

# **O\*NET™ Occupational Listings**

**Database 3.1**

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## INTRODUCTION

This report provides an overview of the O\*NET-SOC classification system. It also describes the four types of listings available from the O\*NET Database 3.1:

- 1) O\*NET-SOC Occupations--Sorted Alphabetically by Title,
- 2) O\*NET-SOC Occupational Definitions--Sorted Alphabetically by Title,
- 3) O\*NET-SOC Occupations--Sorted by Code, and
- 4) O\*NET-SOC Occupational Definitions--Sorted by Code.

### Background and Overview of the Classification System

The Occupational Information Network (O\*NET) is a comprehensive database system for collecting, organizing, describing, and disseminating information on occupational characteristics and worker attributes.

The O\*NET-SOC classification was developed and incorporated into the O\*NET database in response to the Office of Management and Budget mandate that federal agencies that collect occupational data make use of a common set of occupations, the new Standard Occupational Classification (SOC) released in 2000. O\*NET-SOC builds upon the SOC framework, adding an additional level of detailed occupations where worker and occupational information supports a breakout of a detailed SOC occupation. [Note: For a description of O\*NET's transition to the SOC, *see Transitioning O\*NET to the Standard Occupational Classification*. This publication is available in PDF format (requires the free Adobe Acrobat Reader) at the National O\*NET Center web site (<http://www.onetcenter.org>).]

O\*NET-SOC includes 1166 occupational titles, of which 956 will include O\*NET data. See [figure 1](#) for a visual overview of the classification system. The SOC classification contains 821 detailed occupations. The majority of these occupations are adapted without modification into the O\*NET-SOC system (701 occupations). O\*NET identifies 120 SOC's that, based on their occupational information, are broken out into more detailed O\*NET occupations. In other words, multiple O\*NET occupations (a total of 343) are linked to these 120 SOC occupations. A simple example of an O\*NET-SOC breakout is listed below:

19-1013.00 Soil and Plant Scientists  
    19-1013.01 Plant Scientists  
    19-1013.02 Soil Scientists

In this example, the O\*NET system, based on the differences in occupational information, breaks out the SOC occupation (Soil and Plant Scientists) into two occupations: 1) Plant Scientists and 2) Soil Scientists.

O\*NET will retain and display within its classification structure the titles of the original SOC occupations that are further broken out (e.g., 19-1013.00 Soil and Plant Scientists). It will not, however, collect data for these occupations at that level. Instead, it will collect data for the more

detailed O\*NET level occupations (e.g., 19-1013.01 Plant Scientists and 19-01013.02 Soil Scientists)\*.

Similarly, O\*NET will retain and display the titles of SOC detailed residual or “all other” occupations (72 occupations such as 45-2099.99 Agricultural Workers, All Other), but will not include them within its data collection effort. Residuals include occupations not classified in an existing detailed SOC occupation. Thus, data are not included for these titles because they contain a heterogeneous group of occupations not accounted for elsewhere.

The titles of the SOC’s “military specific occupations” (e.g., 55-1014.00 Artillery and Missile Officers) will be retained and displayed within the classification structure, but also will not be included within the O\*NET data collection effort. The military services are the best resource for information on these particular occupations. Finally, two exceptional cases exist where O\*NET adds occupations at the SOC broad occupation level (11-3040.01 Human Resource Managers, Generalists and 19-1020.01 Biologists, General).

In summary, the O\*NET-SOC classification structure includes 1166 occupational titles. O\*NET will collect data on 956 of these occupations: 611 unmodified, original SOC detailed occupations; 343 detailed, breakout O\*NET occupations; and 2 exceptional cases (see the “Titles + Data” section within [figure 1](#)). O\*NET will not collect data for 210 occupations: the 120 original SOC occupations that are further broken out; the 72 residual “All Other” occupations; nor the 18 military specific occupations. The titles for these types of occupations will be maintained in the O\*NET-SOC system, however (see the “Titles Only” section within [figure 1](#)).

## **Coding Structure**

The O\*NET-SOC coding structure uses an enhanced version of the six-digit code assigned to SOC occupations (see *the Standard Occupational Classification Manual, 2000* for a detailed discussion of the SOC coding structure). O\*NET includes a two-digit extension of the SOC code. Values are assigned to the two-digit code on the following basis:

1. Extension “.00” denotes a SOC occupation.  
An extension .00 is added to the six-digit SOC code for a given occupation indicating to users which O\*NET-SOC occupations are the same as SOC occupations. In some cases, this represents an occupation where O\*NET is further broken out, and therefore the occupation is retained within the O\*NET-SOC, but will not include O\*NET data. (See number three below for a description of how detailed residual SOC’s are coded.)
2. Extension “.01, .02,.... .50” denotes a more detailed O\*NET occupation.  
One of these extensions is added to the six-digit SOC code indicating to users that the occupation is broken out from the SOC and is more detailed. In most cases these extensions are used when there is more than one occupation linked to a single detailed SOC. In a few cases, however, the extension .01 is used when only one O\*NET

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\* Six exceptions exist where data collected in the future will be gathered at the SOC level rather than for the detailed O\*NET level. The occupations where this exception occurs are noted within the occupational lists.

occupation is linked to a SOC (i.e., there is one occupation linked representing a specific part of the SOC occupation).

3. Extension “.99” denotes a SOC detailed residual occupation.

An extension .99 is added to the six-digit SOC code indicating to users that an occupation is a detailed residual SOC (a.k.a. “All other” occupation). These titles are retained within the O\*NET-SOC structure, but will not include O\*NET data.

## **Occupational Listings**

The following four O\*NET-SOC occupational listings are provided:

- 1) O\*NET-SOC Occupations--Sorted Alphabetically by Title
- 4) O\*NET-SOC Occupational Definitions--Sorted Alphabetically by Title
- 5) O\*NET-SOC Occupations--Sorted by Code
- 6) O\*NET-SOC Occupational Definitions--Sorted by Code

## 1) O\*NET-SOC Occupations--Sorted Alphabetically by Title

Provides the user with a complete listing of the O\*NET-SOC occupations and codes sorted alphabetically by title. The following example illustrates features of the listing:

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⋮  
13-2011.01 Accountants  
13-2011.00 Accountants and Auditors (*O\*NET data not collected at this level. See: 13-011.01 Accountants, 13-2012.02 Auditors*)  
27-2011.00 Actors  
15-2011.00 Actuaries  
⋮  
45-2099.99 Agricultural Workers, All Other <sup>1</sup>  
55-3011.00 Air Crew Members <sup>2</sup>  
55-1011.00 Air Crew Officers <sup>2</sup>  
⋮  
⋮  
⋮

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<sup>1</sup> Residual or "All Other" occupation. O\*NET data not collected.

<sup>2</sup> Military Specific Occupation. O\*NET data not collected.

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The alphabetical list includes the associated O\*NET-SOC code for each occupation. SOC occupations, that are broken out into detailed occupations (e.g., 13-2011.00 Accountants and Auditors), include a reference to those occupations (e.g., O\*NET data not collected at this level. See: 13-2011.01 Accountants, 13-2011.02 Auditors). Occupations that are residual categories (e.g., 45-2099.99 Agricultural Workers, All Other) and military specific occupations (e.g., 55-3011.00 Air Crew Members) are identified by a footnote indicating that data are not available.

## 2) O\*NET-SOC Occupational Definitions Sorted Alphabetically by Title

Provides the user with a complete listing of the O\*NET-SOC occupational definitions and codes sorted alphabetically by title. The following example illustrates features of the listing:

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- ⋮
- 13-2011.01 Accountants**  
Analyze financial information and prepare financial reports to determine or maintain record of assets, liabilities, profit and loss, tax liability, or other financial activities within an organization.
- 13-2011.00 Accountants and Auditors**  
Examine, analyze, and interpret accounting records for the purpose of giving advice or preparing statements. Install or advise on systems of recording costs or other financial and budgetary data.  
(O\*NET data not collected at this level. See: 13-2011.01 Accountants, 13-2011.02 Auditors)
- 27-2011.00 Actors**  
Play parts in stage, television, radio, video, or motion picture productions for entertainment, information, or instruction. Interpret serious or comic role by speech, gesture, and body movement to entertain or inform audience. May dance and sing.
- 15-2011.00 Actuaries**  
Analyze statistical data, such as mortality, accident, sickness, disability, and retirement rates and construct probability tables to forecast risk and liability for payment of future benefits. May ascertain premium rates required and cash reserves necessary to ensure payment of future benefits.
- ⋮
- 45-2099.99 Agricultural Workers, All Other**<sup>1</sup>  
All agricultural workers not listed separately.
- 55-3011.00 Air Crew Members**<sup>2</sup>  
Perform in-flight duties to ensure the successful completion of combat, reconnaissance, transport, and search and rescue missions. Duties include operating aircraft communications and detection equipment, including establishing satellite linkages and jamming enemy communications capabilities; conducting pre-flight, in-flight, and post-flight inspections of onboard equipment; operating and maintaining aircraft weapons and defensive systems; operating and maintaining aircraft in-flight refueling systems; executing aircraft safety and emergency procedures; computing and verifying passenger, cargo, fuel, and emergency and special equipment weight and balance data; and conducting cargo and personnel drops.
- 55-1011.00 Air Crew Officers**<sup>2</sup>  
Perform and direct in-flight duties to ensure the successful completion of combat, reconnaissance, transport, and search and rescue missions. Duties include operating aircraft communications and radar equipment, such as establishing satellite linkages and jamming enemy communications capabilities; operating aircraft weapons and defensive systems; conducting pre-flight, in-flight, and post-flight inspections of onboard equipment; and directing cargo and personnel drops.
- ⋮

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<sup>1</sup> Residual or "All Other" occupation. O\*NET data not collected.

<sup>2</sup> Military Specific Occupation. O\*NET data not collected.

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This report is identical in format to the preceding report, but includes occupational definitions. The alphabetical list includes the associated O\*NET-SOC code for each occupation. SOC occupations that are broken out into detailed O\*NET occupations (e.g., 13-2011.00 Accountants and Auditors), include a reference to those occupations (e.g., O\*NET data not collected at this

level. See: 13-2011.01 Accountants, 13-2011.02 Auditors). Occupations that are residual categories (e.g., 45-2099.99 Agricultural Workers, All Other) and military specific occupations (e.g., 55-3011.00 Air Crew Members) are identified by a footnote indicating that data are not available.

### 3) O\*NET-SOC Occupations--Sorted by Code

Provides the user with a complete listing of the O\*NET-SOC occupations and codes sorted sequentially by O\*NET-SOC code within SOC job families (i.e., SOC major groups). The following example illustrates features of the listing:

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#### MANAGEMENT OCCUPATIONS (11-0000)

⋮  
11-3031.00 Financial Managers <sup>1</sup>  
    11-3031.01 Treasurers, Controllers, and Chief Financial Officers  
    11-3031.02 Financial Managers, Branch or Department  
11-3040.00 Human Resources Managers  
11-3041.00 Compensation and Benefits Managers  
⋮  
11-3049.99 Human Resource Managers, All Others <sup>2</sup>  
11-3051.00 Industrial Production Managers  
11-3061.00 Purchasing Managers  
⋮  
19-2042.00 Geoscientists, Except Hydrologists and Geographers <sup>3</sup>  
    19-2042.01 Geologists  
19-2043.00 Hydrologists  
⋮  
55-1011.00 Air Crew Officers <sup>4</sup>  
55-1012.00 Aircraft Launch and Recovery Officers <sup>4</sup>  
⋮

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<sup>1</sup> O\*NET data not collected at this level. See more detailed O\*NET 3.1 occupation(s) below.

<sup>2</sup> Residual or "All Other" occupation. O\*NET data not collected.

<sup>3</sup> O\*NET data from incumbents will be collected for this occupation and not for the detailed O\*NET 3.1 occupation below.

<sup>4</sup> Military Specific Occupation. O\*NET data not collected.

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Occupations are sorted by the 23 SOC job families [e.g., Management Occupations (11-000)]. Each occupation has its O\*NET-SOC code displayed to its left. Detailed O\*NET occupations that are breakouts of a SOC occupation are indented (e.g., 11-3031.01 Treasurers, Controllers, and Chief Financial Officers).

SOC occupations that are: 1) broken out into more detailed O\*NET occupations (e.g., 11-3031.00 Financial Managers); 2) residual categories (e.g., 11-3049.99 Human Resource Managers, All Others); or 3) military specific occupations (e.g., 55-1011.00 Air Crew Officers) are each identified with footnotes noting that O\*NET data are not available.

#### 4) O\*NET-SOC Occupational Definitions–Sorted by Code

Provides the user with a complete listing of the O\*NET-SOC occupational definitions and codes sorted sequentially by O\*NET-SOC code within SOC job families (i.e., SOC major groups). The following example illustrates features of the listing:

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##### MANAGEMENT OCCUPATIONS (11-0000)

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##### **11-3031.00 Financial Managers**<sup>1</sup>

Plan, direct, and coordinate accounting, investing, banking, insurance, securities, and other financial activities of a branch, office, or department of an establishment.

##### **11-3031.01 Treasurers, Controllers, and Chief Financial Officers**

Plan, direct, and coordinate the financial activities of an organization at the highest level of management. Include financial reserve officers.

##### **11-3031.02 Financial Managers, Branch or Department**

Direct and coordinate financial activities of workers in a branch, office, or department of an establishment, such as branch bank, brokerage firm, risk and insurance department, or credit department.

##### **11-3040.00 Human Resources Managers**

Plan, direct, and coordinate human resource management activities of an organization to maximize the strategic use of human resources and maintain functions such as employee compensation, recruitment, personnel policies, and regulatory compliance.

##### **11-3041.00 Compensation and Benefits Managers**

Plan, direct, or coordinate compensation and benefits activities and staff of an organization.

⋮

##### **11-3049.99 Human Resource Managers, All Others**<sup>2</sup>

All Human Resources Managers not listed separately.

##### **11-3051.00 Industrial Production Managers**

Plan, direct, or coordinate the work activities and resources necessary for manufacturing products in accordance with cost, quality, and quantity specifications.

##### **11-3061.00 Purchasing Managers**

Plan, direct, or coordinate the activities of buyers, purchasing officers, and related workers involved in purchasing materials, products, and services.

⋮

##### **19-2042.00 Geoscientists, Except Hydrologists and Geographers**<sup>3</sup>

Study the composition, structure, and other physical aspects of the earth. May use geological, physics, and mathematics knowledge in exploration for oil, gas, minerals, or underground water; or in waste disposal, land reclamation, or other environmental problems. May study the earth's internal composition, atmospheres, oceans, and its magnetic, electrical, and gravitational forces. Include mineralogists, crystallographers, paleontologists, stratigraphers, geodesists, and seismologists.

##### **19-2042.01 Geologist**

Study composition, structure, and history of the earth's crust; examine rocks, minerals, and fossil remains to identify and determine the sequence of processes affecting the development of the earth; apply knowledge of chemistry, physics, biology, and mathematics to explain these phenomena and to help locate mineral and petroleum deposits and underground water resources; prepare geologic reports and maps; and interpret research data to recommend further action for study.

**19-2043.00 Hydrologist**

Research the distribution, circulation, and physical properties of underground and surface waters; study the form and intensity of precipitation, its rate of infiltration into the soil, movement through the earth, and its return to the ocean and atmosphere.

⋮

**55-1011.00 Air Crew Officers <sup>4</sup>**

Perform and direct in-flight duties to ensure the successful completion of combat, reconnaissance, transport, and search and rescue missions. Duties include operating aircraft communications and radar equipment, such as establishing satellite linkages and jamming enemy communications capabilities operating aircraft weapons and defensive systems conducting pre-flight, in-flight, and post-flight inspections of onboard equipment and directing cargo and personnel drops.

**55-1012.00 Aircraft Launch and Recovery Officers <sup>4</sup>**

Operate and maintain catapults, arresting gear, and associated mechanical, hydraulic, and control systems involved primarily in aircraft carrier takeoff and landing operations. Duties include installing and maintaining visual landing aids testing and maintaining launch and recovery equipment using electric and mechanical test equipment and hand tools activating airfield arresting systems, such as crash barriers and cables, during emergency landing situations directing aircraft launch and recovery operations using hand or light signals and maintaining logs of airplane launches, recoveries, and equipment maintenance.

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<sup>1</sup> O\*NET data not collected at this level. See more detailed O\*NET 3.1 occupation(s) below.

<sup>2</sup> Residual or "All Other" occupation. O\*NET data not collected.

<sup>3</sup> O\*NET data from incumbents will be collected for this occupation and not for the detailed O\*NET 3.1 occupation below.

<sup>4</sup> Military Specific Occupation. O\*NET data not collected.

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This report is identical in format to the preceding report, but includes occupational definitions. Occupations are sorted by the 23 SOC job families [e.g., Management Occupations (11-000)]. Detailed O\*NET occupations that are breakouts of a SOC occupation are indented (e.g., 11-3031.01 Treasurers, Controllers, and Chief Financial Officers).

SOC occupations that are: 1) broken out into more detailed O\*NET occupations (e.g., 11-3031.00 Financial Managers); 2) residual categories (e.g., 11-3049.99 Human Resource Managers, All Others); or 3) military specific occupations (e.g., 55-1011.00 Air Crew Officers) are each identified with footnotes noting that O\*NET data are not available.

**Figure 1: O\*NET-SOC 3.1 Classification System**

