensively revised and one new crosswalk has been added; however, the DOT-to-OU crosswalk is unchanged. This is the only directly constructed crosswalk to O\*NET Occupations. The DOT linkages were developed by the North Carolina Occupational Analysis Field Center. All other crosswalks except the OPM are derivatives of this crosswalk; hence the linkages are generally somewhat weaker than the DOT linkages.

### 1. New Crosswalk - Apprenticeship Information Management System (AIM)

This crosswalk links O\*NET occupations to the list of apprenticeable occupations maintained by the Bureau of Apprenticeship and Training (BAT). Not all BAT apprenticeable occupations are available in the crosswalk because some are based on Occupational Code Requests (OCRs) rather than existing DOT codes.

The complete list of BAT apprenticeable occupations is available from Bureau of Apprenticeship and Training, Bulletin 97-02.

2. Revised OPM Crosswalk

The OPM Crosswalk has been extensively revised. The OPM crosswalk is derived from the OPM to OES crosswalk. The O\*NET Beta Release crosswalk was a simple expansion of OES codes to OUs, which resulted in a number of very weak linkages.

3. Restructured and Revised Military (MOC) Crosswalk

This crosswalk is contained in two tables: MOCTITLE and XWALKMOC. A third table (MILCODE) serves as a "code table" and contains names of military occupational classification systems. The beta release crosswalk was derived from NOICC 1995 sources. With the assistance of the Defense Manpower Data Center (DMDC), a new crosswalk based on 1997 military occupations was constructed. It was determined that the simple code/title structure was insufficient for military crosswalks, therefore the following structure was developed:

---

| <b><u>MOCTITLE</u></b> |      |   |
|------------------------|------|---|
| SVC                    | C1*  | Service Branch code (A, C, F, M, N)                   |
| EO                     | C1*  | Enlisted/Officer/Warrant Officer code (E,O,W)         |
| MOC                    | C6*  | Military Occupation Code                              |
| CODESYS                | C7*  | Occupational Coding system from which the MOC derives |
| TITLE                  | C135 | Occupational Title                                    |

---

| <b>XWALKMOC</b> |     |   |
|-----------------|-----|---|
| SVC             | C1* | Service Branch code (A, C, F, M, N)                   |
| EO              | C1* | Enlisted/Officer/Warrant Officer code (E,O,W)         |
| MOC             | C6* | Military Occupation Code                              |
| CODESYS         | C7* | Occupational Coding system from which the MOC derives |
| SKILLEVEL       | C3* | Skill Level Range or Pay Grade Range                  |
| ONETCODE        | C6* | O*NET Occupational Unit                               |

---

| <b>MILCODE</b> |     |   |
|----------------|-----|---|
| CODESYS        | C7* | Occupational coding system abbreviation |

---

---

| MILCODE |     |                                     |
|---------|-----|-------------------------------------|
| NAME    | C50 | Occupational coding system name     |
| SVC     | C1  | Service Branch code (A, C, F, M, N) |

---

The reason for the adoption of the changed structure for the MOC crosswalk is that some service branches may classify personnel using more than one code and title. Typically one code will be a broad occupational classification and another would be a specialty. For example, a Navy enlisted man or woman might be classified as CE 5642. The "CE" is the Rating code (a broad occupational classification); in this case the title is Construction Electrician. The "5642" is the Navy Enlisted Classification (a specialty classification); in this case the title is Central Office Exchange Technician. Navy enlisted personnel who are about to enter the civilian workforce would probably be interested in looking at crosswalks for both titles.

Service Branch Codes are the following. These codes are not included in the database in a separate table.

---

|   |              |
|---|--------------|
| A | Army         |
| C | Coast Guard  |
| F | Air Force    |
| M | Marine Corps |
| N | Navy         |

---

Enlisted/Officer Codes are the following. These codes are not included in the database in a separate table.

---

|   |                 |
|---|-----------------|
| E | Enlisted        |
| O | Officer         |
| W | Warrant Officer |

---

Occupational Coding Systems are listed below. Because of the number of codes and the length of the names, this data is included in the database in the MILCODE table.

## Appendix E

---

|              |         |  |
|--------------|---------|--|
| Army         | AOC     | Commissioned Officers Area of Concentration    |
| Army         | MOS     | Military Occupational Specialty                |
| Coast Guard  | CG R    | Coast Guard Rating                             |
| Coast Guard  | CG SR   | Coast Guard Service Rating                     |
| Coast Guard  | CG SSQC | Coast Guard Special Service Qualification Code |
| Coast Guard  | CG OQC  | Coast Guard Occupational Qualification Code    |
| Coast Guard  | CD OOC  | Coast Guard Officer Occupation Code            |
| Air Force    | AFSC    | Air Force Specialty Code                       |
| Marine Corps | MOSC    | Marine Corps Military Occupational Specialty   |
| Navy         | Rating  | Rating   |
| Navy         | NEC     | Navy Enlisted Classification                   |
| Navy         | NOBC    | Navy Officer Billet Classification             |

---

Note that because the Coding System determines the Service Branch, this table is NOT in third normal form. However, because the Service Branch is much more an attribute of interest than the Coding System, it was decided to leave the table in this form. Furthermore, the inclusion of the Service Branch in the primary key violates the relational model requirement that primary keys be minimal. However, in practical terms, primary key indexes are the basis for efficient sorting and selection; and again Service Branch is an attribute of central interest with respect to sorts and searches. It should also be noted that the only reason for the inclusion of CODESYS at all is that there are several Coast Occupations that use the same MOC in two or more classification systems.

### Detailed Changes by Table

#### Content Model Table (CM)

**1. Capitalization and/or punctuation has been corrected in some element labels. Consequently the field width has been changed from 40 to 42 characters. These label changes are not listed individually in this document.**

**2. Change the row: I.B.1 to:**

| OUTLINEPOS | SHORTLABEL             | CMNUMKEY | PARENT_OP | MAXDESCEND | DEPTH |
|------------|------------------------|----------|-----------|------------|-------|
| I.B.1      | Occupational Interests | 107500   | I.B       | 108220     | 3     |

DESCRIPT: Occupational Interest Profiles (OIPs) are compatible with Holland's (1985,1997) model of personality types and work environments. Six interest categories are used to describe the work environment of occupations: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. An OIP consists of six numerical scores indicating how descriptive and characteristic each work environment (or interest area) is for an O\*NET Occupational Unit (OU). In addition, a high-point profile has been assigned indicating which interests are most characteristic of an O\*NET OU. A high-point profile consists of one to three interest codes, depending on how many interest categories meet a minimum degree of descriptiveness for the O\*NET OU.

**3. Change the Outline Positions:**

I.B.1.R, I.B.1.I, I.B.1.A, I.B.1.S, I.B.1.E, I.B.1.C  
to  
I.B.1.a, I.B.1.b, I.B.1.c, I.B.1.d, I.B.1.e, I.B.1.f

**4. For the outline positions in (3) above, change DESCRIPT to:**

- I.B.1.a Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.
- I.B.1.b Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.
- I.B.1.c Artistic occupations frequently involve working with forms, designs and patterns. They often require self-expression and the work can be done without following a clear set of rules.
- I.B.1.d Social occupations frequently involve working with, communicating with, and teaching people. These occupations often involve helping or providing service to others.
- I.B.1.e Enterprising occupations frequently involve starting up and carrying out projects. These occupations can involve leading people and making many decisions. Sometimes they require risk taking and often deal with business.

- I.B.1.f Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.

**5. Add the following 3 rows for Occupational Interest Profile High-Points:**

| <b>OUTLINEPOS</b> | <b>SHORTLABEL</b>          | <b>DESCRIPT</b>                        |
|-------------------|----------------------------|--|
| I.B.1.g           | First Interest High-Point  | Primary-Rank Descriptiveness           |
| I.B.1.h           | Second Interest High-Point | Secondary--Cutoff/Rank descriptiveness |
| I.B.1.h           | Third Interest High-Point  | Tertiary--Cutoff/Rank descriptiveness  |

| <b>CMNUMKEY</b> | <b>PARENT_OP</b> | <b>MAXDESCEND</b> | <b>DEPTH</b> |
|-----------------|------------------|-------------------|--------------|
| 108200          | I.B.1            | 108200            | 4            |
| 108210          | I.B.1            | 108210            | 4            |
| 108220          | I.B.1            | 108220            | 4            |

**6. Change description for Occupational Values (I.B.2) to:**

Occupational Reinforcer Patterns (ORPs) indicate which work values and needs are likely to be reinforced or satisfied by a particular O\*NET Occupational Unit (OU). The use of work values to describe occupations is based on the Theory of Work Adjustment (TWA) developed during the Work Adjustment Project at the University of Minnesota under Research Grants from the U.S. Department of Health, Education and Welfare (Dawis, R.V., England, G.W., & Lofquist, L.H., 1964; Dawis, R.V., & Lofquist L. H., 1984). This theory proposes that job satisfaction is directly related to the degree to which a person's values and corresponding needs are satisfied by his or her work environment. The TWA identifies six work values each with a corresponding set of needs. Every O\*NET OU has an ORP consisting of: 1) 6 numerical scores indicating the mean extent to which each work value is reinforced; and 2) 21 numerical scores indicating the extent to which each need is reinforced.



**7. Change Description and ShortLabel for I.B.2.a - I.B.2.f to:**

| <b>OutlinePos</b> | <b>Shortlabel</b>              | <b>Descript</b>  |
|-------------------|--------------------------------|--|
| I.B.2.a           | Achievement-Mean Extent        | Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement       |
| I.B.2.b           | Working Conditions-Mean Extent | Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.                               |
| I.B.2.c           | Recognition-Mean Extent        | Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.                     |
| I.B.2.d           | Relationships-Mean Extent      | Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service. |
| I.B.2.e           | Support-Mean Extent            | Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.                          |
| I.B.2.f           | Independence-Mean Extent       | Occupations that satisfy this work value allow employs to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.   |

**8. Add rows for the two new Work Context Variables:**

| <b>OUTLINEPOS</b> | <b>SHORTLABEL</b> | <b>CMNUMKEY</b> | <b>PARENT_OP</b> | <b>MAXDESCEND</b> | <b>DEPTH</b> |
|-------------------|-------------------|-----------------|------------------|-------------------|--------------|
| IV.C.2.a.1.g      | Indoors           | 427910          | IV.C.2.a.1       | 427910            | 6            |
| IV.C.2.a.1.h      | Outdoors          | 427920          | IV.C.2.a.1       | 427920            | 6            |

**DESCRIPT**

|              |          |
|--------------|----------|
| IV.C.2.a.1.g | Indoors  |
| IV.C.2.a.1.h | Outdoors |

**9. Change MAXDESCEND for IV.C.2.a.1 from 47700 to 47720**

## Data Dictionary Table (DD)

### 1. Interest Variables

Replace variables H01HC00C - H06HC00C with:

| Var_Name | Outlinepos | Scale_Cd | Quescode | Source | Tablename |
|----------|------------|----------|----------|--------|-----------|
| I01OI00M | I.B.1.a    | OI       | C        | B      | Means_IN  |
| I02OI00M | I.B.1.b    | OI       | C        | B      | Means_IN  |
| I03OI00M | I.B.1.c    | OI       | C        | B      | Means_IN  |
| I04OI00M | I.B.1.d    | OI       | C        | B      | Means_IN  |
| I05OI00M | I.B.1.e    | OI       | C        | B      | Means_IN  |
| I06OI00M | I.B.1.f    | OI       | C        | B      | Means_IN  |

Add the following (Interest High-Points)

|          |         |    |  |   |          |
|----------|---------|----|--|---|----------|
| I07IH00H | I.B.1.g | IH |  | C | Means_IN |
| I08IH00H | I.B.1.h | IH |  | C | Means_IN |
| I09IH00H | I.B.1.i | IH |  | C | Means_IN |

### 2. Needs variables. Replace I01AG00M - I21AG00M with:

| Var_Name | Outlinepos | Scale_Cd | Quescode | Source | Tablename |
|----------|------------|----------|----------|--------|-----------|
| V01EN00M | I.B.2.a.1  | EN       | A        | B      | Means_OV  |
| V02EN00M | I.B.2.a.2  | EN       | B        | B      | Means_OV  |
| V03EN00M | I.B.2.b.1  | EN       | C        | B      | Means_OV  |
| V04EN00M | I.B.2.c.1  | EN       | D        | B      | Means_OV  |
| V05EN00M | I.B.2.c.3  | EN       | E        | B      | Means_OV  |
| V06EN00M | I.B.2.e.1  | EN       | F        | B      | Means_OV  |
| V07EN00M | I.B.2.b.4  | EN       | G        | B      | Means_OV  |
| V08EN00M | I.B.2.d.1  | EN       | H        | B      | Means_OV  |
| V09EN00M | I.B.2.f.1  | EN       | I        | B      | Means_OV  |
| V10EN00M | I.B.2.b.2  | EN       | J        | B      | Means_OV  |
| Var_Name | Outlinepos | Scale_Cd | Quescode | Source | Tablename |

|          |           |    |   |   |          |
|----------|-----------|----|---|---|----------|
| V11EN00M | I.B.2.d.3 | EN | K | B | Means_OV |
| V12EN00M | I.B.2.c.2 | EN | L | B | Means_OV |
| V13EN00M | I.B.2.f.2 | EN | M | B | Means_OV |
| V14EN00M | I.B.2.b.5 | EN | N | B | Means_OV |
| V15EN00M | I.B.2.d.2 | EN | O | B | Means_OV |
| V16EN00M | I.B.2.c.4 | EN | P | B | Means_OV |
| V17EN00M | I.B.2.e.2 | EN | Q | B | Means_OV |
| V18EN00M | I.B.2.e.3 | EN | R | B | Means_OV |
| V19EN00M | I.B.2.b.3 | EN | S | B | Means_OV |
| V20EN00M | I.B.2.b.6 | EN | T | B | Means_OV |
| V21EN00M | I.B.2.f.3 | EN | U | B | Means_OV |

**3. Occupational Values (Aggregate descriptors). Add the following rows to DD:**

|          |         |    |  |   |          |
|----------|---------|----|--|---|----------|
| VAGEN01M | I.B.2.a | EN |  | B | Means_OV |
| VAGEN02M | I.B.2.b | EN |  | B | Means_OV |
| VAGEN03M | I.B.2.c | EN |  | B | Means_OV |
| VAGEN04M | I.B.2.d | EN |  | B | Means_OV |
| VAGEN05M | I.B.2.e | EN |  | B | Means_OV |
| VAGEN06M | I.B.2.f | EN |  | B | Means_OV |

**4. Work Context Indoors/Outdoors Variables. Add the following rows to DD:**

|          |              |    |   |   |          |
|----------|--------------|----|---|---|----------|
| W98FN00M | IV.C.2.a.1.g | FN | W | C | Means_WC |
| W99FN00M | IV.C.2.a.1.h | FN | W | C | Means_WC |

## Means Tables

### 1. Two new tables have been added:

---

|          |  |
|----------|--|
| Means_IN | Occupational Interests (9 variables)                                 |
| Means_OV | Occupational Values and Needs (27 variables, including 6 aggregates) |

---

### 2. There are now 483 variables populated with data, as follows:

---

|          |     |                               |
|----------|-----|-------------------------------|
| Means_AB | 104 | (Abilities)                   |
| Means_GW | 126 | (Generalized Work Activities) |
| Means_IN | 9   | (Interests)                   |
| Means_KN | 66  | (Knowledges)                  |
| Means_OV | 27  | (Work Values)                 |
| Means_SK | 92  | (Skills)                      |
| Means_WC | 59  | (Work Context)                |

---

There are therefore 541,926 (1122 \* 483) observations in the MEANS data set.

3. Two new variables (Indoors and Outdoors) have been added to the Work Context data. In future releases with incumbent-based data, these two variables will be replaced by four variables that are more descriptive of the work context. See Outline Positions IV.C.2.a.1.a - IV.C.2.a.1.d.

4. Corrections have been made to values for Skills, Knowledges, and Abilities for OUs 25104, 87899A and 89706.

## Occupations Table (Occupat)

1. Titles and Descriptions have been revised. A total of 62 titles and 180 descriptions have been modified. No occupational codes have changed.

## Questions Table (Question)

### 1. Add the following rows:

---

| SCALE_CD | QUESCODE | QUESTION  |
|----------|----------|---|
| OI       | C        | How descriptive and characteristic is the Holland work environment of this Occupational Unit?               |
| EN       | A        | To what extent do workers on this job make use of their individual abilities?                               |
| EN       | B        | To what extent do workers on this job get a feeling of accomplishment?                                      |
| EN       | C        | To what extent are workers on this job busy all of the time?  |
| EN       | D        | To what extent do workers on this job have opportunities for advancement?                                   |
| EN       | E        | To what extent do workers on this job give directions and instructions to others?                           |
| EN       | F        | To what extent are workers on this job treated fairly by the company?                                       |
| EN       | G        | To what extent are workers on this job paid well in comparison with other workers?                          |
| EN       | H        | To what extent do workers on this job have coworkers that are easy to get along with?                       |
| EN       | I        | To what extent do workers on this job try out their own ideas?  |
| EN       | J        | To what extent do workers on this job do their work alone?  |
| EN       | K        | To what extent are workers on this job never pressured to do things against their sense of right and wrong? |
| EN       | L        | To what extent do workers on this job receive recognition for the work they do?                             |
| EN       | M        | To what extent do workers on this job make decisions on their own?  |
| EN       | N        | To what extent do workers on this job have steady employment?   |
| EN       | O        | To what extent do workers on this job have work where they do things for other people?                      |
| EN       | P        | To what extent are workers on this job looked up to by others in their company and their community?         |
| EN       | Q        | To what extent do workers on this job have supervisors who back up their workers with management?           |
| EN       | R        | To what extent do workers on this job have supervisors who train their workers well?                        |

---

|    |   |   |
|----|---|---|
| EN | S | To what extent do workers on this job have something different to do every day? |
| EN | T | To what extent do workers on this job have good working conditions?             |
| EN | U | To what extent do workers on this job plan their work with little supervision?  |
| FN | W | How frequently does this job require the worker to work?                        |

**2. Delete the following row:**

| SCALE | QUESC CODE | QUESTION  |
|-------|------------|---|
| AG    | I          | For each statement, mark an X over the appropriate value. |

**Scales Table (SCALE)**

**1. Add the following rows:**

| SCALE_CD | SCALELABEL                       | SCALEMIN | SCALEMAX | VALUelist   |
|----------|----------------------------------|----------|----------|-------------|
| OI       | Occupational Interests           | 1.0      | 7.0      | 1-7         |
| EN       | Extent                           | 1.0      | 5.0      | 1-5         |
| IH       | Occupational Interest High-Point | 0.0      | 6.0      | 1-6 (0 N/A) |

Note that the scale table already has two “Extent” scales (ET and EX); but a third is needed because of the differences in scale labels.

**2. Delete the following row:**

| SCALE_CD | SCALELABEL               | SCALEMIN | SCALEMAX | VALUelist |
|----------|--------------------------|----------|----------|-----------|
| HC       | Holland Codes Importance | 0.0      | 3.0      | 0-3       |

## Scale Labels Table (SCALELBL)

### 1. Add the following rows:

---

| SCALE_CD | VALUE | LABEL                                |
|----------|-------|--------------------------------------|
| OI       | 1     | Not at all characteristic            |
| OI       | 4     | Moderately characteristic            |
| OI       | 7     | Extremely characteristic             |
| EN       | 1     | To a very small extent               |
| EN       | 2     | To a limited extent                  |
| EN       | 3     | To a moderate extent                 |
| EN       | 4     | To a considerable extent             |
| EN       | 5     | To a great extent                    |
| IH       | 0     | No second or third high-point exists |
| IH       | 1     | Realistic                            |
| IH       | 2     | Investigative                        |
| IH       | 3     | Artistic                             |
| IH       | 4     | Social                               |
| IH       | 5     | Enterprising                         |
| IH       | 6     | Conventional                         |

---

### 2. Delete the following rows:

---

|    |   |  |
|----|---|--|
| HC | 0 | Not in top three                             |
| HC | 1 | Third Most Important Holland Characteristic  |
| HC | 2 | Second most Important Holland Characteristic |
| HC | 3 | Most Important Holland Characteristic        |

---

## **Occupation-Specific Tasks (TASKLIST)**

**The TASKLIST table has been revised as follows:**

1. The "Core" field has been removed. There is now no distinction in importance of tasks.
2. The list of tasks has been revised. 343 tasks have been removed, and many of the remaining 12,305 have been edited.



# *Appendix F*

## *Job Zone Definitions*



# *Appendix F*

## *Job Zone Definitions*

### **Job Zone 1: Little or No Preparation Needed**

Overall Experience -- No previous work-related skill, knowledge, or experience is needed for these occupations. For example, a person can become a general office clerk even if he/she has never worked in an office before.

Education -- These occupations may require a high school diploma or GED certificate. Some may require a formal training course to obtain a license.

Job Training -- Employees in these occupations need anywhere from a few days to a few months of training. Usually, an experienced worker could show you how to do the job.

Examples -- These occupations involve following instructions and helping others. Examples include bus drivers, forest and conservation workers, general office clerks, home health aides, and waiters/waitresses.

SVP Range -- Below 4.0

### **Job Zone 2: Some Preparation Needed**

Overall Experience -- Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a drywall installer might benefit from experience installing drywall, but an inexperienced person could still learn to be an installer with little difficulty.

Education -- These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.

Job Training -- Employees in these occupations need anywhere from a few months to one year of working with experienced employees.

Examples -- These occupations often involve using your knowledge and skills to help others. Examples include drywall installers, fire inspectors, flight attendants, pharmacy technicians, salespersons (retail), and tellers.

SVP Range -- 4.0 to < 6.0

### **Job Zone 3: Medium Preparation Needed**

Overall Experience -- Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.

Education -- Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.

Job Training -- Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

Examples -- These occupations usually involve using communication and organizational skills to coordinate, supervise, manage, or train others to accomplish goals. Examples include dental assistants, electricians, fish and game wardens, legal secretaries, personnel recruiters, and recreation workers.

SVP Range -- 6.0 to < 7.0

### **Job Zone 4: Considerable Preparation Needed**

Overall Experience -- A minimum of two to four years of work-related skill, knowledge, or experience is needed for these occupations. For example, an accountant must complete four years of college and work for several years in accounting to be considered qualified.

Education -- Most of these occupations require a four-year bachelor's degree, but some do not.

Job Training -- Employees in these occupations usually need several years of work-related experience, on-the-job training, and/or vocational training.

Examples -- Many of these occupations involve coordinating, supervising, managing, or training others. Examples include accountants, chefs and head cooks, computer programmers, historians, pharmacists, and police detectives.

SVP Range -- 7.0 to < 8.0

### **Job Zone 5: Extensive Preparation Needed**

Overall Experience -- Extensive skill, knowledge, and experience are needed for these occupations. Many require more than five years of experience. For example, surgeons must complete four years of college and an additional five to seven years of specialized medical training to be able to do their job.

Education -- A bachelor's degree is the minimum formal education required for these occupations. However, many also require graduate school. For example, they may require a master's degree, and some require a Ph.D., M.D., or J.D. (law degree).

Job Training -- Employees may need some on-the-job training, but most of these occupations assume that the person will already have the required skills, knowledge, work-related experience, and/or training.

Examples -- These occupations often involve coordinating, training, supervising, or managing the activities of others to accomplish goals. Very advanced communication and organizational skills are required. Examples include athletic trainers, lawyers, managing editors, physicists, social psychologists, and surgeons.

SVP Range -- 8.0 and above



# ***Appendix G***

## ***Stratifying Occupational Units by Specific Vocational Preparation (SVP)***





# *Appendix G*

## *Stratifying Occupational Units by Specific Vocational Preparation (SVP)*

### **Introduction**

A major objective of the O\*NET Career Exploration Program is to allow clients to learn information about themselves that they can use to focus their career search. The O\*NET program attempts to direct clients to explore occupations so as to maximize the joint probability that they (a) have (or can learn) the knowledge and skills necessary for the occupation, (b) have the basic interests that characterize people in that occupation, and place a high value on work outcomes that the occupation will provide.

To achieve this focused career exploration, information pertaining to the three areas just described (i.e., abilities, interests, and valued work outcomes) must be available for clients and occupations. To help determine the client's standing on abilities, interests, and work outcomes, the O\*NET program provides the client with a choice of three assessment tools: (a) the Ability Profiler, (b) the Interest Profiler, and the Work Importance Profiler. The former must be administered by a counselor, but the latter two are self-assessment tools. In addition, both of the latter Profilers are available in computerized and paper-and-pencil versions. The occupations in the O\*NET program are the 1,122 Occupational Units (OUs) identified by the North Carolina Occupational Analysis Field Center during the Dictionary of Occupational Titles (DOT) Conversion Project. The OUs represent a refinement of the Occupational Employment Statistics occupational classification structure. The OUs were created by giving prime consideration to which DOT occupations had similar work content and similar education and training requirements. Many OUs are one-to-one translations of DOT occupations, whereas other OUs comprise hundreds of DOT occupations.

Occupational data on the OUs will soon be available from O\*NET, a computerized, multi-dimensional occupational information database that will replace the current DOT. The O\*NET contains information about an

occupation's required abilities and knowledge, general work activities, work values, as well as many other variables (e.g., certification/licensure requirements, work context).

The O\*NET, however, is not complete. The current version of the O\*NET Career Exploration Program uses occupational information from the DOT. The DOT provides a rich data source upon which to build the O\*NET program. This information will be supplanted by the more inclusive set of occupational information from the completed O\*NET as it becomes available.

To facilitate the career exploration process, the O\*NET Career Exploration Program prioritizes the information on clients and occupations. Specifically, the user first chooses an occupational level (or stratum) in terms of whether the user's general level of occupational training is appropriate for the occupations at that level. This variable has the highest priority. Without the necessary knowledge and skills that are developed by education, training, and experience, the individual will not be able to function effectively in an occupation. Having discordant interest patterns, value preferences, or even ability profiles would not necessarily preclude being able to work in the occupation, if the necessary knowledge and skills had been mastered. It is also the case the DOL's own job analytic work has always placed a high emphasis on differentiating among occupations in terms of their specific education and training requirements.

The following sections contain descriptions of (a) alternative ways of defining occupational level, (b) the chosen method and its rationale, variations on the chosen method that were considered, and (d) the method by which occupations were assigned to levels.

## Alternative Metrics

General cognitive ability (g). There are many ways to represent the dimension of required knowledge and skill. Some researchers (e.g., Gottfredson, 1986) want to use general cognitive ability (g), which could be obtained from a composite of tests from the General Aptitude Test Battery (GATB). However, g is not a direct determinant of being able to perform successfully in an occupation. It can only have indirect effects on the acquisition of knowledge and skill, which are the direct causes of performance. Measures of g also have the unfortunate property of showing large subgroup differences.

Complexity. Another possible alternative metric is some measure of occupational "complexity." For example, Hunter (1986) defined complexity as the dimension that (a) was common to the six job classification systems from the U.S. Employment Service validation data base and (b) moderated the validity of cognitive ability for predicting job performance ratings (the validity is lower for lower complexity jobs than for higher complexity jobs). As this latter statement implies, complexity usually shows a high correlation with g. Occupational complexity is perhaps best indexed in the DOT by the Data dimension, but there is no analog among client characteristics with which it could be matched.

Specific Vocational Preparation. The necessary level of knowledge and skill for an occupation could also be represented by the amount of occupation-specific education, training, and experience that is required to perform successfully in the occupation. The DOT rating of Specific Vocational Preparation (SVP) is intended to be a measure of the required level of specific occupational training and experience. The definition of SVP given by The Revised Handbook for Analyzing Jobs (U.S. Department of Labor, 1991) is

"the amount of lapsed time required by a typical worker to learn the techniques, acquire the information, and develop the facility needed for average performance in a specific job-worker situation" (see Figure 1 for more information and the rating scale that is used).

SVP does not guarantee the necessary knowledge and skill, but it is the most appropriate feasible alternative among the variables in the DOT.<sup>1</sup>

The SVP rating has two other important advantages, as compared to the alternatives. First, the level of the SVP requirement for an occupation can be directly linked to the level of specific occupational education and training achieved by the client. It can also be used to describe the future level of SVP that the client might intend to achieve. Consequently, clients can also ask what new occupations they should explore if they are planning to pursue certain education/training opportunities. This could be used to illustrate in a very concrete way the value of additional training. The O\*NET Career Exploration Program would not have this capability if a different alternative was used to stratify occupations.

Second, using SVP rather than g or "complexity" reduces the direct effects of g on the procedure for linking individuals to occupations. Although there is a significant correlation between general cognitive ability and the level of training achieved by individuals, there are many other determinants of education and training success (e.g., motivation). Stratifying occupations on SVP first would reflect these other determinants and reduce the degree to which the subsequent occupational linkage was a direct function of g.

Several variations to SVP alone could be envisioned, using data from the DOT. Various metrics for measuring the required knowledge of skill of the OUs were created and evaluated for use with the O\*NET Career Exploration Program.

### **Metrics Examined for the O\*NET Career Exploration Program**

The present section describes and compares alternative metrics that were proposed and explored metrics based on combinations of variables in the existing DOT data base. Also provided is the rationale guiding the final determination that Specific Vocational Preparation (SVP) was the most appropriate measure of general occupational level.

For each OU, six metrics for general occupational level were calculated, all using data from the DOT. All metrics considered for the O\*NET

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1. One alternative, General Educational Development (GED), is inadequate because it fails to consider training and experience.

Career Exploration Program incorporated some subset of the following variables:

**Reasoning.** High Reasoning scores apply to those occupations requiring a high level of abstract and/or scientific reasoning. In contrast, low Reasoning scores reflect those occupations needing only the ability to follow commonsense one- or two-step instructions. Metric 5 combines SVP and Reasoning.

**Data.** The Data variable rates worker functions that involve information, knowledge, or concepts. Data therefore has partial overlap with Reasoning but is sufficiently different to make its own contribution in distinguishing among occupations. Occupations with low Data scores are more complex on this dimension (e.g., synthesizing, coordinating) than jobs with high Data scores (e.g., copying, comparing). Metric 1 combines SVP with Reasoning and Data, such that high scores reflect high SVP, high amounts of reasoning, and high involvement with data. Metric 4 combines SVP and Data. Both Metric 1 and Metric 4 are measures of general occupational level that include "technical" aspects of an occupation.

**People.** The People variable is loosely hierarchical, where low People scores are associated with occupations dealing with the most complex interpersonal activities (e.g., mentoring, negotiating), high People scores with the least complex interpersonal activities (e.g., taking instructions/helping, serving). Metric 2 combines SVP and People, and is a measure of general occupational level that includes "interpersonal" aspects of the occupation.

The six metrics considered for the O\*NET program were as follows:

Metric 1 = SVP + Reasoning - Data;

Metric 2 = SVP - People;

Metric 3 = SVP;

Metric 4 = SVP - Data;

Metric 5 = SVP + Reasoning;

Metric 6 = Metric 1 - Metric 2 = Reasoning - Data + People.

With the exception of Metric 6, these metrics comprise occupational information on SVP.

Metric 1 through Metric 5 were based on the simple addition and subtraction of their constituent DOT variables, once they were standardized (i.e., mean = 0, SD = 1). (Subtraction was necessary for the Data and People dimensions, given that lower scores represent greater complexity.) As Table 1 shows, these metrics were highly correlated with one another, even without accounting for measurement unreliability, with zero-order correlations ranging from .83 to .98 (k=1,116 OUs). The pattern and magnitude of correlations were much the same when the data were disaggregated to the DOT level (k = 11,422). Metrics 1 through 5 shared at least the SVP variable, so high intercorrelations were expected.

**Table 1**

**Zero-order Correlations Between DOT "Complexity" Metrics**

OU Level (k = 1,116)

“M” = Metric

|     | M1  | M2   | M3   | M4   | M5   | M6   |
|-----|-----|------|------|------|------|------|
| M 1 | 1.0 |      |      |      |      |      |
| M 2 | .86 | 1.00 |      |      |      |      |
| M 3 | .94 | .83  | 1.00 |      |      |      |
| M 4 | .99 | .85  | .96  | 1.00 |      |      |
| M 5 | .99 | .86  | .96  | .96  | 1.00 |      |
| M 6 | .32 | .20  | .26  | .32  | .29  | 1.00 |

Note. All correlations have a two-tailed  $p < .0005$

Metric 1 = SVP + Reasoning - Data

Metric 2 = SVP - People

Metric 3 = SVP

Metric 4 = SVP - Data

Metric 5 = SVP + Reasoning

Metric 6 = Metric 1 - Metric 2 = Reasoning - Data + People

Metric 6 was created by subtracting Metric 2 from Metric 1. Metric 6 does not involve SVP, but instead creates a bipolar continuum from the more "interpersonal" occupations to the more "technical" occupations. If an occupation is a balance of interpersonal and technical characteristics, no matter what the level of each, then that occupation will be situated in the middle of the Metric 6 continuum. The zero-order correlations of Metric 6 with the other five metrics (ranging from -.20 to .32) suggest that it is relatively, though not completely, independent of these alternative measures of required knowledge and skill.

The distributional properties of each metric were explored. That is, we wanted to know how well each metric differentiated occupations with respect to the variables the metric was intended to represent. In particular, we examined the titles of 50 OUs that fell within the highest, middle, and lowest ranges along the distribution of each metric. The results were reasonable, in that the more technical metrics had more technical occupations at the high end (e.g., environmental scientist, astronomer, biochemist), whereas the more "interpersonal" metrics had more interpersonal occupations at the high end (e.g., clergy, psychiatrists, judges); and the bipolar technical/interpersonal metric had technical occupations at the high end, and interpersonal occupations at the low end.

The importance of technical and interpersonal skills and requirements across a wide variety of occupations cannot be denied, and perhaps these facets will eventually be incorporated into a fully functional O\*NET Career Exploration Program. However, several considerations influenced the final decision to adopt SVP as the measure of general occupational level. Briefly, these considerations included the following.

1. SVP is measured in a straightforward way and can be obtained from both clients and occupations. The metric is the same for both clients and occupations, thereby facilitating the linking process. Clients can easily set realistic career planning goals by determining how discrepant they are from a given class of occupations in terms of the required training or education time specified by SVP. This would not be possible if one of the alternative metrics, even those that included SVP were used to stratify OUs. Further, Data, People, and Reasoning variables are measures of occupational characteristics that have no analogs in the existing client measures, which would make linking clients and OUs on level more difficult.

2. General occupational level, as the term implies, is a broad way to group OUs before proceeding with a more detailed analysis of the similarity between the interest, work values, and aptitude profiles of individuals and occupations. In contrast with SVP, technical and interpersonal aspects of occupations may be better represented multidimensionally (as the interest, work values, and aptitude variables are). Data, People, and Reasoning variables are probably not sufficient technical and interpersonal measures of occupations for the purposes of the O\*NET Career Exploration Program.

3. Related to point 2, the overall power of each metric for differentiating occupations was not much different than that for SVP. Although the metrics identified highly technical and interpersonal occupations in the extreme tails of the distributions, most occupations (i.e., those in the middle range of the distribution) were not substantively affected. Table 1 shows that correlations between all of the five main metrics were quite high; and even for Metric 6, which had lower intercorrelations with SVP, the weak power to differentiate most occupations coupled with the complexity of the measure (i.e., subtracting two metrics to create a single bipolar technical/interpersonal continuum) recommended against its use.

For the above reasons, SVP was chosen as the most appropriate variable, from among those currently available, with which to start the process of linking persons to occupations. In the future, once O\*NET becomes fully functional, even more appropriate linking variables will most certainly become available.

### **Computing an SVP Rating for Each OU**

Having chosen a measure of the required knowledge and skill an occupation requires, it remained to assign a value of SVP to each OU in the O\*NET Career Exploration Program. The following section outlines the three-step procedure adopted for identifying the "core" DOT occupations within an OU those occupations that are considered most characteristic (or representative) of the DOT occupations within a particular OU. These core occupations were the reference occupations to which an OU's SVP value was tied.



## Method

The available information on SVP requirements is attached to DOT codes ("jobs"). The 12,000+ DOT codes have been further aggregated into 1,124 Occupational Units (i.e., clusters of DOT codes) on the basis of similar work content and similar education and training requirements. The Occupational Units (OUs) are the basic structure on which the O\*NET data base is being developed, and they are becoming the focus of a number of other career/occupation exploration systems as well, including the O\*NET Career Exploration Program. Consequently, if the DOT SVP information is to be used to aid the person/OU linkage, then two things are needed. First, each OU must be given an SVP requirement. Second, the full distribution of SVP values for the OUs must be divided into segments (i.e., strata) that make sense in terms of general levels of education and training requirements. This second step was necessary so that users could effectively understand and use SVP as part of their career search.

In general, given multiple DOT codes for an OU, the goal was to compute the mean SVP for the DOT codes that best represented the central core, or content, of the OU. To do this, the following steps were performed:

1. For all OUs with fewer than seven DOT codes, the overall mean SVP was computed. With fewer than seven DOT codes, each job in these small OUs was argued to be a "core" job. The mean was argued to provide a less adequate summary for OUs comprising seven or more DOT codes.
2. For OUs containing 7-24 DOT codes, the profiles of Aptitude Requirement ratings for the individual codes were analyzed via principal components to identify the first principal component for that OU.<sup>2</sup> The mean SVP was computed for the six jobs in the OU that loaded highest on this first component (factor). This procedure was used to (a) identify the core jobs that would best represent the OU and (b) then base the SVP score for the OU on data from those core jobs.
3. For OUs composed of more than 24 codes, the array of codes was first examined for outliers by generating the distribution of SVP ratings. In general, only codes with one of the three most frequent SVP scores were retained. That is, codes with extreme SVP scores (i.e. judged to require much less or much more education/training than the bulk of the codes in the OU) were eliminated, on the grounds that they might have an undue

influence on the principal component. The aptitude requirement profiles for the remaining profiles were then analyzed by principal components. The loadings of the codes on the first principal component were then rank-ordered. Those codes having loadings in the top 25 percent of all loadings on the first component were selected and mean SVP was then computed for them. Again, this was all for the purpose of computing SVP for an OU in such a manner that it represented the central core of the OU

The general rationale for the procedure is as follows. First, calculating a mean profile across six or fewer occupations will yield a profile that is reasonably representative of each of the occupation-specific profiles with the OU. (Note that seven is a rather arbitrary number. Some might argue that five or eight or ten would have been as good a cutoff.) Mean profiles for OUs comprising a greater number of occupations would likely not characterize all of the occupations reasonably well. Steps two and three use the method of principal components analysis to identify the occupations that are most alike with an OU. Step two differs from step three in that OUs having from 7 to 23 occupations, more than 25 percent of the occupations within the OU constitute the core occupations. This difference allows for the rather arbitrary cut of "fewer than seven DOT codes" by permitting more of the occupations within the smaller OUs to contribute to the mean SVP score.

### **Stratifying OUs on SVP**

After identifying the SVP level for each of the OUs, it remained to identify the critical points on the SVP scale that would be used to define groupings of OUs that represented different levels of education and training. For a career exploration or occupational guidance system that would first identify occupations with the appropriate level of training requirements and then identify occupations with the most appropriate aptitudes, vocational interests, or work values profiles, five levels of education and training were deemed appropriate. More levels would make the structures too complicated to use manually and too difficult for clients to interpret; fewer levels would make the structures so broad that not much differentiation would be achieved.

The SVP scale points that were used to define the five strata were chosen on the basis of (a) the nature of the distribution of SVP "scores" across OUs (remember that for all OUs composed of more than one DOT code, the SVP is the mean of a number of DOT code ratings), (b) the requirement to identify five strata that contained approximately the same number of occupations, and the substantive meaning of the SVP scale itself.

## **Initial Strata**

The distribution of SVP scores across strata is shown in Figure 1. The spikes at the whole integer points result, to a considerable extent, from the OUs which are composed of only one DOT code. The SVP rating is on a 1-9 scale and fractional values result from averaging across multiple codes that do not all have the same rating. The SVP scale itself is shown in Figure 2. The five strata that were identified used the following SVP critical scores.

Stratum 1: 193 OUs with mean SVP's that range from 7.5 to 9.0. This is the highest level of preparation and includes occupations that would require more than 4 years of specific education and training for achieving at least an average level of performance in the occupation. This would include most engineers, scientists, and high level professional positions, as well as directors/managers of scientific or professional personnel and occupations that require a very high level of technical skill (e.g., airline pilot, concert musician).

Stratum 2: 219 OUs with mean SVP's that range from 7.0 - 7.4. This second level includes occupations that require more than 2 years, but not more than 4, of specific training and education. A large number of professional and technical occupations fall in this category, as well as a broad range of supervisory and management positions.

Stratum 3: 298 OUs with mean SVP's that range from 5.5 - 6.9. These occupations would require from one to two years of occupation specific training. Many different kinds of technicians, administrative personnel, and skilled machine operators fall at this level.

Stratum 4: 256 OUs with mean SVP's ranging from 3.5 to 5.4. This level includes occupations that are judged to require more than 3 months but not more than one year of occupation specific training. It includes a large number of service positions as well as clerical, maintenance, and operator positions.

Stratum 5: 150 OUs with mean SVP's ranging from 1.0 - 3.4. This is the lowest level of educational and training preparation and includes occupations that require up to 3 months of training. It includes a large number of less complex service occupations as well as materials handlers, and machine/equipment tenders or operators.

### **Operational Strata**

Aptitude Ratings vs. Estimated GATB Aptitude Scores. The Aptitude Rating data were used to evaluate the various metrics for describing the levels of knowledge and skill required by an OU. At the time the level metric was being identified, there were two sets of scores that were candidates for defining the ability profile for an OU: (a) the Aptitude Ratings from the DOT and (b) estimated GATB aptitude scores. Other analyses conducted during the O\*NET Career Exploration Program project demonstrated that GATB aptitudes could be predicted from information contained in the DOT with sufficient accuracy to justify their use.<sup>3</sup> It is more desirable to use the estimated GATB aptitude scores than the Aptitude Ratings to define an OU's ability profile. One reason is that users of the O\*NET Career Exploration Program will receive information about their abilities through their GATB aptitude score profiles. Using this same type of profile to characterize the OUs means that the same ability information will be used to describe people and jobs. This makes the person/job linking process more direct.

Once it was decided to use the estimated GATB profiles, the three-step procedure described above for identifying the core DOT occupations within each multi-job OU was carried out using the estimated GATB scores in place of the Aptitude Ratings. Because the estimated profiles for each DOT occupation look a bit different from the corresponding Aptitude Rating profile, the principal component results differed across the two types of profiles. Therefore, the core DOT occupations within an OU identified when using the Aptitude Ratings were not necessarily the ones identified when using the estimated aptitude scores. Accordingly, the mean SVP value for each multiple-job OU had the potential to change. Even so, the overall distribution of SVP scores across the OUs changed very little indeed.

**SVP Cutoffs for Defining the Job Strata.** Users of the DOT are accustomed to seeing integer values for SVP. Note that the initial strata were defined by fractional boundary SVP values (e.g., stratum 1 contained all OUs with SVP values of 7.5 and above). Although fractional values make fine statistical sense, a pilot test of the system showed that they did not translate well to the operational setting. To maximize the familiarity of the strata boundaries to system users, a new stratification of OUs was conducted using integers as SVP boundary.

In addition, the operational strata were ordered in a reverse fashion from the initial strata reported above, such that operational Stratum 1 now contains those OUs having the lowest values of SVP and Stratum 5 the highest.

Finally, the label "Job Zone" was given to each of the strata to make the concept of job groupings more understandable to users. Thus, the five Job Zones in the O\*NET Career Exploration Program present the user with five broad groupings of OUs that may be explored. Descriptions of the five operational strata (i.e., Job Zones) and their SVP boundaries are provided below. Sample OUs from each of the Job Zones are provided in Table 2.

**Job Zone 1:** 189 OUs {Boundary: mean SVP < 4.0}. This Job Zone represents the lowest level of educational and training preparation and includes occupations that require up to 3 months of training. It includes a large number of less complex service occupations as well as materials handlers and machine/equipment tenders or operators.

Job Zone 2: 260 OUs {Boundary:  $4.0 \leq \text{mean SVP} < 6.0$ }. This Job Zone includes occupations that are judged to require more than 3 months but not more than one year of occupation specific training. It includes a large number of service positions as well as clerical, maintenance, and operator positions.

Job Zone 3: 259 OUs {Boundary:  $6.0 \leq \text{mean SVP} < 7.0$ }. Occupations in this Job Zone require from one to two years of occupation-specific training. Many different kinds of technicians, administrative personnel, and skilled machine operators fall at this level.

Job Zone 4: 285 OUs {Boundary:  $7.0 \leq \text{mean SVP} < 8.0$ }. This Job Zone includes occupations that require more than two years, but not more than four, of specific training and education. A large number of professional and technical occupations fall in this category, as well as a broad range of supervisory and management positions.

Job Zone 5: 131 OUs {Boundary:  $8.0 \leq \text{mean SVP}$ }. This Job Zone represents the highest level of preparation and includes occupations that would require more than 4 years of specific education and training for achieving at least an average level of performance in the occupation. This would include most engineers, scientists, and high level professional positions, as well as directors/managers of scientific or professional personnel and occupations that require a very high level of technical skill (e.g., airline pilot, concert musician).

One advantage of using a parameter such as SVP to begin the person/OU linkage is that the user may enter his or her current level of occupation-specific training and education, or the level that they plan to achieve at some future date. This helps users expand their career exploration by allowing them to explore a wide range of occupational possibilities. For example, the user can perform a certain amount of what if exploration (i.e. what occupations would open up, if the client reached a certain level of education and training). The "what if" speculations can then be tempered by using the user's differential aptitude or interest profile to search for suitable occupations within the stratum. The Job Zones present the user with this option, thereby maximizing the capacity of the O\*NET Career Exploration Program to meet the user's needs.

## Summary

The O\*NET Career Exploration Program provides a vehicle for self-directed career exploration that is powerful, flexible, and easy to use. Clients enter the system through their current or anticipated level of education, training, and experience, individual characteristics that (a) are more malleable than general cognitive ability and (b) have direct relevance to individuals (unlike "occupational complexity"). Clients can obtain additional information about their abilities, vocational interests, and valued work outcomes by taking one or more of the program's three assessment tools (Profilers). Five Job Zones are provided to help clients target their career exploration. Occupational Units (OUs) within a Job Zone have similar levels of required education, training, and experience. The linkage of clients to jobs is based on the similarity between client score profiles and occupation profiles.

**Table 2**

### The Five Job Zones with Sample Occupational Units and their SVP Values

#### Job Zone 1: Mean SVP < 4.0 (k = 189 OUs)

| OU Code | SVP  | OU Title                                    |
|---------|------|---|
| 65005   | 2.33 | Bartenders                                  |
| 49017   | 3.50 | Counter and Rental Clerks                   |
| 87711   | 3.00 | Highway Maintenance Workers                 |
| 57311A  | 2.00 | Messengers                                  |
| 63021   | 2.00 | Parking Enforcement Officers                |
| 66099D  | 3.00 | Phlebotomists                               |
| 98705   | 1.00 | Refuse Collectors                           |
| 93917A  | 2.67 | Solderers                                   |
| 68021   | 2.00 | Ushers, Lobby Attendants, and Ticket Takers |
| 06400C  | 2.00 | Yard Workers                                |

**Job Zone 2: 4.0 <= Mean SVP < 6.0 (k = 260 OUs)**

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| <b>OU Code</b> | <b>SVP</b> | <b>OU Title</b>                 |
|----------------|------------|---------------------------------|
| 79017D         | 4.00       | Aquarists                       |
| 87905          | 5.50       | Blasters and Explosives Workers |
| 97944          | 4.33       | Crane and Tower Operators       |
| 87108          | 5.33       | Drywall Installers              |
| 63002A         | 5.75       | Fire Inspectors                 |
| 34058E         | 5.50       | Motor Racers                    |
| 85128B         | 4.00       | Oilers                          |
| 66014          | 5.00       | Psychiatric Aides               |
| 43008          | 5.50       | Sales Agents, Real Estate       |
| 63032          | 4.25       | Sheriffs and Deputy Sheriffs    |

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**Job Zone 3: 6.0 <= Mean SVP < 7.0 (k = 259 OUs)**

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| <b>OU Code</b> | <b>SVP</b> | <b>OU Title</b>          |
|----------------|------------|--------------------------|
| 79016          | 6.50       | Animal Trainers          |
| 65021          | 6.60       | Bakers, Bread and Pastry |
| 39999C         | 6.00       | City Planning Aides      |
| 53702          | 6.00       | Court Clerks             |
| 32908          | 6.00       | Dental Hygienists        |
| 79999D         | 6.83       | Farmers                  |
| 87811          | 6.67       | Glaziers                 |
| 55102          | 6.00       | Legal Secretaries        |
| 21511E         | 6.50       | Personnel Recruiters     |
| 89999B         | 6.50       | Wig Makers               |

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**Job Zone 4: 7.0 <= Mean SVP < 8.0 (k = 285 OUs)**


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| <b>OU Code</b> | <b>SVP</b> | <b>OU Title</b>                           |
|----------------|------------|---|
| 21114A         | 7.83       | Accountants                               |
| 87102E         | 7.00       | Boat and Ship Builders                    |
| 61099A         | 7.33       | Chefs and Head Cooks                      |
| 34002D         | 7.00       | Editors                                   |
| 89914D         | 7.00       | Film Laboratory Technicians               |
| 97702J         | 7.00       | Helicopter Pilots                         |
| 22135          | 7.50       | Mechanical Engineers                      |
| 15002          | 7.50       | Postmasters and Mail Superintendents      |
| 43014A         | 7.00       | Sales Agents, Securities, and Commodities |
| 31514          | 7.33       | Vocational and Educational Counselors     |

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**Job Zone 5: 8.0 <= Mean SVP (k = 131 OUs)**


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| <b>OU Code</b> | <b>SVP</b> | <b>OU Title</b>                         |
|----------------|------------|---|
| 27502          | 8.00       | Clergy                                  |
| 15005A         | 8.17       | College and University Administrators   |
| 85999D         | 8.00       | Gunsmiths                               |
| 27108J         | 8.00       | Industrial-Organizational Psychologists |
| 22308          | 8.00       | Landscape Architects                    |
| 34051          | 8.00       | Musicians, Instrumental                 |
| 97508          | 8.00       | Pilots, Ship                            |
| 32102J         | 9.00       | Surgeons                                |
| 32114B         | 8.00       | Veterinarians                           |
| 22105C         | 8.00       | Welding Engineers                       |

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## **References**

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Hunter, J.E. (1986). Cognitive ability, cognitive aptitudes, job knowledge, and job performance. *Journal of Vocational Behavior*, 29, 340-362.

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# *Appendix H*

## *Equal Opportunity Guidance Letter No. 4*



The following Equal Opportunity Guidance Letter provides general information and guidance on the use of computer-based services by individuals with disabilities. If applicable, usage of the O\*NET software should comply with these guidelines to ensure that individuals with disabilities are afforded an equal opportunity to use the software.

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**U.S. Department of Labor  
Civil Rights Center**



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**EQUAL OPPORTUNITY GUIDANCE LETTER NO. 4  
MAY 18, 1998**

**TO:** GOVERNORS, STATE JTPA LIAISONS, STATE WORKER ADJUSTMENT LIAISONS, STATE EMPLOYMENT SECURITY AGENCIES (SESA), ONE-STOP CAREER CENTER SYSTEM LEADS, SESA EQUAL OPPORTUNITY (EO) OFFICERS

**FROM:** ANNABELLE T. LOCKHART, Director, Civil Rights Center

**SUBJECT:**  
Making America's Job Bank/America's Talent Bank Available to and Usable by Individuals with Disabilities

1. **Purpose.** To provide guidance on States' responsibilities to make America's Job Bank/America's Talent Bank (AJB/ATB) available to and usable by individuals with disabilities.

2. **References.** TEIN 28-96 (May 1, 1997): Study On Certification Chartering Criteria For One-Stop Career Centers; TEIN 27-96 (April 28, 1997): One-Stop Disability Initiative; TEIN 21-96 (March 17, 1997): Joint Issuance by the Assistant Secretary for Employment and Training and the Assistant Secretary for Special Education and Rehabilitation Services.

3. **Background.** Two statutes that prohibit discrimination on the basis of disability by recipients of Federal financial assistance for labor and workforce programs are section 504 of the Rehabilitation Act of 1973, as amended, and section 167 of the Job Training Partnership Act, as amended. The Department of Labor’s regulations implementing Section 504 and Section 167, title 29 CFR parts 32 and 34 respectively, prescribe several recipient obligations to ensure that its services, including America’s Job/Talent Bank workstations that are made available to the general public, are, to the maximum extent possible, available to and usable by individuals with disabilities. These obligations include, but are not limited to: (1) ensuring physical accessibility; and (2) providing reasonable accommodation to individuals with disabilities. (See Subpart C of part 32). The Americans with Disabilities Act of 1990 (ADA) imposes similar obligations. See section 4. for a discussion of the ADA and its applicability to State and local governments.

(1) Physical accessibility to programs and activities. Title 29 CFR 32.28 requires that “each facility or part of a facility constructed by, on behalf of, or for the use of a recipient, shall be designed and constructed in such manner that the facility or part of the facility is readily accessible to and usable by” qualified individuals with disabilities. Section 32.28 further provides that the standards to be used are those most recently issued by the General Service Administration (GSA), unless alternative standards provide greater accessibility. The most recent standards issued by GSA are the Uniform Federal Accessibility Standards (UFAS). (See 41 CFR Subpart 101-19.6.) These guidelines should be used unless alternative guidelines provide greater accessibility. Alternative standards include the Americans with Disabilities Act Accessibility Guidelines (ADAAG). (See 28 CFR part 36.) Additionally, States should be aware that, if state guidelines provide for greater accessibility, those standards should be used.

The term “facilities” is not synonymous with the term “buildings.” It has a broader meaning and includes such things as automated teller machines (ATMs) and roadside emergency call boxes. AJB/ATB workstations must be in compliance with accessibility standards. In most instances, such as in the case of ATMs, there is a specific UFAS or ADAAG standard. In others, such as with roadside emergency call boxes and AJB/ATB-type workstations, there is no specific accessibility standard. In the absence of a specific standard, a recipient should rely upon the general accessible design criteria contained in ADAAG and UFAS. Both ADAAG and UFAS provide guidance to recipients concerning design considerations

for accessible routes, clear space, reach ranges, and operating mechanisms.

(2) Reasonable accommodation. As a separate and additional obligation, recipients must accommodate the disabilities of particular individuals in response to the specific limitations of their disabilities, unless the recipient can show that the provision of an accommodation would constitute an undue burden. (See 29 CFR 32.13 for a discussion of reasonable accommodation and undue burden.) Accommodations can include auxiliary aids as required by 29 CFR 32.4 (b) (7) and 29 CFR 34.6 (b) as well as staff-assisted services.

4. **Relationship to ADA.** The Americans with Disabilities Act of 1990 (ADA) extends the prohibition of discrimination on the basis of disability to covered entities regardless of whether they receive Federal financial assistance. Title I of the ADA, which is enforced by the Equal Employment Opportunity Commission, applies to all employers, employment agencies, labor organizations and joint labor-management committees (see 29 CFR part 1630). Title II, which is enforced by the Department of Justice (DOJ) and in some circumstances DOL, applies to “public entities” (e.g., any State or local government or any department, agency, special purpose district, or other instrumentality of a State or States or local government (see 28 CFR part 35). Title II is patterned after Section 504 of the Rehabilitation Act. Title III of the ADA, also enforced by DOJ, applies to public accommodations and commercial facilities (see 28 CFR part 36). To the extent that recipients of Federal financial assistance for labor and workforce programs are covered entities (e.g., employers, employment agencies, State and local governments and public accommodations) they are also covered by the ADA and its implementing regulations.

5. **Policy.** States must ensure that their obligation to provide programmatic and physical access to AJB/ATB is met. This includes ensuring that AJB/ATB workstations meet UFAS standards, unless an alternate standard provides greater accessibility. Further, States must provide accommodations, including auxiliary aids and staff-assisted services necessary to ensure equal opportunity for qualified individuals with disabilities. The Department of Labor supports and encourages States to find the methods and means of ensuring that job-seekers with disabilities and business individuals with disabilities can access the

employment related information and use the new Internet tools for labor exchange.

6. **Action.** Recipients should review the location and placement of AJB/ATB workstations available to the public to ensure they are accessible to and usable by individuals with disabilities. Further, recipients should develop and implement strategies to accommodate the specific limitations of individuals with disabilities, including auxiliary aids and staff-assisted services. The determination as to the appropriate accommodation should be made in consultation with the individual with the disability, and may include other interested individuals or groups. Resources listed in 7. can assist the recipient in this regard. Finally, the Department recommends that a three-way partnership of the USDOL, State rehabilitation agencies and local disability advocacy agencies can develop ways to ensure access to service for individuals with disabilities. These activities should be undertaken with the assistance of the SESA Equal Opportunity Officer.

7. **Resources.** ETA's affirmative efforts to ensure access to the AJB/ATB system for individuals with disabilities include partnering with the National Federation of the Blind to develop a voice-based system to access AJB and to conduct regional accessibility conferences. In addition, ETA established the One-Stop Disability Initiative in recognition of the fact that the One-Stop Career Center System presents unique challenges as well as opportunities to provide improved services to individuals with disabilities.

A One-Stop Disability Initiative web site, found at [www.ttrc.doleta.gov/onestop/dslstp.htm](http://www.ttrc.doleta.gov/onestop/dslstp.htm), is a good source for information on this issue. It includes the full text of the publication Technology and Serving Individuals with Special Needs presented by the Electronic One-Stop (EOS) Steering Committee. That publication includes a list of EOS Usability Principles which offers a general framework for the "look and feel" of EOS systems.

The One-Stop Disability Initiative website also provides a link to information on disability issues in general found on the DOL Disability Initiative website.

<http://www.doleta.gov/access/>

There are several other Internet web sites which are recommended for those in need of additional information, including:



The Civil Rights Center (CRC):

<http://www.dol.gov/dol/oasam/public/regs/main.htm>

CRC is the agency within DOL that enforces section 504, section 167 and, under some circumstances, Title II of the ADA. The site includes laws, regulations and technical assistance related to disability.

The Department of Justice (DOJ) ADA home page:

<http://www.usdoj.gov/crt/ada/adahom1.htm>

DOJ enforces Titles II and III of the ADA. The site includes laws, regulations and technical assistance related to those two sections as well as links to other disability-related sites.

The Equal Employment Opportunity Commission (EEOC):

<http://www.eeoc.gov/>

The EEOC enforces Title I of the ADA and has information related to that Title.

The Job Accommodation Network (JAN):

<http://janweb.icdi.wvu.edu/>

JAN is a federally-funded program to advise employers as well as employees with disabilities on accommodations that are available to assist the worker in the performance of his or her job. JAN maintains a database of thousands of accommodations that have been provided to callers in the past.

ADA links:

<http://www.public.iastate.edu/~sbilling/ada.html>

The Iowa State University has compiled links to over 100 different websites of value to individuals with disabilities. Information on the ADA, products and services, communications, specific disabilities, legal resources and more are included on this extensive page.

The President's Committee on Employment of People with Disabilities (PCEPD):

<http://www.pcepd.gov/>

PCEPD is a resource office within the Federal government focusing on disability issues and workers with disabilities. The PCEPD provides information and advice to both employers and individuals with disabilities, setting up and participating in a variety of other conferences and activities throughout the year.

8. **Inquiries**. Questions should be addressed to Everette West of CRC by e-mail at the following address: [west-everette@dol.gov](mailto:west-everette@dol.gov).

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# *O\*NET™ 98 Data Dictionary*

## *Glossary*





# *O\*NET™ 98 Data Dictionary*

## *Glossary*

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| <b>Ability</b>                   | Enduring attributes of the individual that influence performance. Abilities are regarded as traits in that they exhibit some degree of stability over relatively long periods of time. It is recognized, however, that abilities may develop over time and with exposure to multiple situations (Snow & Lohman, 1984). Underlying abilities are related to the rate of acquisition and final levels of performance that a person can achieve in particular skills. |
| <b>Achievement Orientation</b>   | Job requires personal goal setting, trying to succeed at those goals, and striving to be competent in own work. Includes Achievement/Effort, Persistence, and Initiative.  |
| <b>Achievement/ Effort</b>       | Job requires establishing and maintaining personally challenging achievement goals, and exerting effort toward task mastery.   |
| <b>Active Learning</b>           | Working with new material or information to grasp its implications.  |
| <b>Active Listening</b>          | Listening to what other people are saying and asking questions as appropriate.   |
| <b>Adaptability/ Flexibility</b> | Job requires being open to change (positive or negative) and to considerable variety in the workplace.   |
| <b>Adjustment</b>                | Job requires maturity, poise, flexibility, and restraint to cope with pressure, stress, criticism, setbacks, personal and work-related problems, etc. Includes Self Control, Stress Tolerance, and Adaptability/Flexibility.   |
| <b>Administering</b>             | What administrative, staffing, monitoring, or controlling activities are done while performing this job? Includes Performing Administrative Activities; Staffing Organizational Units; and Monitoring and Controlling Resources.   |

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| <b>Administration and Management</b>   | Knowledge of principles and processes involved in business and organizational planning, coordination, and execution. This includes strategic planning, resource allocation, manpower modeling, leadership techniques, and production methods.   |
| <b>Adversarial Roles</b>               | Importance of interpersonal contacts requiring the worker to state, defend, or advocate some goal or objective in opposition to others'. Job activities may involve negotiation to a compromise, but the emphasis is on the taking of a position opposed to that taken by others of equal or similar power. |
| <b>Analytical Thinking</b>             | Job requires analyzing information, and using logic to address work or job issues and problems.   |
| <b>Analyzing Data or Information</b>   | Identifying underlying principles, reasons, or facts by breaking down information or data into separate parts.  |
| <b>Arm-Hand Steadiness</b>             | The ability to keep the hand and arm steady while making an arm movement or while holding the arm and hand in one position.   |
| <b>Artistic</b>                        | The extreme type here is artistically oriented, and likes to work in artistic settings that offer many opportunities for self-expression.   |
| <b>Arts and Humanities</b>             | Knowledge of facts and principles related to the branches of learning concerned with human thought, language, and the arts. Includes English Language, Foreign Language, Fine Arts, History and Archeology, and Philosophy and Theology.  |
| <b>Assisting and Caring for Others</b> | Providing assistance or personal care to others.  |
| <b>Attention to Detail</b>             | Job requires being careful about detail and thorough in completing work tasks.  |
| <b>Attentiveness</b>                   | Abilities related to application of attention. Includes Selective Attention and Time Sharing.   |
| <b>Auditory and Speech Abilities</b>   | Abilities related to auditory and oral input. Includes Hearing Sensitivity, Auditory Attention, Sound Localization, Speech Recognition, and Speech Clarity.   |
| <b>Auditory Attention</b>              | The ability to focus on a single source of auditory (hearing) information in the presence of other distracting sounds.  |

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| <b>Autonomy</b>                           | The degree of independence one has on his/her job.  |
| <b>Availability of Goal Feedback</b>      | The extent to which an individual is given periodic feedback regarding his or her progress toward goals.  |
| <b>Basic Skills</b>                       | Developed capacities that facilitate learning or the more rapid acquisition of knowledge. Basic skills are subdivided into Content and Process Skills.  |
| <b>Benefit Elements</b>                   | The extent to which employees' compensation includes benefits such as pensions, insurance, paid leave, awards and bonuses, pay for time not worked.   |
| <b>Biology</b>                            | Knowledge of plant and animal living tissue, cells, organisms, and entities, including their functions, interdependencies, and interactions with each other and the environment.  |
| <b>Body Positioning</b>                   | Extent to which the worker sits, stands, walks, climbs, etc.  |
| <b>Building and Construction</b>          | Knowledge of materials, methods, and the appropriate tools to construct objects, structures, and buildings.   |
| <b>Business and Management</b>            | Knowledge of principles and facts related to business administration and accounting, human and material resource management in organizations, sales and marketing, economics, and office information and organizing systems. Includes Administration and Management, Clerical, Economics and Accounting, Sales and Marketing, Customer and Personal Service, and Personnel and Human Resources. |
| <b>Category Flexibility</b>               | The ability to produce many rules so that each rule tells how to group (or combine) a set of things in a different way.   |
| <b>Change in Organizational Structure</b> | The frequency with which the organizational structure and related documents (e.g., the organizational chart) are revised.   |
| <b>Chemistry</b>                          | Knowledge of the composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.   |

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| <b>Clerical</b>   | Knowledge of administrative and clerical procedures and systems such as word processing systems, filing and records management systems, stenography and transcription, forms design principles, and other office procedures and terminology.  |
| <b>Coaching and Developing Others</b>                         | Identifying developmental needs of others and coaching or otherwise helping others to improve their knowledge or skills.  |
| <b>Cognitive Abilities</b>                                    | Abilities that influence the acquisition and application of knowledge in problem solving. Includes Verbal Abilities, Idea Generation and Reasoning Abilities, Quantitative Abilities, Perceptual Abilities, and Spatial Abilities.  |
| <b>Communicating with Persons Outside the Organization</b>    | Communicating with persons outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged face-to-face, in writing, or via telephone/electronic transfer.  |
| <b>Communicating with Supervisors, Peers, or Subordinates</b> | Providing information to supervisors, fellow workers, and subordinates. This information can be exchanged face-to-face, in writing, or via telephone/electronic transfer.   |
| <b>Communicating/ Interacting</b>                             | What interactions with other people occur while performing this job? Includes Interpreting the Meaning of Information for Others; Communicating with Supervisors, Peers, or Subordinates; Communicating with Persons Outside the Organization; Establishing and Maintaining Interpersonal Relationships; Assisting and Caring for Others; Selling or Influencing Others; Resolving Conflicts and Negotiating with Others; and Performing for or Working Directly with the Public. |
| <b>Communication</b>  | Types and frequency of interactions with other people that are required as part of this job. Includes Formality of Communication; Communication Methods; Objective or Subjective Information; Job-Required Social Interaction; and Privacy of Communications.   |
| <b>Communication Method</b>                                   | The extent to which the job requires a variety of communication methods, including face-to-face, public speaking, video conferencing, voice mail, telephone, interactive computer communication, electronic mail, handwritten notes or messages, letters or memos, and written reports.   |
| <b>Communications</b>   | Knowledge of the science and art of delivering information. Includes Telecommunications; and Communications and Media.  |
| <b>Communications and Media</b>                               | Knowledge of media production, communication, and dissemination techniques and methods including alternative ways to inform and entertain via written, oral, and visual media.  |

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| <b>Compensation Elements</b>          | The extent to which organizations reward individuals based on certain criteria such as: (a) knowledge, skills, and performance, (b) seniority, (c) team performance, (d) organizational performance, and (e) job attributes.   |
| <b>Competency</b>                     | “An underlying characteristic of an individual which is causally related to effective or superior performance in a job” (Boyatzis, 1982).  |
| <b>Competency</b>                     | “An underlying characteristic of an individual which is causally related to effective or superior performance in a job” (Boyatzis, 1982).  |
| <b>Complex Problem Solving Skills</b> | Developed capacities used to solve novel, ill-defined problems in complex, real-world settings. Includes Problem Identification, Information Gathering, Information Organization, Synthesis/Reorganization, Idea Generation, Idea Evaluation, Implementation Planning, and Solution Appraisal. |
| <b>Computers and Electronics</b>      | Knowledge of electric circuit boards, processors, chips, and computer hardware and software, including applications and programming.   |
| <b>Concern for Others</b>             | Job requires being sensitive to others’ needs and feelings, and being understanding and helpful on the job.  |
| <b>Conflictual Contact</b>            | Amount of conflict that the worker will encounter as part of this job. Includes Frequency in Conflict Situations; Deal with Unpleasant/Angry People; and Deal with Physical Aggressive People.   |
| <b>Conscientiousness</b>              | Job requires dependability, commitment to doing the job correctly and carefully, and being trustworthy, accountable, and attentive to details. Includes Dependability, Attention to Detail, and Integrity.   |
| <b>Consequence of Error</b>           | Breadth and severity of outcomes resulting from errors made by the worker.   |
| <b>Consideration</b>                  | The extent to which the immediate supervisor acts in a friendly and supportive manner.   |
| <b>Content Skills</b>                 | Background structures needed to work with and acquire more specific skills in a variety of different domains. Includes Reading Comprehension, Active Listening, Writing, Speaking, Mathematics, and Science.   |
| <b>Control Movement Abilities</b>     | Abilities related to the control and manipulation of objects in time and space. Includes Control Precision, Multilimb Coordination, Response Orientation, and Rate Control.  |

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| <b>Control Precision</b>  | The ability to quickly and repeatedly make precise adjustments in moving the controls of a machine or vehicle to exact positions.  |
| <b>Controlling Machines and Processes</b>                         | Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).  |
| <b>Conventional</b>   | Extremes of this type prefer the highly ordered activities, both verbal and numerical, that characterize office work.  |
| <b>Cooperation</b>  | Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude encourages people to work together.   |
| <b>Coordinating the Work and Activities of Others</b>             | Coordinating members of a work group to accomplish tasks.  |
| <b>Coordinating/<br/>Developing/Managing/<br/>Advising Others</b> | What coordinating, managerial, or advisory activities are done while performing this job? Includes Coordinating the Work and Activities of Others; Developing and Building Teams; Teaching Others; Guiding, Directing, and Motivating Subordinates; Coaching and Developing Others; and Providing Consultation and Advice to Others. |
| <b>Coordination</b>   | Adjusting actions in relation to others' actions.  |
| <b>Critical Thinking</b>  | Using logic and analysis to identify the strengths and weaknesses in different approaches.   |
| <b>Criticality of Position</b>                                    | Amount of impact the worker has on final products and their outcomes. Includes Consequence of Error; Impact of Decisions; Responsibility/Accountability; and Decision Latitude.  |
| <b>Cross-Functional Skills</b>                                    | Developed capacities that facilitate performance of activities that occur across jobs. Includes Complex Problem Solving Skills, Social Skills, Technical Skills, Systems Skills, and Resource Management Skills.   |
| <b>Customer and Personal Service</b>                              | Knowledge of principles and processes for providing customer and personal services including needs assessment techniques, quality service standards, alternative delivery systems, and customer satisfaction evaluation techniques.  |
| <b>Deal with Physically Aggressive People</b>                     | How frequently does this job require the worker to deal with physical aggression of violent individuals?   |

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| <b>Decentralization (Arthur, 1994) and Employee Empowerment (Spreitzer, 1992)</b> | The degree of influence incumbents have on organizational decision making.  |
| <b>Decision Latitude</b>  | Level of responsibility assigned to the job to be exercised by the worker, including the level of decision making which must be approved by others before action can proceed. |
| <b>Deductive Reasoning</b>  | The ability to apply general rules to specific problems to come up with logical answers. It involves deciding if an answer makes sense.                                       |
| <b>Degree of Automation</b>   | Degree to which significant job functions are automated and require little input from the worker beyond monitoring.   |
| <b>Dependability</b>  | Job requires being reliable, responsible, and dependable, and fulfilling obligations.   |
| <b>Depth Perception</b>   | The ability to judge which of several objects is closer or farther away from the observer, or to judge the distance between an object and the observer.                       |
| <b>Design</b>   | Knowledge of design techniques, principles, tools and instruments involved in the production and use of precision technical plans, blueprints, drawings, and models.          |
| <b>Design of work procedures and content</b>                                      | This area includes two constructs: Formalization and Standardization (Pugh et al., 1968).   |
| <b>Developing and Building Teams</b>  | Encouraging and building mutual trust, respect, and cooperation among team members.   |
| <b>Developing Objectives and Strategies</b>                                       | Establishing long-range objectives and specifying the strategies and actions to achieve these objectives.   |
| <b>Distractions and Interruptions</b>   | Extent to which the worker cannot expect to start and complete a task without interruptions, including the extent to which the worker has control over the interruptions.     |
| <b>Documenting and Recording Information</b>                                      | Entering, transcribing, recording, storing, or maintaining information in either written form or by electronic/magnetic recording.  |

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| <b>Drafting, Laying-Out, and Specifying Technical Devices, Parts, and Equipment</b> | Providing documentation, detailed instructions, drawings, or specifications to inform others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.                    |
| <b>Dynamic Flexibility</b>  | The ability to quickly and repeatedly bend, stretch, twist, or reach out with the body, arms, and/or legs.  |
| <b>Dynamic Strength</b>   | The ability to exert muscle force repeatedly or continuously over time. This involves muscular endurance and resistance to muscle fatigue.  |
| <b>Economics and Accounting</b>   | Knowledge of economic and accounting principles and practices, the financial markets, banking, and the analysis and reporting of financial data.  |
| <b>Education and Training</b>   | Knowledge of instructional methods and training techniques including curriculum design principles, learning theory, group and individual teaching techniques, design of individual development plans, and test design principles.               |
| <b>Endurance</b>  | The ability to exert oneself physically over long periods without getting out of breath. Includes Stamina.  |
| <b>Energy</b>   | Job requires the energy and stamina to accomplish work tasks.   |
| <b>Engineering and Technology</b>   | Knowledge of the design, development, and application of technology for specific purposes. Includes Computers and Electronics, Engineering and Technology, Design, Building and Construction, and Mechanical.                                   |
| <b>Engineering and Technology</b>   | Knowledge of equipment, tools, mechanical devices, and their uses to produce motion, light, power, technology, and other applications.  |
| <b>English Language</b>   | Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.  |
| <b>Enterprising</b>   | The extreme type of this theme has a great facility with words, especially in selling, dominating, and leading; frequently these people are in sales work.  |
| <b>Environmental Conditions</b>   | Description of extreme environmental conditions the worker will be placed in as part of this job. Includes Exposure to Extreme Environmental Conditions; Exposure to Job Hazards; Possibility of Injury from Job Hazards; and Impact of Injury. |



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| <b>Equipment Maintenance</b>   | Performing routine maintenance and determining when and what kind of maintenance is needed.   |
| <b>Equipment Selection</b>   | Determining the kind of tools and equipment needed to do a job.   |
| <b>Establishing and Maintaining Interpersonal Relationships</b>                      | Developing constructive and cooperative working relationships with others.  |
| <b>Estimating the Characteristics of Materials, Products, Events, or Information</b> | Estimating sizes, distances, and quantities, or determining time, costs, resources, or materials needed to perform a work activity. |
| <b>Evaluating Information For Compliance to Standards</b>                            | Evaluating information against a set of standards and verifying that it is correct.   |
| <b>Explosive Strength</b>  | The ability to use short bursts of muscle force to propel oneself (as in jumping or sprinting), or to throw an object.              |
| <b>Exposure to Extreme Environmental Conditions</b>                                  | Extent to which the work is performed under extreme temperatures, noise levels, lighting, air contaminants, or in a confined space. |
| <b>Exposure to Job Hazards</b>   | Extent to which the work is performed under hazardous conditions (e.g., radiation, disease/infection, high places, equipment).      |
| <b>Extent Flexibility</b>  | The ability to bend, stretch, twist, or reach out with the body, arms, and/or legs.   |
| <b>Extent of Individual Goal Setting</b>   | The extent to which an organization requires its members to periodically set goals.   |
| <b>Extent of Organizational Goal Setting</b>   | The extent to which an organization systematically sets organizational goals.   |

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| <b>Extent/Support of Training</b>            | The extent to which an organization makes training available to its employees and provides financial support for training activities.   |
| <b>Far Vision</b>                            | The ability to see details at a distance.   |
| <b>Feedback</b>                              | The amount of feedback one can get from doing the job.  |
| <b>Fine Arts</b>                             | Knowledge of theory and techniques required to produce, compose, and perform works of music, dance, visual arts, drama, and sculpture.  |
| <b>Fine Manipulative Abilities</b>           | Abilities related to the manipulation of objects. Includes Arm-Hand Steadiness, Manual Dexterity, and Finger Dexterity.   |
| <b>Finger Dexterity</b>                      | The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.   |
| <b>Flexibility of Closure</b>                | The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.  |
| <b>Flexibility, Balance and Coordination</b> | Abilities related to the control of gross body movements. Includes Extent Flexibility, Dynamic Flexibility, Gross Body Coordination, and Gross Body Equilibrium.  |
| <b>Fluency of Ideas</b>                      | The ability to come up with a number of ideas about a given topic. It concerns the number of ideas produced and not the quality, correctness, or creativity of the ideas.   |
| <b>Food Production</b>                       | Knowledge of techniques and equipment for planting, growing, and harvesting of food for consumption including crop rotation methods, animal husbandry, and food storage/handling techniques.                                    |
| <b>Foreign Language</b>                      | Knowledge of the structure and content of a foreign (non-English) language including the meaning and spelling of words, rules of composition and grammar, and pronunciation.  |
| <b>Formality of Communication</b>            | The extent to which communication is informal and personal (such as words spoken face to face, touching, eye contact) or formal and impersonal (such as telephone, letters, reports, memoranda, electronic mail, or facsimile). |
| <b>Formalization</b>                         | The extent to which rules, procedures and instructions are written.   |

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| <b>Frequency and Stringency of Deadlines</b>           | Extent that the job imposes frequent strict deadlines.  |
| <b>Frequency of Job-Required Social Interaction</b>    | Extent to which the worker is required to have interpersonal contact with others, including customers, trainees, supervisors, phone callers, etc.   |
| <b>Frustrating Circumstances</b>                       | Extent to which the worker's goal-oriented behavior is blocked by impediments over which the worker has little or no control.   |
| <b>Generalized Work Activity (GWA)</b>                 | An aggregation of similar job activities/behaviors that underlie the accomplishment of major work functions.  |
| <b>Generalized Work Behaviors (GWBs)</b>               | A final job analysis cluster that had “sufficient homogeneity to be descriptive of work behaviors yet possess enough heterogeneity to cover more than occupation-specific duties” (Outerbrige, 1981, p. 7). |
| <b>Geography</b>                                       | Knowledge of various methods for describing the location and distribution of land, sea, and air masses including their physical locations, relationships, and characteristics.                              |
| <b>Getting Information Needed to Do the Job</b>        | Observing, receiving, and otherwise obtaining information from all relevant sources.  |
| <b>Glare Sensitivity</b>                               | The ability to see objects in the presence of glare or bright lighting.   |
| <b>Goals</b>   | Includes both Individual Goal Setting and Organizational Goal Setting.  |
| <b>Gross Body Coordination</b>                         | The ability to coordinate the movement of the arms, legs, and torso together in activities where the whole body is in motion.   |
| <b>Gross Body Equilibrium</b>                          | The ability to keep or regain one’s body balance to stay upright when in an unstable position.  |
| <b>Group Socialization</b>                             | The extent to which formal programs exist that involve socializing employees in groups.   |
| <b>Guiding, Directing, and Motivating Subordinates</b> | Providing guidance and direction to subordinates, including setting performance standards and monitoring subordinates.  |

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| <b>Handling and Moving Objects</b>               | Using one's own hands and arms in handling, installing, forming, positioning, and moving materials, or in manipulating things, including the use of keyboards.  |
| <b>Health Services</b>                           | Knowledge of principles and facts regarding diagnosing, curing, and preventing disease, and improving and preserving physical and mental health and well-being. Includes Medicine and Dentistry and Therapy and Counseling.   |
| <b>Hearing Sensitivity</b>                       | The ability to detect or tell the difference between sounds that vary over broad ranges of pitch and loudness.  |
| <b>Hierarchy</b>                                 | The vertical structure of an organization (e.g., number of management levels).  |
| <b>History and Archeology</b>                    | Knowledge of past historical events and their causes, indicators, and impact on particular civilizations and cultures.  |
| <b>HR Systems and Practices</b>                  | Exist to ensure that an organization has employees who are capable of meeting its goals. It can be broken down into Recruitment and Selection practices (Cascio, 1987; Rynes, 1991), Socialization Tactics (e.g., Van Maanen & Schein, 1979), Training and Development (Campbell, 1988; Goldstein, 1991, 1993), and Reward Systems (Lawler & Jenkins, 1992; Gerhart & Milkovich, 1992). |
| <b>Idea Evaluation</b>                           | Evaluating the likely success of an idea in reaction to the demands of the situation.   |
| <b>Idea Generation</b>                           | Generating a number of different approaches to problems.  |
| <b>Idea Generation and Reasoning Abilities</b>   | Abilities that influence the application and manipulation of information in problem solving. Includes Fluency of Ideas, Originality, Problem Sensitivity, Deductive Reasoning, Inductive Reasoning, Information Ordering, and Category Flexibility.   |
| <b>Identification of Downstream Consequences</b> | Determining the long-term outcomes of a change in operations.   |
| <b>Identification of Key Causes</b>              | Identifying the things that must be changed to achieve a goal.  |

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| <b>Identifying and Evaluating Job Related Information</b> | How is information interpreted to perform this job? Includes Identifying Objects, Actions, and Events; Inspecting Equipment, Structures, or Materials; and Estimating the Characteristics of materials, Products, Events, or Information.   |
| <b>Identifying Objects, Actions, and Events</b>           | Identifying information received by making estimates or categorizations, recognizing differences or similarities, or sensing changes in circumstances or events.  |
| <b>Impact of Decisions</b>                                | Breadth and impact of results of the decisions required of a worker.  |
| <b>Impact of Injury</b>                                   | The likely extent, duration, and seriousness of injuries possible to be received on the job.  |
| <b>Implementation Planning</b>                            | Developing approaches for implementing an idea.   |
| <b>Implementing Ideas, Programs, Systems, or Products</b> | Conducting or carrying out work procedures and activities in accord with one's own ideas or information provided through directions/ instructions for purposes of installing, modifying, preparing, delivering, constructing, integrating, finishing, or completing programs, systems, structures, or products. |
| <b>Independence</b>                                       | Job requires being autonomous, following own way of doing things, guiding oneself with little or no supervision, and depending mainly on oneself to get things done.  |
| <b>Individual Goal Negotiability</b>                      | The extent to which employees are allowed to participate in setting their own goals.  |
| <b>Individual Goal Setting</b>                            | Includes Extent of Individual Goal Setting, Individual Goal Specificity, Availability of Goal Feedback, and Individual Goal Negotiability.  |
| <b>Individual Goal Specificity</b>                        | The extent to which an individuals goals are made explicit.   |
| <b>Individual versus Team Structure</b>                   | The extent to which teams are used to accomplish organizational goals.  |
| <b>Individualized Socialization</b>                       | The extent to which formal programs exist that involve socializing employees individually.  |

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| <b>Inductive Reasoning</b>                            | The ability to combine separate pieces of information, or specific answers to problems, to form general rules or conclusions. It includes coming up with a logical explanation for why a series of seemingly unrelated events occur together.              |
| <b>Information Gathering</b>                          | Knowing how to find information and identifying essential information.   |
| <b>Information Ordering</b>                           | The ability to correctly follow a given rule or set of rules in order to arrange things or actions in a certain order. The things or actions can include numbers, letters, words, pictures, procedures, sentences, and mathematical or logical operations. |
| <b>Information Organization</b>                       | Finding ways to structure or classify multiple pieces of information.  |
| <b>Information Sharing</b>                            | The extent to which the organization shares different kinds of information with employees (Lawler, Mohrman, & Ledford, 1992).  |
| <b>Information/Data Processing</b>                    | How is information processed to perform this job? Includes Judging the Qualities of Objects, Services, or Persons; Evaluating information for Compliance to Standards, Processing Information; and Analyzing Data or Information.                          |
| <b>Initiative</b>                                     | Job requires being willing to take on job responsibilities and challenges.   |
| <b>Innovation</b>                                     | Job requires creativity and alternative thinking to come up with new ideas for and answers to work-related problems.   |
| <b>Inspecting Equipment, Structures, or Materials</b> | Inspecting or diagnosing equipment, structures, or materials to identify the causes of errors or other problems or defects.  |
| <b>Installation</b>                                   | Installing equipment, machines, wiring, or programs to meet specifications.  |
| <b>Instructing</b>                                    | Teaching others how to do something.   |
| <b>Integrity</b>                                      | Job requires being honest and avoiding unethical behavior.   |
| <b>Interacting With Computers</b>                     | Controlling computer functions by using programs, setting up functions, writing software, or otherwise communicating with computer systems.  |

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| <b>Interpersonal Conflict</b>                                 | Extent to which the job structure itself creates a role for the worker that inevitably places him/her in conflict with others (e.g., police officer making an arrest, utility worker collecting overdue bills, labor relations manager dealing with grievances). |
| <b>Interpersonal Orientation</b>                              | Job requires being pleasant, cooperative, sensitive to others, easy to get along with, and having a preference for associating with other organization members. Includes Cooperative, Caring, and Social Orientation.  |
| <b>Interpersonal Relationships</b>                            | This category describes the context of the job in terms of human interaction processes. Includes four second-order factors: Communication, Role Relationships, Responsibility for Others, and Conflictual Contact.   |
| <b>Interpreting The Meaning of Information for Others</b>     | Translating or explaining what information means and how it can be understood or used to support responses or feedback to others.  |
| <b>Investigative</b>  | This theme centers around science and scientific activities. Extremes of this type are task-oriented; they are not particularly interested in working around other people.   |
| <b>Job characteristics</b>                                    | Aspects of employees' jobs that are associated with job enrichment (Hackman & Oldham, 1980). The five core job characteristics were included in the taxonomy: Skill Variety, Task Significance, Task Identity, Autonomy, and Feedback.                           |
| <b>Job Rotation</b>   | The extent to which an organization uses job rotation to develop employee skills.  |
| <b>Judging the Qualities of Objects, Services, or Persons</b> | Making judgments about or assessing the value, importance, or quality of things or people.   |
| <b>Judgment and Decision Making</b>                           | Weighing the relative costs and benefits of a potential action.  |
| <b>Knowledge</b>  | Organized sets of principles and facts applying in general domains.  |

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| <b>Law and Public Safety</b>                             | Knowledge of regulations and methods for maintaining people and property free from danger, injury, or damage; the rules of public conduct established and enforced by legislation, and the political process establishing such rules. Includes Public Safety and Security; and Law, Government, and Jurisprudence. |
| <b>Law, Government and Jurisprudence</b>                 | Knowledge of law, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process.   |
| <b>Leadership</b>  | Includes Consideration and Task-Orientation.   |
| <b>Leadership Orientation</b>                            | Job requires a willingness to lead, take charge, and offer opinions and direction.   |
| <b>Learning Strategies</b>                               | Using multiple approaches when learning or teaching new things.  |
| <b>Level of Competition</b>                              | Extent job requires the worker to compete or be aware of competitive pressures.  |
| <b>Looking For and Receiving Job Related Information</b> | How is information obtained to perform this job? Includes Getting Information Needed to Do the Job; and Monitoring Processes, Materials, or Surroundings.  |
| <b>Machine Driven Work Pace</b>                          | Extent to which the work pace is machine driven or controlled by the speed of process, such as assembly lines, leaving the worker little control over it.  |
| <b>Making Decisions and Solving Problems</b>             | Combining, evaluating, and reasoning with information and data to make decisions and solve problems. These processes involve making decisions about the relative importance of information and choosing the best solution.   |
| <b>Management of Financial Resources</b>                 | Determining how money will be spent to get the work done, and accounting for these expenditures.   |
| <b>Management of Material Resources</b>                  | Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.   |
| <b>Management of Personnel Resources</b>                 | Motivating, developing, and directing people as they work, identifying the best people for the job.  |



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| <b>Manual Dexterity</b>                          | The ability to quickly make coordinated movements of one hand, a hand together with the arm, or two hands to grasp, manipulate, or assemble objects.  |
| <b>Manufacturing and Production</b>              | Knowledge of principles and facts related to the production, processing, storage, and distribution of manufactured and agricultural goods. Includes Production and Processing and Food Production.  |
| <b>Mathematical Reasoning</b>                    | The ability to understand and organize a problem and then to select a mathematical method or formula to solve the problem.  |
| <b>Mathematics</b>                               | Using mathematics to solve problems.  |
| <b>Mathematics</b>                               | Knowledge of numbers, their operations, and interrelationships including arithmetic, algebra, geometry, calculus, statistics, and their applications.   |
| <b>Mathematics and Science</b>                   | Knowledge of the history, theories, methods, and applications of the physical, biological, social, mathematical, and geography. Includes Mathematics, Physics, Chemistry, Biology, Psychology, Sociology and Anthropology, and Geography. |
| <b>Mechanical</b>                                | Knowledge of machines and tools, including their designs, uses, benefits, repair, and maintenance.  |
| <b>Medicine and Dentistry</b>                    | Knowledge of the information and techniques needed to diagnose and treat injuries, diseases, and deformities. This includes symptoms, treatment alternatives, drug properties and interactions, and preventive health-care measures.      |
| <b>Memorization</b>                              | The ability to remember information such as words, numbers, pictures, and procedures.   |
| <b>Memory</b>                                    | Abilities related to the recall of available information.   |
| <b>Miscellaneous High-Performance Constructs</b> | Organizational characteristics thought to be characteristic of high-performance organizations. Includes Use of Independent Contractors, Change in Organizational Structure, and Use of Data.  |
| <b>Monitoring</b>                                | Assessing how well one is doing when learning or doing something.   |

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| <b>Monitoring and Controlling Resources</b>                 | Monitoring and controlling resources and overseeing the spending of money.   |
| <b>Monitoring Processes, Materials, or Surroundings</b>     | Monitoring and reviewing information from materials, events, or the environment, often to detect problems or to find out when things are finished.   |
| <b>Monotony/ Repetitive Activities</b>                      | Extent to which the worker is required to perform the same physical and/or mental activities repeatedly, in a relatively short period of time, usually less than one hour.   |
| <b>Multilimb Coordination</b>                               | The ability to coordinate movements of two or more limbs together (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down. It does not involve performing the activities while the body is in motion. |
| <b>Near Vision</b>  | The ability to see details of objects at a close range (within a few feet of the observer).  |
| <b>Negotiation</b>  | Bring others together and trying to reconcile differences.   |
| <b>Night Vision</b>   | The ability to see under low light conditions.   |
| <b>Number Facility</b>                                      | The ability to add, subtract, multiply, or divide quickly and correctly.   |
| <b>Objectivity of Information Communicated</b>              | The extent to which the job requires the communication of emotionally/ psychologically valued subjective information, feelings, thoughts, and ideas versus the communication of objective and verifiable data-based information.               |
| <b>Occupational Interests</b>                               | Interests are tendencies that vary in strength and duration and are related to attention, experience, and satisfaction. Interests tend to refer to the like or dislike of activities.  |
| <b>Occupational Values</b>                                  | Importance of particular types of on-the-job outcomes.   |
| <b>Operating Vehicles, Mechanized Devices, or Equipment</b> | Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.  |
| <b>Operation and Control</b>                                | Controlling operations of equipment or systems.  |

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| <b>Operation Monitoring</b>                        | Watching gauges, dials, or other indicators to make sure a machine is working properly.  |
| <b>Operations Analysis</b>                         | Analyzing needs and product requirements to create a design.   |
| <b>Oral Comprehension</b>                          | The ability to listen to and understand information and ideas presented through spoken words and sentences.  |
| <b>Oral Expression</b>                             | The ability to communicate information and ideas in speaking so others will understand.  |
| <b>Organizational Context</b>                      | Descriptive information about the organizations in which jobs occur. Includes Structural Characteristics, Social Processes, and Type of Industry.  |
| <b>Organizational Culture</b>                      | Organizational Culture is often regarded as a general label for social and behavioral patterns observed in organizations. Culture typically is thought of as composed of shared assumptions, values, norms, and artifacts. Includes Organizational Values and Goals. |
| <b>Organizational Goal Setting</b>                 | Includes Extent of Organizational Goal Setting and Organizational Goal Specificity.  |
| <b>Organizational Goal Specificity</b>             | The extent to which an organization's goals are made explicit.   |
| <b>Organizational Size</b>                         | The scope of human and capital resources.  |
| <b>Organizational Structure</b>                    | The architecture or the anatomy of an organization. Includes Organizational Size, Vertical and Horizontal Differentiation, Design of Work Procedures and Content, Decision Making System, and Job Characteristics.   |
| <b>Organizational Values</b>                       | The hierarchy of values that guide an organization. The importance of certain values such as tradition, stability, innovation, and collaboration.  |
| <b>Organizing, Planning, and Prioritizing Work</b> | Developing plans to accomplish work, and prioritizing and organizing one's own work.   |
| <b>Originality</b>                                 | The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.  |

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| <b>Pace and Scheduling</b>                                | Description of the role that time plays in the way the worker performs the tasks required by this job. Includes Frequency and Stringency of Deadlines; Distractions and Interruptions; and Machine Driven Work Pace.  |
| <b>Perceptual Abilities</b>                               | Abilities related to the acquisition and organization of visual information. Includes Speed of Closure, Flexibility of Closure, and Perceptual Speed.   |
| <b>Perceptual Speed</b>                                   | The ability to quickly and accurately compare letters, numbers, objects, pictures, or patterns. The things to be compared may be presented at the same time or one after the other. This ability also includes comparing a presented object with a remembered object.   |
| <b>Performing Administrative Activities</b>               | Approving requests, handling paperwork, and performing day-to-day administrative tasks.   |
| <b>Performing Complex/ Technical Activities</b>           | What skilled activities using coordinated movements are done to perform this job? Includes Interacting with Computers; Drafting, Laying-Out, and Specifying Technical Devices, Parts, and Equipment; Implementing Ideas, Programs, Systems, or Products; Repairing and Maintaining Mechanical Equipment; Repairing and Maintaining Electronic Equipment; and Documenting and Recording Information. |
| <b>Performing for or Working Directly With the Public</b> | Performing for people or dealing directly with the public, including serving persons in restaurants and stores, and receiving clients or guests.  |
| <b>Performing General Physical Activities</b>             | Performing physical activities that require moving one's whole body, such as in climbing, lifting, balancing, walking, stooping, where the activities often also require considerable use of the arms and legs, such as in the physical handling of materials.  |
| <b>Performing Physical and Manual Work Activities</b>     | What activities using the body and hands are done to perform this job? Includes performing General Physical Activities; Handling and Moving Objects; Controlling Machines and Processes; and Operating Vehicles, Mechanized Devices, or Equipment.  |
| <b>Peripheral Vision</b>                                  | The ability to see objects or movement of objects to one's side when the eyes are focused forward.  |
| <b>Persistence</b>  | Job requires persistence in the face of obstacles on the job.   |

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| <b>Personnel and Human Resources</b>          | Knowledge of policies and practices involved in personnel/human resources functions. This includes recruitment, selection, training, and promotion regulations and procedures; compensation and benefits packages; labor relations and negotiation strategies; and personnel information systems. |
| <b>Persuasion</b>                             | Persuading others to approach things differently.   |
| <b>Philosophy and Theology</b>                | Knowledge of different philosophical systems and religious, including their basic principles, values, ethics, ways of thinking, customs, and practices, and their impact on human culture.  |
| <b>Physical Abilities</b>                     | Abilities that influence strength, endurance, flexibility, balance and coordination. Includes Physical Strength Abilities, Endurance, Flexibility, Balance, and Coordination.   |
| <b>Physical Proximity</b>                     | The extent to which the job requires the worker to perform job tasks in close physical proximity to other people.   |
| <b>Physical Strength Abilities</b>            | Abilities related to the capacity to exert force. Includes Static Strength, Explosive Strength, Dynamic Strength, and Trunk Strength.   |
| <b>Physical Work Conditions</b>               | This category describes the work context as it relates to the interactions between the worker and the physical job environment. Includes the Work Setting; the Environmental Conditions; and Job Demands.   |
| <b>Physics</b>                                | Knowledge and prediction of physical principles, laws, and applications including air, water, material dynamics, light, atomic principles, heat, electric theory, earth formations, and meteorological and related natural phenomena.   |
| <b>Possibility of Injury from Job Hazards</b> | The likelihood the worker will be injured while working under hazardous conditions.   |
| <b>Practical Intelligence</b>                 | Job requires generating useful ideas and thinking things through logically. Includes Innovate and Analytical.   |
| <b>Preference</b>                             | Choices among options.  |
| <b>Privacy of Communication</b>               | The extent an individual's work materials and communications (face-to-face, phone, fax, e-mail, etc.) can be monitored by others.   |

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| <b>Privacy of Work Area</b>                        | The extent to which the work area is private.  |
| <b>Problem Identification</b>                      | Identifying the nature of problems.  |
| <b>Problem Sensitivity</b>                         | The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.  |
| <b>Problem Solving</b>                             | The extent to which the immediate supervisor solves difficult problems quickly and effectively.  |
| <b>Process Skills</b>                              | Procedures that contribute to the more rapid acquisition of knowledge and skill across a variety of domains. Includes Active Learning, Critical Thinking, Learning Strategies, and Monitoring. |
| <b>Processing Information</b>                      | Compiling, coding, categorizing, calculating, tabulating, auditing, verifying, or processing information or data.  |
| <b>Product Inspection</b>                          | Inspecting and evaluating the quality of products.   |
| <b>Production and Processing</b>                   | Knowledge of inputs, outputs, raw materials, waste, quality control, costs, and techniques for maximizing the manufacture and distribution of goods.   |
| <b>Programming</b>                                 | Writing computer programs for various purposes.  |
| <b>Providing Consultation and Advice to Others</b> | Providing consultation and expert advice to management or other groups on technical, systems-related, or process-related topics.   |
| <b>Psychology</b>                                  | Knowledge of human behavior and performance, mental processes, psychological research methods, and the assessment and treatment of behavioral and affective disorders.                         |
| <b>Psychomotor Abilities</b>                       | Abilities that influence the capacity to manipulate and control objects. Includes Fine Manipulative Abilities, Control Movement Abilities, and Reaction Time and Speed Abilities.              |
| <b>Public Safety and Security</b>                  | Knowledge of weaponry, public safety, and security operations, rules, regulations, precautions, prevention, and the protection of people, data, and property.                                  |
| <b>Quantitative Abilities</b>                      | Abilities that influence the solution of problems involving mathematical relationships. Includes Mathematical Reasoning and Number Facility.   |

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| <b>Rate Control</b>                                   | The ability to time the adjustments of a movement or equipment control in anticipation of changes in the speed and/or direction of a continuously moving object or scene.  |
| <b>Reaction Time</b>                                  | The ability to quickly respond (with the hand, finger, or foot) to one signal (sound, light, picture, etc.) when it appears.   |
| <b>Reaction Time and Speed Abilities</b>              | Abilities related to speed of manipulation of objects. Includes Reaction Time, Wrist-Finger Speed, and Speed of Limb Movement.   |
| <b>Reading Comprehension</b>                          | Understanding written sentences and paragraphs in work related documents.  |
| <b>Realistic</b>                                      | People scoring high here usually are rugged, robust, practical, physically strong; they usually have good physical skills, but sometimes have trouble expressing themselves or in communicating their feelings to others.  |
| <b>Reasoning/Decision Making</b>                      | What decisions are made and problems solved in performing this job? Includes Making Decisions and Solving Problems; Thinking Creatively; Updating and using job-Relevant Knowledge; Developing Objectives and Strategies; Scheduling Work and Activities; and Organizing, Planning, and Prioritizing Work. |
| <b>Recruitment</b>                                    | Organizational practices and decisions that affect either the number or types of individuals who are willing to apply for, or accept, a given vacancy (Rynes, 1991). Includes Recruitment Planning and Recruitment Operations (Cascio, 1987).  |
| <b>Recruitment Operations</b>                         | Activities involved in implementing recruitment plans (e.g., selecting sources, realistic job previews).   |
| <b>Recruitment Planning</b>                           | Determining staffing needs and collecting information to help ensure that those needs are met on a timely basis.   |
| <b>Repairing and Maintaining Electronic Equipment</b> | Fixing, servicing, adjusting, regulating, calibrating, fine-tuning, or testing machines, devices, and equipment that operate primarily on the basis of electrical or electronic (not mechanical) principles.   |
| <b>Repairing and Maintaining Mechanical Equipment</b> | Fixing, servicing, aligning, setting up, adjusting, and testing machines, devices, moving parts, and equipment that operate primarily on the basis of mechanical (not electronic) principles.  |

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| <b>Required Attention to Detail</b>                    | Extent to which a job requires a high level of thoroughness to ensure that nothing is left undone or that steps are not taken out of order, including attending to the details of a set of procedures, checking the completion of a series of tasks, auditing the correctness and documentation of activities or financial results. |
| <b>Required Maintenance of Vigilance</b>               | Extent to which the job requires the worker to maintain attention or alertness, either for events or circumstances which do not occur often or for those which are subject to continual change.   |
| <b>Required Precision</b>                              | Extent to which the job requires the worker to maintain a high level of accuracy and precision including both manual and mental precision.  |
| <b>Resolving Conflicts and Negotiating With Others</b> | Handling complaints, arbitrating disputes, and resolving grievances, or otherwise negotiating with others.  |
| <b>Resource Management Skills</b>                      | Developed capacities used to allocate resources efficiently. Includes Time Management, Management of Financial Resources, Management of Material Resources, and Management of Personnel Resources.  |
| <b>Response Orientation</b>                            | The ability to choose quickly and correctly between two or more movements in response to two or more different signals (lights, sounds, pictures, etc.). It includes the speed with which the correct response is started with the hand, foot, or other body parts.   |
| <b>Responsibility for Others</b>                       | Amount of responsibility the worker has for other workers as a part of this job. Includes Responsible for the Safety of Others; and Responsibility for Outcomes and Results.  |
| <b>Responsibility for the Safety of Others</b>         | Extent to which the job requires the worker to be particularly careful not to cause harm or injury to others, including the responsibility to establish policies and programs to protect others.  |
| <b>Responsibility for Work Outcomes and Results</b>    | Extent to which the job requires the worker to assume responsibility for the results of the work of others, including being responsible for the errors or failures of others.   |
| <b>Responsibility/Accountability</b>                   | Extent to which the worker's performance is judged based on the ultimate outcome of work activities, and/or results of errors and mistakes.   |
| <b>Role Conflict</b>                                   | The extent to which an individual has to deal with conflicting demands.   |
| <b>Role Negotiability</b>                              | The extent to which an individual can negotiate his/her role in an organization.  |



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| <b>Role Overload</b>                   | A discrepancy between the demands of others and one's ability to meet those demands.   |
| <b>Role Relationships</b>              | Importance of different types of interactions with others both inside and outside the organization. Includes Supervisory Roles; Sales Roles; Service Roles; Adversarial Roles; and Team Participant Roles.   |
| <b>Roles</b>                           | Sets of behaviors expected of role incumbents (Ilgen & Hollenbeck, 1991). Includes Role Conflict, Role Overload, and Role Negotiability.   |
| <b>Routine versus Challenging Work</b> | The relative amounts of routine versus challenging work the worker will perform as part of this job. Includes Frustrating Circumstances; Degree of Automation; Task Clarity; Required Precision; Required Attention to Detail; Required Maintenance of Vigilance; Monotony/Repetitive Activities; Structured versus Unstructured Work; and Level of Competition. |
| <b>Sales and Marketing</b>             | Knowledge of principles and methods involved in showing, promoting, and selling products or services. This includes marketing strategies and tactics, product demonstration and sales techniques, and sales control systems.   |
| <b>Sales Roles</b>                     | Importance of interpersonal contacts requiring the worker to engage in persuasion or influence.  |
| <b>Scheduling Work and Activities</b>  | Scheduling events, programs, activities, as well as the work of others.  |
| <b>Science</b>                         | Using scientific methods to solve problems.  |
| <b>Selection Methods</b>               | The methods used for selection or promotion of employees.  |
| <b>Selection Processes</b>             | The extent to which selection systems are based on formal job analysis and predictors are validated against criteria.  |
| <b>Selective Attention</b>             | The ability to concentrate and not be distracted while performing a task over a period of time.  |
| <b>Self Control</b>                    | Job requires maintaining composure, keeping emotions in check even in very difficult situations, controlling anger, and avoiding aggressive behavior.  |
| <b>Selling or Influencing Others</b>   | Convincing others to buy merchandise/goods, or otherwise changing their minds or actions.  |

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| <b>Sensory Abilities</b>          | Abilities that influence visual, auditory, and speech perception. Includes Visual Abilities and Auditory and Speed Abilities.   |
| <b>Service Orientation</b>        | Actively looking for ways to help people.   |
| <b>Service Roles</b>              | Importance of interpersonal interactions requiring the worker to provide others with needed services or to assist others to accomplish an objective, including customer service and advisor-client/patient relationships.   |
| <b>Skill</b>                      | A skill is a developed capacity to perform tasks.   |
| <b>Skill Variety</b>              | The extent to which one's job requires the use of multiple skills.  |
| <b>Skills</b>                     | Skills are dependent on learning and represent the product of training in particular tasks. Skills are situational and tend to improve. The development of a given skill (e.g., airplane piloting) is predicated, in part, on the individual's possession of relevant underlying abilities. |
| <b>Social</b>                     | The pure type here is sociable, responsible, humanistic, and concerned with the welfare of others.  |
| <b>Social Influence</b>           | Job requires having an impact on others in the organization, and displaying energy and leadership. Includes Energy and Leadership Orientation.  |
| <b>Social Orientation</b>         | Job requires preferring to work with others rather than alone and being personally connected with others on the job.  |
| <b>Social Perceptiveness</b>      | Being aware of others' reactions and understanding why they react the way they do.  |
| <b>Social Processes</b>           | Links human operators both to technology and to each other and includes elements such as values, goals, leadership, and roles. Includes Organizational Culture, Goals, Roles, and Leadership.   |
| <b>Social Skills</b>              | Developed capacities used to work with people to achieve goals. Includes Coordination, Instructing, Negotiation, Persuasion, Service Orientation, and Social Perceptiveness.  |
| <b>Sociology and Anthropology</b> | Knowledge of group behavior and dynamics, societal trends and influences, cultures, their history, migrations, ethnicity, and origins.  |

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| <b>Solution Appraisal</b>            | Observing and evaluating the outcomes of a problem solution to identify lessons learned or redirect efforts.   |
| <b>Sound Localization</b>            | The ability to tell the direction from which a sound originated.   |
| <b>Spatial Abilities</b>             | Abilities related to the manipulation and organization of spatial information. Includes Spatial Organization and Visualization.  |
| <b>Spatial Organization</b>          | The ability to know one's location in relation to the environment, or to know whether other objects are in relation to one's self.   |
| <b>Speaking</b>                      | Talking to others to effectively convey information.   |
| <b>Specialization</b>                | The form of division of labor.   |
| <b>Speech Clarity</b>                | The ability to speak clearly so that it is understandable to a listener.   |
| <b>Speech Recognition</b>            | The ability to identify and understand the speech of another person.   |
| <b>Speed of Closure</b>              | The ability to quickly make sense of information that seems to be without meaning or organization. It involves quickly combining and organizing different pieces of information into a meaningful pattern. |
| <b>Speed of Limb Movement</b>        | The ability to quickly move the arms or legs.  |
| <b>Staffing Organizational Units</b> | Recruiting, interviewing, selecting, hiring, and promoting persons for an organization.  |
| <b>Stamina</b>                       | The ability to exert one's self physically over long periods of time without getting winded or out of breath.  |
| <b>Standardization</b>               | The extent to which organizational behavior is controlled by procedures and regulations.   |
| <b>Static Strength</b>               | The ability to exert maximum muscle force to lift, push, pull, or carry objects.   |

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| <b>Strained Interpersonal Relations</b> | Extent to which the worker must from time to time deal with others who are discourteous, angry, hostile, or otherwise unpleasant even when the job structure does not make such encounters inevitable (e.g., food servers, customer service representatives, postal counter workers). |
| <b>Stress Tolerance</b>                 | Job requires accepting criticism, and dealing calmly and effectively with high stress situations.   |
| <b>Structural Characteristics</b>       | The process of transforming raw materials into output, and includes elements such as technology and structure. Includes Organizational Structure and Human Resources Systems and Practices.   |
| <b>Structural Job Characteristics</b>   | This category involves the relationships or interactions between the worker and the structural characteristics of the job. Includes Criticality of Position; Routine versus Challenging Work; and Pace and Scheduling.  |
| <b>Structured vs. Unstructured Work</b> | The degree to which job activities are at the discretion of the worker rather than being predetermined and requiring following directions and carrying out orders.  |
| <b>Supervisory Roles</b>                | Importance of interactions requiring the worker to assume a role of trainer, coach, leader, supervisor, manager, etc., with respect to other workers.   |
| <b>Synthesis/ Reorganization</b>        | Reorganizing information to get a better approach to problems or tasks.   |
| <b>Systems Evaluation</b>               | Looking at many indicators of system performance, taking into account their accuracy.   |
| <b>Systems Perception</b>               | Determining when important changes have occurred in a system or are likely to occur.  |
| <b>Systems Skills</b>                   | Developed capacities to understand, monitor, and improve socio-technical systems. Includes Identification of Downstream Consequences, Identification of Key Causes, Judgment and Decision Making, Systems Evaluation, Systems Perception, and Visioning.                              |
| <b>Task</b>                             | An activity that occurs in order to produce some product or outcome required on the job (Gael, 1979).   |
| <b>Task</b>                             | A task has all of the following characteristics: (a) one complete activity with a beginning and an end; (b) performed by only one person; and (c) results in an outcome that contributes to a product or service.   |

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| <b>Task Clarity</b>           | Extent to which tasks or objectives are not clearly defined or communicated.  |
| <b>Task Identity</b>          | The extent to which one's job involves doing a whole and identifiable piece of work.  |
| <b>Task Significance</b>      | The importance of one's job to society.   |
| <b>Task-Orientation</b>       | The extent to which the immediate supervisor sets goals and assigns tasks for the work group.   |
| <b>Tasks</b>                  | R. B. Miller (1967) states, "A task is any set of activities, occurring at the same time, sharing some common purpose that is recognized by the task performer" (p. 11). Wheaton (1973) proposed that a task reflects an organized set of responses to a specified stimulus situation intended to bring about the attainment of a goal state. This definition of a task is similar to one proposed by Hackman (1968) and McCormick (1979) and, more recently, by Carroll (1993), who defines a task as "an activity in which a person engages in order to achieve a specified objective or result." |
| <b>Teaching Others</b>        | Identifying educational needs, developing formal training programs or classes, and teaching or instructing others.  |
| <b>Team Participant Roles</b> | Importance of job activities requiring the worker to contribute to group accomplishment of goals or objectives, to work closely with others, to be supportive and cooperative, and to place group accomplishment ahead of individual aspirations.   |
| <b>Technical Skills</b>       | Developed capacities used to design, set-up, operate, and correct malfunctions involving application of machines or technological systems. Includes Operations Analysis, Technology Design, Equipment Selection, Installation, Programming, Testing, Operations Monitoring, Operation and Control, Product Inspection, Equipment Maintenance, Troubleshooting, and Repairing.   |
| <b>Technology Design</b>      | Generating or adapting equipment and technology to serve user needs.  |
| <b>Telecommunications</b>     | Knowledge of transmission, broadcasting, switching, control, and operation of telecommunication systems.  |
| <b>Testing</b>                | Conducting tests to determine whether equipment, software, or procedures are operating as expected.   |

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| <b>Therapy and Counseling</b>                    | Knowledge of information and techniques needed to rehabilitate physical and mental ailments and to provide career guidance including alternative treatments, rehabilitation equipment and its proper use, and methods to evaluate treatment effects.    |
| <b>Thinking Creatively</b>                       | Originating, inventing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.  |
| <b>Time Management</b>                           | Managing one's own time and the time of others.   |
| <b>Time Sharing</b>                              | The ability to efficiently shift back and forth between two or more activities or sources of information (such as speech, sounds, touch, or other sources).   |
| <b>Training Methods</b>                          | The methods used in training programs.  |
| <b>Training Topics/Content</b>                   | What trainers intend to teach trainees through training programs.   |
| <b>Transportation</b>                            | Knowledge of principles and methods for moving people or goods by air, sea, or road, including their relative costs, advantages, and limitations.   |
| <b>Trunk Strength</b>                            | The ability to use one's abdominal and lower back muscles to support part of the body repeatedly or continuously over time without "giving out" or fatiguing.   |
| <b>Type of Industry</b>                          | Based on organizational output.   |
| <b>Type of Work Teams</b>                        | The use of work teams.  |
| <b>Types of Work Settings</b>                    | Extent to which the work is performed in a variety of settings, including indoors (environmentally or not environmentally controlled), outdoors (exposed to weather conditions or under cover), in a vehicle or operating equipment (open or enclosed). |
| <b>Updating and Using Job-Relevant Knowledge</b> | Keeping up-to-date technically and knowing one's own jobs' and related jobs' functions.   |
| <b>Use of Data</b>                               | The extent to which the organization uses quantitative data to make organizational decision and invests in collecting such data.  |
| <b>Use of Data in Training</b>                   | The use of quantitative methods to identify training needs and evaluate training programs.  |

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| <b>Use of Independent Contractors</b>          | The extent to which the organization uses external consultants and contractors to accomplish work tasks.  |
| <b>Verbal Abilities</b>                        | Abilities that influence the application and manipulation of information in problem solving. Includes Oral Comprehension, Written Comprehension, Oral Expression, and Written Expression. |
| <b>Vertical and Horizontal Differentiation</b> | Includes just two constructs: Specialization and Hierarchy.   |
| <b>Visionary</b>                               | The extent to which the immediate supervisor provides a clear vision for the work group and inspires commitment.  |
| <b>Visioning</b>                               | Developing an image of how a system should work under ideal conditions.   |
| <b>Visual Abilities</b>                        | Abilities related to visual sensory input. Includes Near Vision, Far Vision, Visual Color Discrimination, Night Vision, Peripheral Vision, Depth Perception, and Glare Sensitivity.       |
| <b>Visual Color Discrimination</b>             | The ability to match or detect differences between colors, including shades of color and brightness.  |
| <b>Visualization</b>                           | The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.  |
| <b>Work Attire</b>                             | Extent to which the worker must wear various types of clothing and equipment.   |
| <b>Work Context</b>                            | Physical and social factors that influence the nature of work. Includes Interpersonal Relationships, Physical Work Conditions, and Structural Job Characteristics.                        |
| <b>Work Setting</b>                            | Description of physical surroundings that the worker will face as part of this job. Includes Types of Work Settings; Privacy of Work Area; and Physical Proximity.                        |
| <b>Work Style</b>                              | Interpersonal, personality, and personal characteristic requirements in jobs and occupations. These personal characteristics are work-related, not clinically-oriented.                   |

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| <b>Wrist-Finger Speed</b>    | The ability to make fast, simple, repeated movements of the fingers, hands, and wrists.     |
| <b>Writing</b>               | Communicating effectively with others in writing as indicated by the needs of the audience. |
| <b>Written Comprehension</b> | The ability to read and understand information and ideas presented in writing.              |
| <b>Written Expression</b>    | The ability to communicate information and ideas in writing so others will understand.      |