

Data Dictionary

O*NET[®] 28.3 Database

National Center for O*NET Development

Email: onet@onetcenter.org



May 2024

Table of Contents

| | |
|--|----|
| Using O*NET Data and Metadata | 1 |
| Knowledge, Skills, Abilities | 2 |
| Knowledge | 3 |
| Skills | 5 |
| Abilities | 7 |
| Education, Experience, Training | 10 |
| Education, Training, and Experience | 11 |
| Education, Training, and Experience Categories | 13 |
| Job Zones | 14 |
| Job Zone Reference | 15 |
| Interests | 17 |
| Interests | 18 |
| RIASEC Keywords | 21 |
| Basic Interests to RIASEC | 22 |
| Interests Illustrative Activities | 23 |
| Interests Illustrative Occupations | 24 |
| Work Values and Work Styles | 25 |
| Work Values | 26 |
| Work Styles | 28 |
| Tasks | 30 |
| Task Statements | 31 |
| Task Ratings | 33 |
| Task Categories | 35 |
| Emerging Tasks | 36 |
| Technology Skills & Tools | 38 |
| Technology Skills | 39 |
| Tools Used | 41 |
| UNSPSC Reference | 43 |
| Work Activities | 45 |
| Work Activities | 46 |
| IWA Reference | 48 |
| DWA Reference | 49 |
| Tasks to DWAs | 50 |
| Work Context | 51 |
| Work Context | 52 |
| Work Context Categories | 54 |
| Occupation Titles | 55 |
| Occupation Data | 56 |
| Alternate Titles | 58 |
| Sample of Reported Titles | 60 |
| Related Occupations and Related Domains | 61 |
| Related Occupations | 62 |

| | |
|---|-----|
| Abilities to Work Activities | 64 |
| Abilities to Work Context | 65 |
| Skills to Work Activities | 66 |
| Skills to Work Context | 67 |
| Data Collection | 68 |
| Content Model Reference | 69 |
| Occupation Level Metadata | 70 |
| Level Scale Anchors | 72 |
| Scales Reference | 74 |
| Survey Booklet Locations | 75 |
| Appendices | 76 |
| 1. Item Rating Level Statistics - Analyst | 77 |
| 2. Item Rating Level Statistics - Incumbent | 78 |
| 3. Key to Occupation Level Metadata | 79 |
| 4. Content Updates Since Release 4.0 | 82 |
| 5. Historical Summary of Database Content Changes | 100 |

Using O*NET Data and Metadata

Metadata is provided in the O*NET database to provide users with information that will help evaluate the quality and valid use of the data. The needs of individual users of the O*NET database will determine which metadata items are utilized.

It's assumed that the needs of many users will be met by using O*NET data along with the O*NET metadata that provides the recommended "flags" for "Not Relevant" or "Recommend Suppress". Those interested in a more detailed study or use of the database can choose to utilize any or all of the provided metadata items. Metadata is provided at both the item level and at the occupation level.

For more information, see the Appendices:

- [Appendix 1, Item Rating Level Statistics - Analyst](#)
- [Appendix 2, Item Rating Level Statistics - Incumbent](#)
- [Appendix 3, Key to Occupation Level Metadata](#)

In the "Structure and Description" section documenting each file, cells that are shaded or contain **bold** text denote O*NET metadata versus O*NET data. Bold text highlights the "Not Relevant" and "Recommend Success" flags recommended for typical use of O*NET data.

The content of the O*NET 28.3 Database is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/) [https://creativecommons.org/licenses/by/4.0/]. See the [Database license page](https://www.onetcenter.org/license_db.html) [https://www.onetcenter.org/license_db.html] for more information.

Knowledge, Skills, Abilities

Knowledge

Purpose: Provide a mapping of O*NET-SOC codes (occupations) to Knowledge ratings.

File Name: Knowledge.txt

Structure and Description:

| Column | Type | Column Content |
|---------------------------|------------------------|---|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |
| Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| Scale ID | Character Varying(3) | Scale ID (<i>see Scales Reference</i>) |
| Data Value | Float(5,2) | Rating associated with the O*NET-SOC occupation |
| N | Integer(4) | Sample size |
| Standard Error | Float(7,4) | Standard Error |
| Lower CI Bound | Float(7,4) | Lower 95% confidence interval bound |
| Upper CI Bound | Float(7,4) | Upper 95% confidence interval bound |
| Recommend Suppress | Character(1) | Low precision indicator (Y=yes, N=no) |
| Not Relevant | Character(1) | Not relevant for the occupation (Y=yes, N=no) |
| Date | Character(7) | Date when data was updated |
| Domain Source | Character Varying(30) | Source of the data |

This file contains the Content Model Knowledge data associated with each O*NET-SOC occupation. It is displayed in 13 tab delimited fields and identified using the column names provided above. Item rating level metadata is provided in columns named N, Standard Error, Lower CI Bound, Upper CI Bound, Recommend Suppress, Not Relevant, Date, and Domain Source. Refer to [Appendix 2, Item Rating Level Statistics - Incumbent](#) for additional information on these items. The 13 fields are represented by one row. There are a total of 57,618 rows of data in this file.

File Structure Changes:

| Release Number | Description of Change |
|----------------|---|
| 5.0 | Date and Source columns added |
| 5.1 | Columns added for N, Standard Error, Lower CI Bound, Upper CI Bound, Recommend Suppress, and Not Relevant |
| 6.0 - 28.1 | No structure changes |
| 28.2 | Standard Error, Lower CI Bound, Upper CI Bound expanded from 2 decimal places to 4 |
| 28.3 | No structure changes |

Data Example - Knowledge:

| O*NET-SOC Code | Element ID | Element Name | Scale ID | Data Value | N | Standard Error | Lower CI Bound | Upper CI Bound | Recommend Suppress | Not Relevant | Date | Domain Source |
|----------------|------------|--------------------------|----------|------------|----|----------------|----------------|----------------|--------------------|--------------|---------|---------------------|
| 13-2099.04 | 2.C.8.b | Law and Government | IM | 4.04 | 24 | n/a | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 13-2099.04 | 2.C.8.b | Law and Government | LV | 4.32 | 25 | n/a | n/a | n/a | n/a | N | 08/2023 | Occupational Expert |
| 13-2099.04 | 2.C.9.a | Telecommunications | IM | 2.71 | 24 | n/a | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 13-2099.04 | 2.C.9.a | Telecommunications | LV | 2.88 | 25 | n/a | n/a | n/a | n/a | N | 08/2023 | Occupational Expert |
| 13-2099.04 | 2.C.9.b | Communications and Media | IM | 2.84 | 25 | n/a | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 13-2099.04 | 2.C.9.b | Communications and Media | LV | 3.44 | 25 | n/a | n/a | n/a | n/a | N | 08/2023 | Occupational Expert |
| 13-2099.04 | 2.C.10 | Transportation | IM | 2.28 | 25 | n/a | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 13-2099.04 | 2.C.10 | Transportation | LV | 2.44 | 25 | n/a | n/a | n/a | n/a | N | 08/2023 | Occupational Expert |

Skills

Purpose: Provide a mapping of O*NET-SOC codes (occupations) to Skill ratings.

File Name: Skills.txt

Structure and Description:

| Column | Type | Column Content |
|---------------------------|------------------------|---|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |
| Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| Scale ID | Character Varying(3) | Scale ID (<i>see Scales Reference</i>) |
| Data Value | Float(5,2) | Rating associated with the O*NET-SOC occupation |
| N | Integer(4) | Sample size |
| Standard Error | Float(7,4) | Standard Error |
| Lower CI Bound | Float(7,4) | Lower 95% confidence interval bound |
| Upper CI Bound | Float(7,4) | Upper 95% confidence interval bound |
| Recommend Suppress | Character(1) | Low precision indicator (Y=yes, N=no) |
| Not Relevant | Character(1) | Not relevant for the occupation (Y=yes, N=no) |
| Date | Character(7) | Date when data was updated |
| Domain Source | Character Varying(30) | Source of the data |

This file contains the Content Model Skill data associated with each O*NET-SOC occupation. It is displayed in 13 tab delimited fields and identified using the column names provided above. Item rating level metadata is provided in columns named N, Standard Error, Lower CI Bound, Upper CI Bound, Recommend Suppress, Not Relevant, Date, and Domain Source. Refer to [Appendix 1, Item Rating Level Statistics - Analyst](#) for additional information on these items. The 13 fields are represented by one row. There are a total of 61,110 rows of data in this file.

For more information, see:

- [O*NET Analyst Occupational Skills Ratings: Procedures Update](https://www.onetcenter.org/reports/AOSkills_ProcUpdate.html) [https://www.onetcenter.org/reports/AOSkills_ProcUpdate.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|---|
| 5.0 | Date and Source columns added |
| 5.1 | Columns added for N, Standard Error, Lower CI Bound, Upper CI Bound, Recommend Suppress, and Not Relevant |
| 6.0 - 28.1 | No structure changes |
| 28.2 | Standard Error, Lower CI Bound, Upper CI Bound expanded from 2 decimal places to 4 |
| 28.3 | No structure changes |

Data Example - Skills:

| O*NET-SOC Code | Element ID | Element Name | Scale ID | Data Value | N | Standard Error | Lower CI Bound | Upper CI Bound | Recommend Suppress | Not Relevant | Date | Domain Source |
|----------------|------------|-----------------------|----------|------------|---|----------------|----------------|----------------|--------------------|--------------|---------|---------------|
| 31-1122.00 | 2.A.1.a | Reading Comprehension | IM | 2.88 | 8 | 0.1250 | 2.6300 | 3.1200 | N | n/a | 08/2023 | Analyst |
| 31-1122.00 | 2.A.1.a | Reading Comprehension | LV | 3.00 | 8 | 0.0000 | 3.0000 | 3.0000 | N | N | 08/2023 | Analyst |
| 31-1122.00 | 2.A.1.b | Active Listening | IM | 3.38 | 8 | 0.1830 | 3.0164 | 3.7336 | N | n/a | 08/2023 | Analyst |
| 31-1122.00 | 2.A.1.b | Active Listening | LV | 3.00 | 8 | 0.0000 | 3.0000 | 3.0000 | N | N | 08/2023 | Analyst |
| 31-1122.00 | 2.A.1.c | Writing | IM | 2.88 | 8 | 0.2266 | 2.4309 | 3.3191 | N | n/a | 08/2023 | Analyst |
| 31-1122.00 | 2.A.1.c | Writing | LV | 2.88 | 8 | 0.1250 | 2.6300 | 3.1200 | N | N | 08/2023 | Analyst |
| 31-1122.00 | 2.A.1.d | Speaking | IM | 3.00 | 8 | 0.0000 | 3.0000 | 3.0000 | N | n/a | 08/2023 | Analyst |
| 31-1122.00 | 2.A.1.d | Speaking | LV | 3.00 | 8 | 0.0000 | 3.0000 | 3.0000 | N | N | 08/2023 | Analyst |

Abilities

Purpose: Provide a mapping of O*NET-SOC codes (occupations) to Ability ratings.

File Name: Abilities.txt

Structure and Description:

| Column | Type | Column Content |
|---------------------------|------------------------|---|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |
| Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| Scale ID | Character Varying(3) | Scale ID (<i>see Scales Reference</i>) |
| Data Value | Float(5,2) | Rating associated with the O*NET-SOC occupation |
| N | Integer(4) | Sample size |
| Standard Error | Float(7,4) | Standard Error |
| Lower CI Bound | Float(7,4) | Lower 95% confidence interval bound |
| Upper CI Bound | Float(7,4) | Upper 95% confidence interval bound |
| Recommend Suppress | Character(1) | Low precision indicator (Y=yes, N=no) |
| Not Relevant | Character(1) | Not relevant for the occupation (Y=yes, N=no) |
| Date | Character(7) | Date when data was updated |
| Domain Source | Character Varying(30) | Source of the data |

This file contains the Content Model Ability data associated with each O*NET-SOC occupation. It is displayed in 13 tab delimited fields and identified using the column names provided above. Item rating level metadata is provided in columns named N, Standard Error, Lower CI Bound, Upper CI Bound, Recommend Suppress, Not Relevant, Date, and Domain Source. Refer to [Appendix 1, Item Rating Level Statistics - Analyst](#) for additional information on these items. The 13 fields are represented by one row. There are a total of 90,792 rows of data in this file.

For more information, see:

- [O*NET Analyst Occupational Ratings: Linkage Revisit](https://www.onetcenter.org/reports/LinkageRevisit.html) [https://www.onetcenter.org/reports/LinkageRevisit.html]
- [O*NET Analyst Occupational Abilities Ratings: Procedures Update](https://www.onetcenter.org/reports/AnalystProcUpdate.html) [https://www.onetcenter.org/reports/AnalystProcUpdate.html]
- [Updating Occupational Ability Profiles with O*NET Content Model Descriptors](https://www.onetcenter.org/reports/UpdateOAP.html) [https://www.onetcenter.org/reports/UpdateOAP.html]
- [Linking Client Assessment Profiles to O*NET Occupational Profiles Within the O*NET Ability Profiler](https://www.onetcenter.org/reports/AP_Linking.html) [https://www.onetcenter.org/reports/AP_Linking.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-------------------------------|
| 5.0 | Date and Source columns added |

| Release Number | Description of Change |
|-----------------------|---|
| 5.1 | Columns added for N, Standard Error, Lower CI Bound, Upper CI Bound, Recommend Suppress, and Not Relevant |
| 6.0 - 28.1 | No structure changes |
| 28.2 | Standard Error, Lower CI Bound, Upper CI Bound expanded from 2 decimal places to 4 |
| 28.3 | No structure changes |

Data Example - Abilities:

| O*NET-SOC Code | Element ID | Element Name | Scale ID | Data Value | N | Standard Error | Lower CI Bound | Upper CI Bound | Recommend Suppress | Not Relevant | Date | Domain Source |
|----------------|------------|-----------------------|----------|------------|---|----------------|----------------|----------------|--------------------|--------------|---------|---------------|
| 51-9161.00 | 1.A.1.a.1 | Oral Comprehension | IM | 3.25 | 8 | 0.1637 | 2.9292 | 3.5708 | N | n/a | 08/2023 | Analyst |
| 51-9161.00 | 1.A.1.a.1 | Oral Comprehension | LV | 3.75 | 8 | 0.1637 | 3.4292 | 4.0708 | N | N | 08/2023 | Analyst |
| 51-9161.00 | 1.A.1.a.2 | Written Comprehension | IM | 3.00 | 8 | 0.0000 | 3.0000 | 3.0000 | N | n/a | 08/2023 | Analyst |
| 51-9161.00 | 1.A.1.a.2 | Written Comprehension | LV | 3.00 | 8 | 0.0000 | 3.0000 | 3.0000 | N | N | 08/2023 | Analyst |
| 51-9161.00 | 1.A.1.a.3 | Oral Expression | IM | 3.00 | 8 | 0.0000 | 3.0000 | 3.0000 | N | n/a | 08/2023 | Analyst |
| 51-9161.00 | 1.A.1.a.3 | Oral Expression | LV | 3.62 | 8 | 0.1830 | 3.2664 | 3.9836 | N | N | 08/2023 | Analyst |
| 51-9161.00 | 1.A.1.a.4 | Written Expression | IM | 2.88 | 8 | 0.1250 | 2.6300 | 3.1200 | N | n/a | 08/2023 | Analyst |
| 51-9161.00 | 1.A.1.a.4 | Written Expression | LV | 3.00 | 8 | 0.0000 | 3.0000 | 3.0000 | N | N | 08/2023 | Analyst |

Education, Experience, Training

Education, Training, and Experience

Purpose: Provide a mapping of O*NET-SOC codes (occupations) to Education, Training, and Experience ratings.

File Name: Education, Training, and Experience.txt

Structure and Description:

| Column | Type | Column Content |
|---------------------------|------------------------|--|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |
| Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| Scale ID | Character Varying(3) | Scale ID (<i>see Scales Reference</i>) |
| Category | Integer(3) | Percent frequency category (<i>see Education, Training, and Experience Categories</i>) |
| Data Value | Float(5,2) | Rating associated with the O*NET-SOC occupation |
| N | Integer(4) | Sample size |
| Standard Error | Float(7,4) | Standard Error |
| Lower CI Bound | Float(7,4) | Lower 95% confidence interval bound |
| Upper CI Bound | Float(7,4) | Upper 95% confidence interval bound |
| Recommend Suppress | Character(1) | Low precision indicator (Y=yes, N=no) |
| Date | Character(7) | Date when data was updated |
| Domain Source | Character Varying(30) | Source of the data |

This file contains the percent frequency data associated with Education, Training, and Experience Content Model elements. It is displayed in 13 tab delimited fields and identified using the column names provided above. Item rating level metadata is provided in columns named N, Standard Error, Lower CI Bound, Upper CI Bound, Recommend Suppress, Date, and Domain Source. Refer to [Appendix 2, Item Rating Level Statistics - Incumbent](#) for additional information on these items. The 13 fields are represented by one row. There are a total of 35,881 rows of data in this file.

File Structure Changes:

| Release Number | Description of Change |
|----------------|---|
| 5.0 | Added as a new file |
| 5.1 | Columns added for N, Standard Error, Lower CI Bound, Upper CI Bound, and Recommend Suppress |
| 6.0 - 28.1 | No structure changes |
| 28.2 | Standard Error, Lower CI Bound, Upper CI Bound expanded from 2 decimal places to 4 |
| 28.3 | No structure changes |

Data Example - Education, Training, and Experience:

| O*NET-SOC Code | Element ID | Element Name | Scale ID | Category | Data Value | N | Standard Error | Lower CI Bound | Upper CI Bound | Recommend Suppress | Date | Domain Source |
|----------------|------------|-----------------------------|----------|----------|------------|----|----------------|----------------|----------------|--------------------|---------|---------------|
| 51-8093.00 | 2.D.1 | Required Level of Education | RL | 1 | 0.00 | 21 | 0.0000 | n/a | n/a | N | 08/2023 | Incumbent |
| 51-8093.00 | 2.D.1 | Required Level of Education | RL | 2 | 97.02 | 21 | 1.9957 | 88.5275 | 99.2763 | N | 08/2023 | Incumbent |
| 51-8093.00 | 2.D.1 | Required Level of Education | RL | 3 | 1.69 | 21 | 1.3334 | 0.3199 | 8.4065 | N | 08/2023 | Incumbent |
| 51-8093.00 | 2.D.1 | Required Level of Education | RL | 4 | 1.29 | 21 | 1.3460 | 0.1455 | 10.5581 | N | 08/2023 | Incumbent |
| 51-8093.00 | 2.D.1 | Required Level of Education | RL | 5 | 0.00 | 21 | 0.0000 | n/a | n/a | N | 08/2023 | Incumbent |
| 51-8093.00 | 2.D.1 | Required Level of Education | RL | 6 | 0.00 | 21 | 0.0000 | n/a | n/a | N | 08/2023 | Incumbent |
| 51-8093.00 | 2.D.1 | Required Level of Education | RL | 7 | 0.00 | 21 | 0.0000 | n/a | n/a | N | 08/2023 | Incumbent |
| 51-8093.00 | 2.D.1 | Required Level of Education | RL | 8 | 0.00 | 21 | 0.0000 | n/a | n/a | N | 08/2023 | Incumbent |
| 51-8093.00 | 2.D.1 | Required Level of Education | RL | 9 | 0.00 | 21 | 0.0000 | n/a | n/a | N | 08/2023 | Incumbent |
| 51-8093.00 | 2.D.1 | Required Level of Education | RL | 10 | 0.00 | 21 | 0.0000 | n/a | n/a | N | 08/2023 | Incumbent |
| 51-8093.00 | 2.D.1 | Required Level of Education | RL | 11 | 0.00 | 21 | 0.0000 | n/a | n/a | N | 08/2023 | Incumbent |
| 51-8093.00 | 2.D.1 | Required Level of Education | RL | 12 | 0.00 | 21 | 0.0000 | n/a | n/a | N | 08/2023 | Incumbent |

Education, Training, and Experience Categories

Purpose: Provide descriptions of the Education, Training, and Experience percent frequency categories.

File Name: Education, Training, and Experience Categories.txt

Structure and Description:

| Column | Type | Column Content |
|----------------------|-------------------------|---|
| Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| Scale ID | Character Varying(3) | Scale ID (<i>see Scales Reference</i>) |
| Category | Integer(3) | Category value associated with element |
| Category Description | Character Varying(1000) | Detail description of category associated with element |

This file contains the categories associated with the Education, Training, and Experience content area. Categories for the following scales are included: Required Level of Education (RL), Related Work Experience (RW), On-Site or In-Plant Training (PT), and On-The-Job Training (OJ).

The file is displayed in five tab delimited fields with the columns named Element ID, Element Name, Scale ID, Category, and Category Description. The five fields are represented by one row. There are a total of 41 rows of data in this file.

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 9.0 | Added as a new file |
| 10.0 - 28.3 | No structure changes |

Data Example - Education, Training, and Experience Categories:

| Element ID | Element Name | Scale ID | Category | Category Description |
|------------|-------------------------|----------|----------|---|
| 3.A.1 | Related Work Experience | RW | 1 | None |
| 3.A.1 | Related Work Experience | RW | 2 | Up to and including 1 month |
| 3.A.1 | Related Work Experience | RW | 3 | Over 1 month, up to and including 3 months |
| 3.A.1 | Related Work Experience | RW | 4 | Over 3 months, up to and including 6 months |
| 3.A.1 | Related Work Experience | RW | 5 | Over 6 months, up to and including 1 year |
| 3.A.1 | Related Work Experience | RW | 6 | Over 1 year, up to and including 2 years |
| 3.A.1 | Related Work Experience | RW | 7 | Over 2 years, up to and including 4 years |
| 3.A.1 | Related Work Experience | RW | 8 | Over 4 years, up to and including 6 years |
| 3.A.1 | Related Work Experience | RW | 9 | Over 6 years, up to and including 8 years |
| 3.A.1 | Related Work Experience | RW | 10 | Over 8 years, up to and including 10 years |
| 3.A.1 | Related Work Experience | RW | 11 | Over 10 years |

Job Zones

Purpose: Provide a mapping of O*NET-SOC occupations to Job Zone ratings.

File Name: Job Zones.txt

Structure and Description:

| Column | Type | Column Content |
|----------------|-----------------------|---|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |
| Job Zone | Integer(1) | Job Zone number (<i>see Job Zone Reference</i>) |
| Date | Character(7) | Date when data was updated |
| Domain Source | Character Varying(30) | Source of the data |

This file contains each O*NET-SOC code and its corresponding Job Zone number.

The file is displayed in four tab delimited fields with the columns named O*NET-SOC Code, Job Zone, Date, and Domain Source. The four fields are represented by one row. There are a total of 923 rows of data in this file.

For more information, see:

- [Procedures for O*NET Job Zone Assignment](https://www.onetcenter.org/reports/JobZoneProcedure.html) [https://www.onetcenter.org/reports/JobZoneProcedure.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|--------------------------------------|
| 5.0 | No structure changes |
| 5.1 | Date and Domain Source columns added |
| 6.0 - 28.3 | No structure changes |

Data Example - Job Zones:

| O*NET-SOC Code | Job Zone | Date | Domain Source |
|----------------|----------|---------|---------------|
| 43-4171.00 | 2 | 08/2023 | Analyst |
| 13-1051.00 | 4 | 08/2023 | Analyst |
| 19-4013.00 | 3 | 08/2023 | Analyst |
| 19-2031.00 | 4 | 08/2023 | Analyst |
| 37-2011.00 | 3 | 08/2023 | Analyst |
| 27-1011.00 | 4 | 08/2023 | Analyst |

Job Zone Reference

Purpose: Provide Job Zone data (developed to help transition DOT's measures of Specific Vocational Preparation (SVP) to O*NET's measure of experience, education, and job training).

File Name: Job Zone Reference.txt

Structure and Description:

| Column | Type | Column Content |
|--------------|------------------------|---------------------------------------|
| Job Zone | Integer(1) | Job Zone number |
| Name | Character Varying(50) | Job Zone name/zone |
| Experience | Character Varying(300) | Job Zone experience requirements |
| Education | Character Varying(500) | Job Zone educational requirements |
| Job Training | Character Varying(300) | Job Zone training requirements |
| Examples | Character Varying(500) | Job Zone examples |
| SVP Range | Character Varying(25) | Specific vocational preparation range |

This file describes the five O*NET Job Zones, which are groups of occupations that need the same level of experience, education, and training.

The file is displayed in seven tab delimited fields with the columns named Job Zone, Name, Experience, Education, Job Training, Examples, and SVP Range. The seven fields are represented by one row. There are a total of 5 rows of data in this file.

For more information, see:

- [Procedures for O*NET Job Zone Assignment](https://www.onetcenter.org/reports/JobZoneProcedure.html) [https://www.onetcenter.org/reports/JobZoneProcedure.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 5.0 - 28.3 | No structure changes |

Data Example - Job Zone Reference:

| Job Zone | Name | Experience | Education | Job Training | Examples | SVP Range |
|-----------------|---|---|--|---|--|------------------|
| 1 | Job Zone One: Little or No Preparation Needed | Little or no previous work-related skill, knowledge, or experience is needed for these occupations. For example, a person can become a waiter or waitress even if he/she has never worked before. | Some of these occupations may require a high school diploma or GED certificate. | 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. | These occupations involve following instructions and helping others. Examples include food preparation workers, dishwashers, floor sanders and finishers, landscaping and groundskeeping workers, logging equipment operators, and baristas. | (Below 4.0) |
| 2 | Job Zone Two: Some Preparation Needed | Some previous work-related skill, knowledge, or experience is usually needed. For example, a teller would benefit from experience working directly with the public. | These occupations usually require a high school diploma. | Employees in these occupations need anywhere from a few months to one year of working with experienced employees. A recognized apprenticeship program may be associated with these occupations. | These occupations often involve using your knowledge and skills to help others. Examples include orderlies, counter and rental clerks, customer service representatives, security guards, upholsterers, tellers, and dental laboratory technicians. | (4.0 to < 6.0) |
| 3 | Job Zone Three: Medium Preparation Needed | 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. | Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. | Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers. A recognized apprenticeship program may be associated with these occupations. | These occupations usually involve using communication and organizational skills to coordinate, supervise, manage, or train others to accomplish goals. Examples include hydroelectric production managers, desktop publishers, electricians, agricultural technicians, barbers, court reporters and simultaneous captioners, and medical assistants. | (6.0 to < 7.0) |

Interests

Interests

Purpose: Provide general occupational interest (RIASEC) high-point codes and numeric profile data for each O*NET-SOC occupation.

File Name: Interests.txt

Structure and Description:

| Column | Type | Column Content |
|----------------|------------------------|---|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |
| Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| Scale ID | Character Varying(3) | Scale ID (<i>see Scales Reference</i>) |
| Data Value | Float(5,2) | Rating associated with the O*NET-SOC occupation |
| Date | Character(7) | Date when data was updated |
| Domain Source | Character Varying(30) | Source of the data |

This file contains the general occupational interest (RIASEC) high-point codes and numeric profile data for each O*NET-SOC occupation.

Interest ratings are presented as two scales: OI reports the RIASEC level of each interest and IH presents “high-point codes”, the numbers of the RIASEC scales for the first, second and/or third highest ratings.

The high-point values represent the following elements:

- 0.00 = No high point available
- 1.00 = Realistic
- 2.00 = Investigative
- 3.00 = Artistic
- 4.00 = Social
- 5.00 = Enterprising
- 6.00 = Conventional

The file is displayed in seven tab delimited fields with the columns named O*NET-SOC Code, Element ID, Element Name, Scale ID, Data Value, Date, and Domain Source. The seven fields are represented by one row. There are a total of 8,307 rows of data in this file.

For more information, see:

- [Using Machine Learning to Develop Occupational Interest Profiles and High-Point Codes for the O*NET System](https://www.onetcenter.org/reports/ML_OIPs.html) [https://www.onetcenter.org/reports/ML_OIPs.html]
- [Linking Client Assessment Profiles to O*NET® Occupational Profiles Within the O*NET Interest Profiler Short Form and Mini Interest Profiler \(Mini-IP\)](https://www.onetcenter.org/reports/Mini-IP_Linking.html) [https://www.onetcenter.org/reports/Mini-IP_Linking.html]

- [Development of an O*NET® Mini Interest Profiler \(Mini-IP\) for Mobile Devices: Psychometric Characteristics](https://www.onetcenter.org/reports/Mini-IP.html) [https://www.onetcenter.org/reports/Mini-IP.html]
- [Examining the Efficacy of Emoji Anchors for the O*NET Interest Profiler Short Form](https://www.onetcenter.org/reports/IP_Emoji.html) [https://www.onetcenter.org/reports/IP_Emoji.html]
- [O*NET Interest Profiler Short Form Psychometric Characteristics: Summary](https://www.onetcenter.org/reports/IPSF_Psychometric.html) [https://www.onetcenter.org/reports/IPSF_Psychometric.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-------------------------------|
| 5.0 | Date and Source columns added |
| 5.1 - 28.3 | No structure changes |

Data Example - Interests:

| O*NET-SOC Code | Element ID | Element Name | Scale ID | Data Value | Date | Domain Source |
|-----------------------|-------------------|----------------------------|-----------------|-------------------|-------------|----------------------|
| 43-4041.00 | 1.B.1.a | Realistic | OI | 1.00 | 11/2023 | Machine Learning |
| 43-4041.00 | 1.B.1.b | Investigative | OI | 1.85 | 11/2023 | Machine Learning |
| 43-4041.00 | 1.B.1.c | Artistic | OI | 1.00 | 11/2023 | Machine Learning |
| 43-4041.00 | 1.B.1.d | Social | OI | 3.39 | 11/2023 | Machine Learning |
| 43-4041.00 | 1.B.1.e | Enterprising | OI | 4.47 | 11/2023 | Machine Learning |
| 43-4041.00 | 1.B.1.f | Conventional | OI | 7.00 | 11/2023 | Machine Learning |
| 43-4041.00 | 1.B.1.g | First Interest High-Point | IH | 6.00 | 11/2023 | Machine Learning |
| 43-4041.00 | 1.B.1.h | Second Interest High-Point | IH | 5.00 | 11/2023 | Machine Learning |
| 43-4041.00 | 1.B.1.i | Third Interest High-Point | IH | 4.00 | 11/2023 | Machine Learning |
| 29-2034.00 | 1.B.1.a | Realistic | OI | 6.25 | 11/2023 | Machine Learning |
| 29-2034.00 | 1.B.1.b | Investigative | OI | 4.63 | 11/2023 | Machine Learning |
| 29-2034.00 | 1.B.1.c | Artistic | OI | 1.00 | 11/2023 | Machine Learning |
| 29-2034.00 | 1.B.1.d | Social | OI | 3.58 | 11/2023 | Machine Learning |
| 29-2034.00 | 1.B.1.e | Enterprising | OI | 1.00 | 11/2023 | Machine Learning |
| 29-2034.00 | 1.B.1.f | Conventional | OI | 4.87 | 11/2023 | Machine Learning |
| 29-2034.00 | 1.B.1.g | First Interest High-Point | IH | 1.00 | 11/2023 | Machine Learning |
| 29-2034.00 | 1.B.1.h | Second Interest High-Point | IH | 6.00 | 11/2023 | Machine Learning |
| 29-2034.00 | 1.B.1.i | Third Interest High-Point | IH | 2.00 | 11/2023 | Machine Learning |

RIASEC Keywords

Purpose: Provide action and object keywords for each general occupational interest.

File Name: RIASEC Keywords.txt

Structure and Description:

| Column | Type | Column Content |
|--------------|------------------------|---|
| Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| Keyword | Character Varying(150) | Relevant interest keyword |
| Keyword Type | Character Varying(20) | “Action” or “Object” |

This file contains action and object keywords for each general occupational interest.

The file is displayed in four tab delimited fields with the columns named Element ID, Element Name, Keyword, and Keyword Type. The four fields are represented by one row. There are a total of 75 rows of data in this file.

For more information, see:

- [Updating Vocational Interests Information for the O*NET Content Model](https://www.onetcenter.org/reports/Voc_Interests.html) [https://www.onetcenter.org/reports/Voc_Interests.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 27.2 | Added as a new file |
| 27.3 - 28.3 | No structure changes |

Data Example - RIASEC Keywords:

| Element ID | Element Name | Keyword | Keyword Type |
|------------|--------------|----------|--------------|
| 1.B.1.a | Realistic | Build | Action |
| 1.B.1.a | Realistic | Drive | Action |
| 1.B.1.a | Realistic | Install | Action |
| 1.B.1.a | Realistic | Maintain | Action |
| 1.B.1.a | Realistic | Repair | Action |

Basic Interests to RIASEC

Purpose: Provide linkages between each basic occupational interest to relevant general occupational interests.

File Name: Basic Interests to RIASEC.txt

Structure and Description:

| Column | Type | Column Content |
|------------------------------|------------------------|---|
| Basic Interests Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Basic Interests Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| RIASEC Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| RIASEC Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |

This file contains linkages between each basic occupational interest to relevant general occupational interests.

The file is displayed in four tab delimited fields with the columns named Basic Interests Element ID, Basic Interests Element Name, RIASEC Element ID, and RIASEC Element Name. The four fields are represented by one row. There are a total of 53 rows of data in this file.

For more information, see:

- [Updating Vocational Interests Information for the O*NET Content Model](https://www.onetcenter.org/reports/Voc_Interests.html) [https://www.onetcenter.org/reports/Voc_Interests.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 27.2 | Added as a new file |
| 27.3 - 28.3 | No structure changes |

Data Example - Basic Interests to RIASEC:

| Basic Interests Element ID | Basic Interests Element Name | RIASEC Element ID | RIASEC Element Name |
|----------------------------|----------------------------------|-------------------|---------------------|
| 1.B.3.a | Mechanics/Electronics | 1.B.1.a | Realistic |
| 1.B.3.b | Construction/Woodwork | 1.B.1.a | Realistic |
| 1.B.3.c | Transportation/Machine Operation | 1.B.1.a | Realistic |
| 1.B.3.d | Physical/Manual Labor | 1.B.1.a | Realistic |
| 1.B.3.e | Protective Service | 1.B.1.a | Realistic |

Interests Illustrative Activities

Purpose: Provide illustrative work activities related to the general and basic occupational interests.

File Name: Interests Illustrative Activities.txt

Structure and Description:

| Column | Type | Column Content |
|---------------|------------------------|---|
| Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| Interest Type | Character Varying(20) | “General” or “Basic” |
| Activity | Character Varying(150) | Illustrative work activity |

This file contains illustrative work activities related to the general and basic occupational interests.

The file is displayed in four tab delimited fields with the columns named Element ID, Element Name, Interest Type, and Activity. The four fields are represented by one row. There are a total of 188 rows of data in this file.

For more information, see:

- [Updating Vocational Interests Information for the O*NET Content Model](https://www.onetcenter.org/reports/Voc_Interests.html) [https://www.onetcenter.org/reports/Voc_Interests.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 27.2 | Added as a new file |
| 27.3 - 28.3 | No structure changes |

Data Example - Interests Illustrative Activities:

| Element ID | Element Name | Interest Type | Activity |
|------------|---------------|---------------|---|
| 1.B.1.a | Realistic | General | Build kitchen cabinets. |
| 1.B.1.a | Realistic | General | Drive a truck to deliver packages to offices and homes. |
| 1.B.1.a | Realistic | General | Put out forest fires. |
| 1.B.1.a | Realistic | General | Repair household appliances. |
| 1.B.1.b | Investigative | General | Develop a new medicine. |

Interests Illustrative Occupations

Purpose: Provide illustrative occupations linked to the general and basic occupational interests.

File Name: Interests Illustrative Occupations.txt

Structure and Description:

| Column | Type | Column Content |
|----------------|------------------------|---|
| Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| Interest Type | Character Varying(20) | “General” or “Basic” |
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |

This file contains illustrative occupations linked to the general and basic occupational interests. For occupation-specific ratings for RIASEC elements, see the [Interests](#) file.

The file is displayed in four tab delimited fields with the columns named Element ID, Element Name, Interest Type, and O*NET-SOC Code. The four fields are represented by one row. There are a total of 186 rows of data in this file.

For more information, see:

- [Updating Vocational Interests Information for the O*NET Content Model](https://www.onetcenter.org/reports/Voc_Interests.html) [https://www.onetcenter.org/reports/Voc_Interests.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 27.2 | Added as a new file |
| 27.3 - 28.3 | No structure changes |

Data Example - Interests Illustrative Occupations:

| Element ID | Element Name | Interest Type | O*NET-SOC Code |
|------------|---------------|---------------|----------------|
| 1.B.1.a | Realistic | General | 17-3024.01 |
| 1.B.1.a | Realistic | General | 45-2091.00 |
| 1.B.1.a | Realistic | General | 47-2031.00 |
| 1.B.1.a | Realistic | General | 53-3052.00 |
| 1.B.1.b | Investigative | General | 19-1029.04 |

Work Values and Work Styles

Work Values

Purpose: Provide a mapping of O*NET-SOC codes (occupations) to Work Values ratings.

File Name: Work Values.txt

Structure and Description:

| Column | Type | Column Content |
|----------------|------------------------|---|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |
| Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| Scale ID | Character Varying(3) | Scale ID (<i>see Scales Reference</i>) |
| Data Value | Float(5,2) | Rating associated with the O*NET-SOC occupation |
| Date | Character(7) | Date when data was updated |
| Domain Source | Character Varying(30) | Source of the data |

This file contains the Content Model Work Values data associated with each O*NET- SOC occupation.

The column named Data Value provides both the mean extent rating (indicated by the value EX in the Scale ID column) and the top three high-point values for respondents endorsing each occupation (indicated by VH in the Scale ID Column).

The high-point values represent the following elements:

- 0.00 = No high point available
- 1.00 = Achievement
- 2.00 = Working Conditions
- 3.00 = Recognition
- 4.00 = Relationships
- 5.00 = Support
- 6.00 = Independence

The file is displayed in seven tab delimited fields with the columns named O*NET-SOC Code, Element ID, Element Name, Scale ID, Data Value, Date, and Domain Source. The seven fields are represented by one row. There are a total of 7,866 rows of data in this file.

For more information, see:

- [Second Generation Occupational Value Profiles for the O*NET System: Summary](https://www.onetcenter.org/reports/SecondOVP_Summary.html) [https://www.onetcenter.org/reports/SecondOVP_Summary.html]
- [Occupational Value Profiles for New and Emerging Occupations in the O*NET System: Summary](https://www.onetcenter.org/reports/OVP_NewEmerging.html) [https://www.onetcenter.org/reports/OVP_NewEmerging.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-------------------------------|
| 5.0 | Date and Source columns added |
| 5.1 - 28.3 | No structure changes |

Data Example - Work Values:

| O*NET-SOC Code | Element ID | Element Name | Scale ID | Data Value | Date | Domain Source |
|----------------|------------|------------------------------|----------|------------|---------|----------------------|
| 19-3033.00 | 1.B.2.a | Achievement | EX | 5.83 | 11/2020 | Analyst - Transition |
| 19-3033.00 | 1.B.2.b | Working Conditions | EX | 5.75 | 11/2020 | Analyst - Transition |
| 19-3033.00 | 1.B.2.c | Recognition | EX | 5.33 | 11/2020 | Analyst - Transition |
| 19-3033.00 | 1.B.2.d | Relationships | EX | 6.83 | 11/2020 | Analyst - Transition |
| 19-3033.00 | 1.B.2.e | Support | EX | 3.17 | 11/2020 | Analyst - Transition |
| 19-3033.00 | 1.B.2.f | Independence | EX | 6.00 | 11/2020 | Analyst - Transition |
| 19-3033.00 | 1.B.2.g | First Work Value High-Point | VH | 4.00 | 11/2020 | Analyst - Transition |
| 19-3033.00 | 1.B.2.h | Second Work Value High-Point | VH | 6.00 | 11/2020 | Analyst - Transition |
| 19-3033.00 | 1.B.2.i | Third Work Value High-Point | VH | 1.00 | 11/2020 | Analyst - Transition |

Work Styles

Purpose: Provide a mapping of O*NET-SOC codes (occupations) to Work Styles ratings.

File Name: Work Styles.txt

Structure and Description:

| Column | Type | Column Content |
|---------------------------|------------------------|---|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |
| Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| Scale ID | Character Varying(3) | Scale ID (<i>see Scales Reference</i>) |
| Data Value | Float(5,2) | Rating associated with the O*NET-SOC occupation |
| N | Integer(4) | Sample size |
| Standard Error | Float(7,4) | Standard Error |
| Lower CI Bound | Float(7,4) | Lower 95% confidence interval bound |
| Upper CI Bound | Float(7,4) | Upper 95% confidence interval bound |
| Recommend Suppress | Character(1) | Low precision indicator (Y=yes, N=no) |
| Date | Character(7) | Date when data was updated |
| Domain Source | Character Varying(30) | Source of the data |

This file contains the Content Model Work Styles data associated with each O*NET-SOC occupation. It is displayed in 12 tab delimited fields and identified using the column names provided above. Item rating level metadata is provided in columns named N, Standard Error, Lower CI Bound, Upper CI Bound, Recommend Suppress, Date, and Domain Source. Refer to [Appendix 2, Item Rating Level Statistics - Incumbent](#) for additional information on these items. The 12 fields are represented by one row. There are a total of 13,968 rows of data in this file.

File Structure Changes:

| Release Number | Description of Change |
|----------------|---|
| 5.0 | Added as a new file |
| 5.1 | Columns added for N, Standard Error, Lower CI Bound, Upper CI Bound, and Recommend Suppress |
| 6.0 - 28.1 | No structure changes |
| 28.2 | Standard Error, Lower CI Bound, Upper CI Bound expanded from 2 decimal places to 4 |
| 28.3 | No structure changes |

Data Example - Work Styles:

| O*NET-SOC Code | Element ID | Element Name | Scale ID | Data Value | N | Standard Error | Lower CI Bound | Upper CI Bound | Recommend Suppress | Date | Domain Source |
|-----------------------|-------------------|---------------------|-----------------|-------------------|----------|-----------------------|-----------------------|-----------------------|---------------------------|-------------|----------------------|
| 11-1011.00 | 1.C.1.a | Achievement/Effort | IM | 4.69 | 28 | 0.1218 | 4.4426 | 4.9426 | N | 08/2023 | Incumbent |
| 11-1011.00 | 1.C.1.b | Persistence | IM | 4.76 | 28 | 0.1104 | 4.5318 | 4.9847 | N | 08/2023 | Incumbent |
| 11-1011.00 | 1.C.1.c | Initiative | IM | 4.85 | 28 | 0.0770 | 4.6927 | 5.0000 | N | 08/2023 | Incumbent |
| 11-1011.00 | 1.C.2.b | Leadership | IM | 4.97 | 28 | 0.0194 | 4.9274 | 5.0000 | N | 08/2023 | Incumbent |
| 11-1011.00 | 1.C.3.a | Cooperation | IM | 4.63 | 27 | 0.1880 | 4.2387 | 5.0000 | N | 08/2023 | Incumbent |
| 11-1011.00 | 1.C.3.b | Concern for Others | IM | 4.50 | 28 | 0.1692 | 4.1545 | 4.8486 | N | 08/2023 | Incumbent |
| 11-1011.00 | 1.C.3.c | Social Orientation | IM | 3.95 | 28 | 0.2019 | 3.5339 | 4.3626 | N | 08/2023 | Incumbent |
| 11-1011.00 | 1.C.4.a | Self-Control | IM | 4.21 | 28 | 0.2064 | 3.7899 | 4.6368 | N | 08/2023 | Incumbent |

Tasks

Task Statements

Purpose: Provide a mapping of O*NET-SOC codes (occupations) to tasks associated with the occupation.

File Name: Task Statements.txt

Structure and Description:

| Column | Type | Column Content |
|-----------------------|-------------------------|---|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |
| Task ID | Integer(8) | Identifies each task |
| Task | Character Varying(1000) | Task statement associated with an occupation |
| Task Type | Character Varying(12) | “Core” or “Supplemental” |
| Incumbents Responding | Integer(4) | Number of incumbents providing task information |
| Date | Character(7) | Date when data was updated |
| Domain Source | Character Varying(30) | Source of the data |

This file contains the tasks associated with each O*NET-SOC occupation.

The “Task Type” column identifies two categories of tasks:

- **Core** — tasks that are critical to the occupation. The criteria for these tasks are (a) relevance $\geq 67\%$ and (b) a mean importance rating of ≥ 3.0 .
- **Supplemental** — tasks that are less relevant and/or important to the occupation. Two sets of tasks are included in this category: (a) tasks rated $\geq 67\%$ on relevance but < 3.0 on importance, and (b) tasks rated $< 67\%$ on relevance, regardless of mean importance.

The file is displayed in seven tab delimited fields with the columns named O*NET-SOC Code, Task ID, Task, Task Type, Incumbents Responding, Date, and Domain Source. The seven fields are represented by one row. There are a total of 19,281 rows of data in this file.

For more information, see:

- [Summary of Procedures for O*NET Task Updating and New Task Generation](https://www.onetcenter.org/reports/TaskUpdating.html) [https://www.onetcenter.org/reports/TaskUpdating.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 13.0 | Added as a new file |
| 14.0 - 28.3 | No structure changes |

Data Example - Task Statements:

| O*NET-SOC Code | Task ID | Task | Task Type | Incumbents Responding | Date | Domain Source |
|----------------|---------|---|-----------|-----------------------|---------|---------------|
| 47-2211.00 | 5177 | Maintain equipment, making repairs or modifications when necessary. | Core | 51 | 08/2023 | Incumbent |
| 47-2211.00 | 19858 | Fabricate ducts for high efficiency heating, ventilating, and air conditioning (HVAC) systems to maximize efficiency of systems. | Core | 50 | 08/2023 | Incumbent |
| 47-2211.00 | 5173 | Fasten seams or joints together with welds, bolts, cement, rivets, solder, caulks, metal drive clips, or bonds to assemble components into products or to repair sheet metal items. | Core | 50 | 08/2023 | Incumbent |
| 47-2211.00 | 5179 | Transport prefabricated parts to construction sites for assembly and installation. | Core | 50 | 08/2023 | Incumbent |
| 47-2211.00 | 5170 | Install assemblies, such as flashing, pipes, tubes, heating and air conditioning ducts, furnace casings, rain gutters, or downspouts in supportive frameworks. | Core | 50 | 08/2023 | Incumbent |
| 47-2211.00 | 18782 | Hire, train, or supervise new employees or apprentices. | Core | 50 | 08/2023 | Incumbent |
| 47-2211.00 | 20639 | Lay out, measure, and mark dimensions and reference lines on material, such as roofing panels, using calculators, scribes, dividers, squares, or rulers. | Core | 50 | 08/2023 | Incumbent |

Task Ratings

Purpose: Provide a mapping of O*NET-SOC codes (occupations) to the ratings for tasks associated with the occupation.

File Name: Task Ratings.txt

Structure and Description:

| Column | Type | Column Content |
|---------------------------|-----------------------|---|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |
| Task ID | Integer(8) | Identifies each task (<i>see Task Statements</i>) |
| Scale ID | Character Varying(3) | Scale ID (<i>see Scales Reference</i>) |
| Category | Integer(3) | Percent frequency category (<i>see Task Categories</i>) |
| Data Value | Float(5,2) | Rating associated with the O*NET-SOC occupation |
| N | Integer(4) | Sample size |
| Standard Error | Float(7,4) | Standard Error |
| Lower CI Bound | Float(7,4) | Lower 95% confidence interval bound |
| Upper CI Bound | Float(7,4) | Upper 95% confidence interval bound |
| Recommend Suppress | Character(1) | Low precision indicator (Y=yes, N=no) |
| Date | Character(7) | Date when data was updated |
| Domain Source | Character Varying(30) | Source of the data |

This file contains the task ratings associated with each O*NET-SOC occupation. It is displayed in 12 tab delimited fields and identified using the column names provided above. Item rating level metadata is provided in columns named N, Standard Error, Lower CI Bound, Upper CI Bound, Recommend Suppress, Date, and Domain Source. Refer to [Appendix 2, Item Rating Level Statistics - Incumbent](#) for additional information on these items. The 12 fields are represented by one row. There are a total of 161,847 rows of data in this file.

File Structure Changes:

| Release Number | Description of Change |
|----------------|--|
| 13.0 | Added as a new file |
| 14.0 - 28.1 | No structure changes |
| 28.2 | Standard Error, Lower CI Bound, Upper CI Bound expanded from 2 decimal places to 4 |
| 28.3 | No structure changes |

Data Example - Task Ratings:

| O*NET-SOC Code | Task ID | Scale ID | Category | Data Value | N | Standard Error | Lower CI Bound | Upper CI Bound | Recommend Suppress | Date | Domain Source |
|----------------|---------|----------|----------|------------|----|----------------|----------------|----------------|--------------------|---------|---------------------|
| 17-2199.09 | 16540 | FT | 1 | 0.00 | 19 | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 17-2199.09 | 16540 | FT | 2 | 0.00 | 19 | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 17-2199.09 | 16540 | FT | 3 | 15.79 | 19 | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 17-2199.09 | 16540 | FT | 4 | 5.26 | 19 | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 17-2199.09 | 16540 | FT | 5 | 52.63 | 19 | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 17-2199.09 | 16540 | FT | 6 | 10.53 | 19 | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 17-2199.09 | 16540 | FT | 7 | 15.79 | 19 | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 17-2199.09 | 16540 | IM | n/a | 4.28 | 18 | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 17-2199.09 | 16540 | RT | n/a | 90.48 | 21 | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |

Task Categories

Purpose: Provide description of Task categories.

File Name: Task Categories.txt

Structure and Description:

| Column | Type | Column Content |
|----------------------|-------------------------|--|
| Scale ID | Character Varying(3) | Scale ID (<i>see Scales Reference</i>) |
| Category | Integer(3) | Category value associated with Scale ID |
| Category Description | Character Varying(1000) | Detail description of category associated with Scale ID |

This file contains the categories associated with the Task content area. Categories for the scale Frequency of Task (FT) are included.

The file is displayed in three tab delimited fields with the columns named Scale ID, Category, and Category Description. The three fields are represented by one row. There are a total of 7 rows of data in this file.

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 13.0 | Added as a new file |
| 14.0 - 28.3 | No structure changes |

Data Example - Task Categories:

| Scale ID | Category | Category Description |
|----------|----------|----------------------|
| FT | 1 | Yearly or less |
| FT | 2 | More than yearly |
| FT | 3 | More than monthly |
| FT | 4 | More than weekly |
| FT | 5 | Daily |
| FT | 6 | Several times daily |
| FT | 7 | Hourly or more |

Emerging Tasks

Purpose: Provide emerging task data associated with some O*NET-SOC occupations.

File Name: Emerging Tasks.txt

Structure and Description:

| Column | Type | Column Content |
|------------------|-------------------------|--|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |
| Task | Character Varying(1000) | New or revised task associated with an occupation |
| Category | Character Varying(8) | “New” or “Revision” |
| Original Task ID | Integer(8) | Task ID referencing original task (<i>see Task Statements</i>) |
| Original Task | Character Varying(1000) | Original task being revised (<i>see Task Statements</i>) |
| Write-in Total | Integer(3) | Number of incumbents providing task |
| Date | Character(7) | Date when data was updated |
| Domain Source | Character Varying(30) | Source of the data |

This file contains new and revised task statements proposed for future data collection. In their survey responses during the on-going data collection, job incumbents are given the opportunity to provide any statements of tasks that they feel are not represented in the current survey task list for their respective occupations. Based on a review and analysis of such statements, drawn from the occupations in the initial data collection, revisions were made to existing tasks and emerging tasks were identified.

The file is displayed in 8 tab delimited fields with the columns named O*NET-SOC Code, Task, Category, Original Task ID, Original Task, Write-in Total, Date, and Domain Source. The 8 fields are represented by one row. There are a total of 218 rows of data in this file.

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 20.1 | Added as a new file |
| 20.2 - 28.3 | No structure changes |

Data Example - Emerging Tasks:

| O*NET-SOC Code | Task | Category | Original Task ID | Original Task | Write-in Total | Date | Domain Source |
|----------------|--|----------|------------------|---------------|----------------|---------|---------------|
| 45-4011.00 | Create field maps using geographic information systems technology. | New | n/a | n/a | 10 | 08/2023 | Incumbent |
| 11-9071.00 | Monitor the performance of the gaming floor, relocating games and installing new games as necessary. | New | n/a | n/a | 6 | 08/2023 | Incumbent |

Technology Skills & Tools

Technology Skills

Purpose: Provide Technology Skills examples.

File Name: Technology Skills.txt

Structure and Description:

| Column | Type | Column Content |
|-----------------|------------------------|---|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |
| Example | Character Varying(150) | Technology skill example |
| Commodity Code | Integer(8) | UNSPSC commodity code (<i>see UNSPSC Reference</i>) |
| Commodity Title | Character Varying(150) | UNSPSC commodity title (<i>see UNSPSC Reference</i>) |
| Hot Technology | Character(1) | Whether example is classified as a hot technology (Y=yes, N=no) |
| In Demand | Character(1) | Whether example is classified as in demand for the occupation (Y=yes, N=no) |

This file contains the Technology Skills examples, including hot and in-demand technologies, associated with O*NET-SOC occupations. The columns “Commodity Code” and “Commodity Title” classify the example under the United Nations Standard Products and Services Code (UNSPSC). See the [UNSPSC Reference](#) section for more information.

The “Hot Technology” column indicates requirements frequently included across all employer job postings. A concise list of all hot technologies may be downloaded from [O*NET OnLine](https://www.onetonline.org/search/hot_tech/) [https://www.onetonline.org/search/hot_tech/].

The “In Demand” column indicates requirements frequently included in employer job postings for the particular occupation.

We welcome feedback on the Technology Skills database. We accept suggestions for new technology skills via our [feedback process](https://www.onetcenter.org/t2_feedback.html) [https://www.onetcenter.org/t2_feedback.html]. Suggestions will be considered for a future update of the Technology Skills database.

The file is displayed in six tab delimited fields with the columns named O*NET-SOC Code, Example, Commodity Code, Commodity Title, Hot Technology, and In Demand. The six fields are represented by one row. There are a total of 32,470 rows of data in this file.

For more information, see:

- [Hot Technologies and In Demand Technology Skills within the O*NET System](https://www.onetcenter.org/reports/Hot_Technologies_Demand.html) [https://www.onetcenter.org/reports/Hot_Technologies_Demand.html]
- [O*NET Center Tools and Technology Quality Control Processes](https://www.onetcenter.org/reports/T2_QC.html) [https://www.onetcenter.org/reports/T2_QC.html]
- [O*NET Tools and Technology: A Synopsis of Data Development Procedures](https://www.onetcenter.org/reports/T2Development.html) [https://www.onetcenter.org/reports/T2Development.html]

- [Identification of “Hot Technologies” within the O*NET® System](https://www.onetcenter.org/reports/Hot_Technologies.html) [https://www.onetcenter.org/reports/Hot_Technologies.html]
- [Tools and Technology Search](https://www.onetcenter.org/reports/T2_Search.html) [https://www.onetcenter.org/reports/T2_Search.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|--------------------------|
| 23.2 | Added as a new file |
| 23.3 - 27.0 | No structure changes |
| 27.1 | “In Demand” column added |
| 27.2 - 28.3 | No structure changes |

Data Example - Technology Skills:

| O*NET-SOC Code | Example | Commodity Code | Commodity Title | Hot Technology | In Demand |
|----------------|-------------------------------|----------------|--|----------------|-----------|
| 11-2011.00 | Actuate BIRT | 43232314 | Business intelligence and data analysis software | N | N |
| 11-2011.00 | Adobe Acrobat | 43232202 | Document management software | Y | N |
| 11-2011.00 | Adobe Acrobat Reader | 43232202 | Document management software | N | N |
| 11-2011.00 | Adobe After Effects | 43232103 | Video creation and editing software | Y | N |
| 11-2011.00 | Adobe Creative Cloud software | 43232102 | Graphics or photo imaging software | Y | N |

Tools Used

Purpose: Provide Tools Used examples.

File Name: Tools Used.txt

Structure and Description:

| Column | Type | Column Content |
|-----------------|------------------------|--|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |
| Example | Character Varying(150) | Tool example |
| Commodity Code | Integer(8) | UNSPSC commodity code (<i>see UNSPSC Reference</i>) |
| Commodity Title | Character Varying(150) | UNSPSC commodity title (<i>see UNSPSC Reference</i>) |

This file contains the Tools Used examples associated with O*NET-SOC occupations. The columns “Commodity Code” and “Commodity Title” classify the example under the United Nations Standard Products and Services Code (UNSPSC). See the [UNSPSC Reference](#) section for more information.

We welcome feedback on the Tools Used database. We accept suggestions for new tools via our [feedback process](https://www.onetcenter.org/t2_feedback.html) [https://www.onetcenter.org/t2_feedback.html]. Suggestions will be considered for a future update of the Tools Used database.

The file is displayed in four tab delimited fields with the columns named O*NET-SOC Code, Example, Commodity Code, and Commodity Title. The four fields are represented by one row. There are a total of 41,650 rows of data in this file.

For more information, see:

- [O*NET Center Tools and Technology Quality Control Processes](https://www.onetcenter.org/reports/T2_QC.html) [https://www.onetcenter.org/reports/T2_QC.html]
- [O*NET Tools and Technology: A Synopsis of Data Development Procedures](https://www.onetcenter.org/reports/T2Development.html) [https://www.onetcenter.org/reports/T2Development.html]
- [Tools and Technology Search](https://www.onetcenter.org/reports/T2_Search.html) [https://www.onetcenter.org/reports/T2_Search.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 23.2 | Added as a new file |
| 23.3 - 28.3 | No structure changes |

Data Example - Tools Used:

| O*NET-SOC Code | Example | Commodity Code | Commodity Title |
|-----------------------|------------------------------|-----------------------|-------------------------------|
| 11-2011.00 | Computer data input scanners | 43211711 | Scanners |
| 11-2011.00 | Desktop computers | 43211507 | Desktop computers |
| 11-2011.00 | Handheld computers | 43211715 | Portable data input terminals |
| 11-2011.00 | Laptop computers | 43211503 | Notebook computers |
| 11-2011.00 | Laser facsimile machines | 44101508 | Laser fax machine |

UNSPSC Reference

Purpose: Provide relevant aspects of the UNSPSC taxonomy.

File Name: UNSPSC Reference.txt

Structure and Description:

| Column | Type | Column Content |
|-----------------|------------------------|------------------------|
| Commodity Code | Integer(8) | UNSPSC commodity code |
| Commodity Title | Character Varying(150) | UNSPSC commodity title |
| Class Code | Integer(8) | UNSPSC class code |
| Class Title | Character Varying(150) | UNSPSC class title |
| Family Code | Integer(8) | UNSPSC family code |
| Family Title | Character Varying(150) | UNSPSC family title |
| Segment Code | Integer(8) | UNSPSC segment code |
| Segment Title | Character Varying(150) | UNSPSC segment title |

This file contains a listing of commodities in the United Nations Standard Products and Services Code (UNSPSC), version 23.0701. The UNSPSC is a four-level taxonomy for the classification of products and services, provided by the [United Nations Development Programme](http://www.unspsc.org/) [http://www.unspsc.org/]. In the taxonomy, the Segment is the most general element and the Commodity is the most specific. One example is listed below:

| | | |
|------------|----------|--|
| Segment: | 43000000 | Information Technology Broadcasting and Telecommunications |
| Family: | 43230000 | Software |
| Class: | 43232100 | Content authoring and editing software |
| Commodity: | 43232104 | Word processing software |

Each technology or tool example is classified under this taxonomy; the “Commodity Code” and “Commodity Title” columns in the [Technology Skills](#) and [Tools Used](#) files can be used as a cross-reference into this file.

The file is displayed in 8 tab delimited fields with the columns named Commodity Code, Commodity Title, Class Code, Class Title, Family Code, Family Title, Segment Code, and Segment Title. The 8 fields are represented by one row. There are a total of 4,262 rows of data in this file.

For more information, see:

- [O*NET Center Tools and Technology Quality Control Processes](https://www.onetcenter.org/reports/T2_QC.html) [https://www.onetcenter.org/reports/T2_QC.html]
- [O*NET Tools and Technology: A Synopsis of Data Development Procedures](https://www.onetcenter.org/reports/T2Development.html) [https://www.onetcenter.org/reports/T2Development.html]
- [Identification of “Hot Technologies” within the O*NET® System](https://www.onetcenter.org/reports/Hot_Technologies.html) [https://www.onetcenter.org/reports/Hot_Technologies.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 20.1 | Added as a new file |
| 20.2 - 28.3 | No structure changes |

Data Example - UNSPSC Reference:

| Commodity Code | Commodity Title | Class Code | Class Title | Family Code | Family Title | Segment Code | Segment Title |
|----------------|---------------------------|------------|----------------------------|-------------|---------------------|--------------|---|
| 12131704 | Explosive initiators | 12131700 | Igniters | 12130000 | Explosive materials | 12000000 | Chemicals including Bio Chemicals and Gas Materials |
| 12131707 | Lighters | 12131700 | Igniters | 12130000 | Explosive materials | 12000000 | Chemicals including Bio Chemicals and Gas Materials |
| 14111513 | Ledger paper | 14111500 | Printing and writing paper | 14110000 | Paper products | 14000000 | Paper Materials and Products |
| 14111802 | Receipts or receipt books | 14111800 | Business use papers | 14110000 | Paper products | 14000000 | Paper Materials and Products |

Work Activities

Work Activities

Purpose: Provide a mapping of O*NET-SOC codes (occupations) to Work Activity ratings.

File Name: Work Activities.txt

Structure and Description:

| Column | Type | Column Content |
|---------------------------|------------------------|---|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |
| Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| Scale ID | Character Varying(3) | Scale ID (<i>see Scales Reference</i>) |
| Data Value | Float(5,2) | Rating associated with the O*NET-SOC occupation |
| N | Integer(4) | Sample size |
| Standard Error | Float(7,4) | Standard Error |
| Lower CI Bound | Float(7,4) | Lower 95% confidence interval bound |
| Upper CI Bound | Float(7,4) | Upper 95% confidence interval bound |
| Recommend Suppress | Character(1) | Low precision indicator (Y=yes, N=no) |
| Not Relevant | Character(1) | Not relevant for the occupation (Y=yes, N=no) |
| Date | Character(7) | Date when data was updated |
| Domain Source | Character Varying(30) | Source of the data |

This file contains the Content Model Work Activity data associated with each O*NET-SOC occupation. It is displayed in 13 tab delimited fields and identified using the column names provided above. Item rating level metadata is provided in columns named N, Standard Error, Lower CI Bound, Upper CI Bound, Recommend Suppress, Not Relevant, Date, and Domain Source. Refer to [Appendix 2, Item Rating Level Statistics - Incumbent](#) for additional information on these items. The 13 fields are represented by one row. There are a total of 71,586 rows of data in this file.

For more information, see:

- [O*NET Work Activities Project Technical Report](https://www.onetcenter.org/reports/DWA_2014.html) [https://www.onetcenter.org/reports/DWA_2014.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|---|
| 5.0 | Date and Source columns added |
| 5.1 | Columns added for N, Standard Error, Lower CI Bound, Upper CI Bound, Recommend Suppress, and Not Relevant |
| 6.0 - 28.1 | No structure changes |
| 28.2 | Standard Error, Lower CI Bound, Upper CI Bound expanded from 2 decimal places to 4 |
| 28.3 | No structure changes |

Data Example - Work Activities:

| O*NET-SOC Code | Element ID | Element Name | Scale ID | Data Value | N | Standard Error | Lower CI Bound | Upper CI Bound | Recommend Suppress | Not Relevant | Date | Domain Source |
|----------------|------------|---|----------|------------|----|----------------|----------------|----------------|--------------------|--------------|---------|---------------------|
| 31-9099.02 | 4.A.1.a.1 | Getting Information | IM | 3.92 | 26 | n/a | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 31-9099.02 | 4.A.1.a.1 | Getting Information | LV | 3.50 | 26 | n/a | n/a | n/a | n/a | N | 08/2023 | Occupational Expert |
| 31-9099.02 | 4.A.1.a.2 | Monitoring Processes, Materials, or Surroundings | IM | 4.50 | 26 | n/a | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 31-9099.02 | 4.A.1.a.2 | Monitoring Processes, Materials, or Surroundings | LV | 5.15 | 26 | n/a | n/a | n/a | n/a | N | 08/2023 | Occupational Expert |
| 31-9099.02 | 4.A.1.b.1 | Identifying Objects, Actions, and Events | IM | 4.35 | 26 | n/a | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 31-9099.02 | 4.A.1.b.1 | Identifying Objects, Actions, and Events | LV | 4.88 | 26 | n/a | n/a | n/a | n/a | N | 08/2023 | Occupational Expert |
| 31-9099.02 | 4.A.1.b.2 | Inspecting Equipment, Structures, or Materials | IM | 4.60 | 25 | n/a | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 31-9099.02 | 4.A.1.b.2 | Inspecting Equipment, Structures, or Materials | LV | 4.46 | 26 | n/a | n/a | n/a | n/a | N | 08/2023 | Occupational Expert |
| 31-9099.02 | 4.A.1.b.3 | Estimating the Quantifiable Characteristics of Products, Events, or Information | IM | 3.32 | 25 | n/a | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 31-9099.02 | 4.A.1.b.3 | Estimating the Quantifiable Characteristics of Products, Events, or Information | LV | 3.31 | 26 | n/a | n/a | n/a | n/a | N | 08/2023 | Occupational Expert |
| 31-9099.02 | 4.A.2.a.1 | Judging the Qualities of Objects, Services, or People | IM | 3.38 | 24 | n/a | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 31-9099.02 | 4.A.2.a.1 | Judging the Qualities of Objects, Services, or People | LV | 3.44 | 25 | n/a | n/a | n/a | n/a | N | 08/2023 | Occupational Expert |

IWA Reference

Purpose: Provide each Intermediate Work Activity.

File Name: IWA Reference.txt

Structure and Description:

| Column | Type | Column Content |
|------------|------------------------|---|
| Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| IWA ID | Character Varying(20) | Identifies each Intermediate Work Activity |
| IWA Title | Character Varying(150) | Intermediate Work Activity statement |

This file contains each Intermediate Work Activity and its corresponding O*NET Work Activity element ID. Every IWA is linked to exactly one Work Activity from the O*NET Content Model. IWAs are linked to one or more DWAs; see the [DWA Reference](#) file for these links.

The file is displayed in three tab delimited fields with the columns named Element ID, IWA ID, and IWA Title. The three fields are represented by one row. There are a total of 332 rows of data in this file.

For more information, see:

- [O*NET Work Activities Project Technical Report](https://www.onetcenter.org/reports/DWA_2014.html) [https://www.onetcenter.org/reports/DWA_2014.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 18.1 | Added as a new file |
| 19.0 - 28.3 | No structure changes |

Data Example - IWA Reference:

| Element ID | IWA ID | IWA Title |
|------------|---------------|---|
| 4.A.1.a.1 | 4.A.1.a.1.I01 | Study details of artistic productions. |
| 4.A.1.a.1 | 4.A.1.a.1.I02 | Read documents or materials to inform work processes. |
| 4.A.2.b.2 | 4.A.2.b.2.I14 | Design industrial systems or equipment. |
| 4.A.4.c.2 | 4.A.4.c.2.I01 | Perform recruiting or hiring activities. |

DWA Reference

Purpose: Provide each Detailed Work Activity.

File Name: DWA Reference.txt

Structure and Description:

| Column | Type | Column Content |
|------------|------------------------|---|
| Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| IWA ID | Character Varying(20) | Identifies each Intermediate Work Activity (<i>see IWA Reference</i>) |
| DWA ID | Character Varying(20) | Identifies each Detailed Work Activity |
| DWA Title | Character Varying(150) | Detailed Work Activity statement |

This file contains each Detailed Work Activity and its corresponding GWA and IWA identifiers. Each DWA is linked to exactly one IWA, which in turn is linked to exactly one Work Activity from the O*NET Content Model. See [Content Model Reference](#) and [IWA Reference](#) for information about these higher-level elements. Each DWA is linked to multiple task statements; see [Tasks to DWAs](#) for these links.

The file is displayed in four tab delimited fields with the columns named Element ID, IWA ID, DWA ID, and DWA Title. The four fields are represented by one row. There are a total of 2,087 rows of data in this file.

For more information, see:

- [O*NET Work Activities Project Technical Report](https://www.onetcenter.org/reports/DWA_2014.html) [https://www.onetcenter.org/reports/DWA_2014.html]
- [Ranking Detailed Work Activities \(DWAs\) Within O*NET® Occupational Profiles](https://www.onetcenter.org/reports/DWA_Ranking.html) [https://www.onetcenter.org/reports/DWA_Ranking.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 18.1 | Added as a new file |
| 19.0 - 28.3 | No structure changes |

Data Example - DWA Reference:

| Element ID | IWA ID | DWA ID | DWA Title |
|------------|---------------|-------------------|---|
| 4.A.1.a.1 | 4.A.1.a.1.I01 | 4.A.1.a.1.I01.D01 | Review art or design materials. |
| 4.A.1.a.1 | 4.A.1.a.1.I01 | 4.A.1.a.1.I01.D02 | Study details of musical compositions. |
| 4.A.2.b.2 | 4.A.2.b.2.I14 | 4.A.2.b.2.I14.D06 | Design control systems for mechanical or other equipment. |
| 4.A.4.b.6 | 4.A.4.b.6.I09 | 4.A.4.b.6.I09.D03 | Advise others on health and safety issues. |

Tasks to DWAs

Purpose: Provide a mapping of task statements to Detailed Work Activities.

File Name: Tasks to DWAs.txt

Structure and Description:

| Column | Type | Column Content |
|----------------|-----------------------|---|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |
| Task ID | Integer(8) | Identifies each task (<i>see Task Statements</i>) |
| DWA ID | Character Varying(20) | Identifies each Detailed Work Activity (<i>see DWA Reference</i>) |
| Date | Character(7) | Date when data was updated |
| Domain Source | Character Varying(30) | Source of the data |

This file maps each Detailed Work Activity (DWA) to the task statements, and consequently to the O*NET-SOC occupations, requiring that activity. Each DWA is mapped to multiple task statements, and each referenced task statement is mapped to one or more DWAs.

The file is displayed in five tab delimited fields with the columns named O*NET-SOC Code, Task ID, DWA ID, Date, and Domain Source. The five fields are represented by one row. There are a total of 23,703 rows of data in this file.

For more information, see:

- [O*NET Work Activities Project Technical Report](https://www.onetcenter.org/reports/DWA_2014.html) [https://www.onetcenter.org/reports/DWA_2014.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 18.1 | Added as a new file |
| 19.0 - 28.3 | No structure changes |

Data Example - Tasks to DWAs:

| O*NET-SOC Code | Task ID | DWA ID | Date | Domain Source |
|----------------|---------|-------------------|---------|---------------|
| 11-9199.08 | 15781 | 4.A.2.a.3.I03.D05 | 03/2014 | Analyst |
| 11-9199.08 | 15782 | 4.A.1.a.2.I03.D04 | 03/2014 | Analyst |
| 11-9199.08 | 15783 | 4.A.2.b.2.I19.D04 | 03/2014 | Analyst |
| 11-9199.08 | 15784 | 4.A.1.a.2.I02.D05 | 03/2014 | Analyst |
| 11-9199.08 | 15785 | 4.A.2.b.2.I02.D02 | 03/2014 | Analyst |

Work Context

Work Context

Purpose: Provide a mapping of O*NET-SOC codes (occupations) to Work Context ratings.

File Name: Work Context.txt

Structure and Description:

| Column | Type | Column Content |
|---------------------------|------------------------|---|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |
| Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| Scale ID | Character Varying(3) | Scale ID (<i>see Scales Reference</i>) |
| Category | Integer(3) | Percent frequency category (<i>see Work Context Categories</i>) |
| Data Value | Float(5,2) | Rating associated with the O*NET-SOC occupation |
| N | Integer(4) | Sample size |
| Standard Error | Float(7,4) | Standard Error |
| Lower CI Bound | Float(7,4) | Lower 95% confidence interval bound |
| Upper CI Bound | Float(7,4) | Upper 95% confidence interval bound |
| Recommend Suppress | Character(1) | Low precision indicator (Y=yes, N=no) |
| Not Relevant | Character(1) | Not relevant for the occupation (Y=yes, N=no) |
| Date | Character(7) | Date when data was updated |
| Domain Source | Character Varying(30) | Source of the data |

This file contains the Content Model Work Context data associated with each O*NET-SOC occupation. It is displayed in 14 tab delimited fields and identified using the column names provided above. Item rating level metadata is provided in columns named N, Standard Error, Lower CI Bound, Upper CI Bound, Recommend Suppress, Not Relevant, Date, and Domain Source. Refer to [Appendix 2, Item Rating Level Statistics - Incumbent](#) for additional information on these items. The 14 fields are represented by one row. There are a total of 289,173 rows of data in this file.

File Structure Changes:

| Release Number | Description of Change |
|----------------|---|
| 5.0 | Date and Source columns added |
| 5.1 | Columns added for N, Standard Error, Lower CI Bound, Upper CI Bound, Recommend Suppress, and Not Relevant |
| 6.0 - 28.1 | No structure changes |
| 28.2 | Standard Error, Lower CI Bound, Upper CI Bound expanded from 2 decimal places to 4 |
| 28.3 | No structure changes |

Data Example - Work Context:

| O*NET-SOC Code | Element ID | Element Name | Scale ID | Category | Data Value | N | Standard Error | Lower CI Bound | Upper CI Bound | Recommend Suppress | Not Relevant | Date | Domain Source |
|----------------|------------|-------------------------------|----------|----------|------------|----|----------------|----------------|----------------|--------------------|--------------|---------|---------------------|
| 11-3111.00 | 4.C.3.d.8 | Duration of Typical Work Week | CT | n/a | 2.67 | 21 | n/a | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 11-3111.00 | 4.C.3.d.8 | Duration of Typical Work Week | CTP | 1 | 0.00 | 21 | n/a | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 11-3111.00 | 4.C.3.d.8 | Duration of Typical Work Week | CTP | 2 | 33.33 | 21 | n/a | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |
| 11-3111.00 | 4.C.3.d.8 | Duration of Typical Work Week | CTP | 3 | 66.67 | 21 | n/a | n/a | n/a | n/a | n/a | 08/2023 | Occupational Expert |

Work Context Categories

Purpose: Provide description of Work Context categories.

File Name: Work Context Categories.txt

Structure and Description:

| Column | Type | Column Content |
|----------------------|-------------------------|---|
| Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| Scale ID | Character Varying(3) | Scale ID (<i>see Scales Reference</i>) |
| Category | Integer(3) | Category value associated with element |
| Category Description | Character Varying(1000) | Detail description of category associated with element |

This file contains the categories associated with the Work Context content area. Categories for the following scales are included: Context (CXP) and Context Category (CTP). The file includes categories utilized in the data collection survey where the category descriptions are variable and item specific.

The file is displayed in five tab delimited fields with the columns named Element ID, Element Name, Scale ID, Category, and Category Description. The five fields are represented by one row. There are a total of 281 rows of data in this file.

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 9.0 | Added as a new file |
| 10.0 - 28.3 | No structure changes |

Data Example - Work Context Categories:

| Element ID | Element Name | Scale ID | Category | Category Description |
|-------------|--------------------------|----------|----------|---|
| 4.C.1.a.2.1 | Face-to-Face Discussions | CXP | 1 | Never |
| 4.C.1.a.2.1 | Face-to-Face Discussions | CXP | 2 | Once a year or more but not every month |
| 4.C.1.a.2.1 | Face-to-Face Discussions | CXP | 3 | Once a month or more but not every week |
| 4.C.1.a.2.1 | Face-to-Face Discussions | CXP | 4 | Once a week or more but not every day |
| 4.C.1.a.2.1 | Face-to-Face Discussions | CXP | 5 | Every day |
| 4.C.1.a.4 | Contact With Others | CXP | 1 | No contact with others |
| 4.C.1.a.4 | Contact With Others | CXP | 2 | Occasional contact with others |
| 4.C.1.a.4 | Contact With Others | CXP | 3 | Contact with others about half the time |
| 4.C.1.a.4 | Contact With Others | CXP | 4 | Contact with others most of the time |
| 4.C.1.a.4 | Contact With Others | CXP | 5 | Constant contact with others |

Occupation Titles

Occupation Data

Purpose: Provide O*NET-SOC codes, titles, and descriptions.

File Name: Occupation Data.txt

Structure and Description:

| Column | Type | Column Content |
|----------------|-------------------------|-----------------------|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code |
| Title | Character Varying(150) | O*NET-SOC Title |
| Description | Character Varying(1000) | O*NET-SOC Description |

This file contains each O*NET-SOC code, occupational title, and definition/description.

The file is displayed in three tab delimited fields with the columns named O*NET-SOC Code, Title, and Description. The three fields are represented by one row. There are a total of 1,016 rows of data in this file.

For more information, see:

- [Updating the O*NET-SOC Taxonomy: Incorporating the 2010 SOC Structure](https://www.onetcenter.org/reports/Taxonomy2010.html) [https://www.onetcenter.org/reports/Taxonomy2010.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 5.0 - 28.3 | No structure changes |

Data Example - Occupation Data:

| O*NET-SOC Code | Title | Description |
|----------------|--|--|
| 11-9041.01 | Biofuels/Biodiesel Technology and Product Development Managers | Define, plan, or execute biofuels/biodiesel research programs that evaluate alternative feedstock and process technologies with near-term commercial potential. |
| 17-2072.00 | Electronics Engineers, Except Computer | Research, design, develop, or test electronic components and systems for commercial, industrial, military, or scientific use employing knowledge of electronic theory and materials properties. Design electronic circuits and components for use in fields such as telecommunications, aerospace guidance and propulsion control, acoustics, or instruments and controls. |
| 19-4031.00 | Chemical Technicians | Conduct chemical and physical laboratory tests to assist scientists in making qualitative and quantitative analyses of solids, liquids, and gaseous materials for research and development of new products or processes, quality control, maintenance of environmental standards, and other work involving experimental, theoretical, or practical application of chemistry and related sciences. |
| 45-4011.00 | Forest and Conservation Workers | Under supervision, perform manual labor necessary to develop, maintain, or protect areas such as forests, forested areas, woodlands, wetlands, and rangelands through such activities as raising and transporting seedlings; combating insects, pests, and diseases harmful to plant life; and building structures to control water, erosion, and leaching of soil. Includes forester aides, seedling pullers, tree planters, and gatherers of nontimber forestry products such as pine straw. |
| 51-8012.00 | Power Distributors and Dispatchers | Coordinate, regulate, or distribute electricity or steam. |

Alternate Titles

Purpose: Provide alternate occupational titles for O*NET-SOC occupations.

File Name: Alternate Titles.txt

Structure and Description:

| Column | Type | Column Content |
|-----------------|------------------------|---|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |
| Alternate Title | Character Varying(250) | Alternate occupational title |
| Short Title | Character Varying(150) | Short version of alternate title (if applicable) |
| Source(s) | Character Varying(50) | List of source codes — see below |

This file contains alternate, or "lay", occupational titles for the O*NET-SOC classification system. The file was developed to improve keyword searches in several Department of Labor internet applications (i.e., Career InfoNet, O*NET OnLine, and O*NET Code Connector). The file contains occupational titles from existing occupational classification systems, as well as from other diverse sources. When a title contains acronyms, abbreviations, or jargon, the "Short Title" column contains the brief version of the full title. The "Source(s)" column contains a comma delimited list of codes which indicate the source of the title information; the codes are identified below:

| | |
|----|---|
| 01 | Associations [i.e., National Retail Federation, Environmental Career Centers (ECC), etc.] |
| 02 | Incumbent Data – O*NET Data Collection |
| 03 | Occupational Code Assignment (OCA) |
| 04 | SOC (i.e., SOC Index, SOC Volume 2, etc.) |
| 05 | State Agencies |
| 06 | US Bureau of Census (e.g., Census Index) |
| 07 | USDOL – BLS (e.g., IT to SOC) |
| 08 | USDOL – ETA (i.e., OPDER, OATELS, ACINET/Fu Associates, DOT, O*NET Center, etc.) |
| 09 | USDOL – User input, web applications (Code Connector, OnLine, and ACINET) |
| 10 | Employer Job Postings |

The file is displayed in four tab delimited fields with the columns named O*NET-SOC Code, Alternate Title, Short Title, and Source(s). The four fields are represented by one row. There are a total of 55,024 rows of data in this file.

For more information, see:

- [O*NET Alternate Titles Procedures](https://www.onetcenter.org/reports/AltTitles.html) [https://www.onetcenter.org/reports/AltTitles.html]
- [A Weighted O*NET Keyword Search \(WWS\)](https://www.onetcenter.org/reports/WWS.html) [https://www.onetcenter.org/reports/WWS.html]
- [Military Transition Search \(as used in My Next Move for Veterans\)](https://www.onetcenter.org/reports/MilitarySearch.html) [https://www.onetcenter.org/reports/MilitarySearch.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 20.1 | Added as a new file |

| Release Number | Description of Change |
|-----------------------|---|
| 20.2 - 21.3 | No structure changes |
| 22.0 | increased "Alternate Title" column from 150 to 250 characters |
| 22.1 - 28.3 | No structure changes |

Data Example - Alternate Titles:

| O*NET-SOC Code | Alternate Title | Short Title | Source(s) |
|-----------------------|------------------------|--------------------|------------------|
| 29-2099.00 | Sleep Technician | n/a | 09 |

Sample of Reported Titles

Purpose: Provide job titles reported during O*NET data collection.

File Name: Sample of Reported Titles.txt

Structure and Description:

| Column | Type | Column Content |
|-----------------------|------------------------|--|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |
| Reported Job Title | Character Varying(150) | Title from incumbents or occupational experts |
| Shown in My Next Move | Character(1) | Whether title is shown on My Next Move career page (Y=yes, N=no) |

This file contains job titles frequently reported by incumbents and occupational experts on data collection surveys. These titles are displayed on occupational reports in the O*NET OnLine and O*NET Code Connector web applications; up to 10 titles for each occupation are displayed and included in this file. Up to 4 titles are also displayed in My Next Move, My Next Move for Veterans, and Mi Próximo Paso; the titles shown in these applications are marked with a Y in the “Shown in My Next Move” column.

The file is displayed in three tab delimited fields with the columns named O*NET-SOC Code, Reported Job Title, and Shown in My Next Move. The three fields are represented by one row. There are a total of 7,659 rows of data in this file.

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 20.1 | Added as a new file |
| 20.2 - 28.3 | No structure changes |

Data Example - Sample of Reported Titles:

| O*NET-SOC Code | Reported Job Title | Shown in My Next Move |
|----------------|--|-----------------------|
| 17-2071.00 | Circuits Engineer | N |
| 17-2071.00 | Design Engineer | Y |
| 17-2071.00 | Electrical Controls Engineer | N |
| 17-2071.00 | Electrical Design Engineer | Y |
| 17-2071.00 | Electrical Engineer | Y |
| 17-2071.00 | Electrical Project Engineer | N |
| 17-2071.00 | Engineer | N |
| 17-2071.00 | Instrumentation and Electrical Reliability Engineer (I&E Reliability Engineer) | N |

Related Occupations and Related Domains

Related Occupations

Purpose: Provide related occupation links between O*NET-SOC occupations.

File Name: Related Occupations.txt

Structure and Description:

| Column | Type | Column Content |
|------------------------|-----------------------|---|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |
| Related O*NET-SOC Code | Character(10) | Related O*NET-SOC code mapping (<i>see Occupation Data</i>) |
| Relatedness Tier | Character Varying(50) | Categories indicating level of relatedness |
| Index | Integer(3) | Order of related code mappings based on expert review |

For each O*NET-SOC code included, 10 primary and 10 supplemental related O*NET-SOC codes are listed. The related occupations in this file are developed using an approach which includes three important contributors to occupational similarity: what people in the occupations do, what they know, and what they are called.

The “Relatedness Tier” column assigns one of three categories to each link:

- **Primary-Short** — Five most strongly related occupations after expert review.
- **Primary-Long** — 6th to 10th most strongly related occupations after expert review.
- **Supplemental** — 11th to 20th most strongly related occupations after expert review.

The file is displayed in four tab delimited fields with the columns named O*NET-SOC Code, Related O*NET-SOC Code, Relatedness Tier, and Index. The four fields are represented by one row. There are a total of 18,460 rows of data in this file.

For more information, see:

- [Developing Related Occupations for the O*NET Program](https://www.onetcenter.org/reports/Related_2022.html) [https://www.onetcenter.org/reports/Related_2022.html]
- [Updates to Related Occupations for the O*NET Program Using the O*NET 28.0 Database](https://www.onetcenter.org/reports/Related_2024.html) [https://www.onetcenter.org/reports/Related_2024.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 26.3 | Added as a new file |
| 27.0 - 28.3 | No structure changes |

Data Example - Related Occupations:

| O*NET-SOC Code | Related O*NET-SOC Code | Relatedness Tier | Index |
|----------------|------------------------|------------------|-------|
| 17-1011.00 | 17-1012.00 | Primary-Short | 1 |
| 17-1011.00 | 27-1025.00 | Primary-Short | 2 |
| 17-1011.00 | 11-9021.00 | Primary-Short | 3 |
| 17-1011.00 | 17-2051.00 | Primary-Short | 4 |
| 17-1011.00 | 47-4011.00 | Primary-Short | 5 |
| 17-1011.00 | 11-9041.00 | Primary-Long | 6 |
| 17-1011.00 | 17-2112.00 | Primary-Long | 7 |

Abilities to Work Activities

Purpose: Provide linkages between abilities and relevant work activities.

File Name: Abilities to Work Activities.txt

Structure and Description:

| Column | Type | Column Content |
|------------------------------|------------------------|---|
| Abilities Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Abilities Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| Work Activities Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Work Activities Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |

This file contains linkages between abilities and relevant work activities. Occupation-specific ratings for the listed elements may be found in the [Abilities](#) and [Work Activities](#) files. Linkages were developed by a panel of experienced industrial/organizational psychologists, and are used in the development of analyst occupational abilities ratings.

The file is displayed in four tab delimited fields with the columns named Abilities Element ID, Abilities Element Name, Work Activities Element ID, and Work Activities Element Name. The four fields are represented by one row. There are a total of 381 rows of data in this file.

For more information, see:

- [O*NET Analyst Occupational Abilities Ratings: Procedures Update](https://www.onetcenter.org/reports/AnalystProcUpdate.html) [https://www.onetcenter.org/reports/AnalystProcUpdate.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 24.2 | Added as a new file |
| 24.3 - 28.3 | No structure changes |

Data Example - Abilities to Work Activities:

| Abilities Element ID | Abilities Element Name | Work Activities Element ID | Work Activities Element Name |
|----------------------|------------------------|----------------------------|---|
| 1.A.1.a.1 | Oral Comprehension | 4.A.1.a.1 | Getting Information |
| 1.A.1.a.1 | Oral Comprehension | 4.A.1.a.2 | Monitoring Processes, Materials, or Surroundings |
| 1.A.1.a.1 | Oral Comprehension | 4.A.1.b.1 | Identifying Objects, Actions, and Events |
| 1.A.1.a.1 | Oral Comprehension | 4.A.2.a.1 | Judging the Qualities of Objects, Services, or People |
| 1.A.1.a.1 | Oral Comprehension | 4.A.2.a.2 | Processing Information |

Abilities to Work Context

Purpose: Provide linkages between abilities and relevant work context.

File Name: Abilities to Work Context.txt

Structure and Description:

| Column | Type | Column Content |
|---------------------------|------------------------|---|
| Abilities Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Abilities Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| Work Context Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Work Context Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |

This file contains linkages between abilities and relevant work context. Occupation-specific ratings for the listed elements may be found in the [Abilities](#) and [Work Context](#) files. Linkages were developed by a panel of experienced industrial/organizational psychologists, and are used in the development of analyst occupational abilities ratings.

The file is displayed in four tab delimited fields with the columns named Abilities Element ID, Abilities Element Name, Work Context Element ID, and Work Context Element Name. The four fields are represented by one row. There are a total of 139 rows of data in this file.

For more information, see:

- [O*NET Analyst Occupational Abilities Ratings: Procedures Update](https://www.onetcenter.org/reports/AnalystProcUpdate.html) [https://www.onetcenter.org/reports/AnalystProcUpdate.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 24.2 | Added as a new file |
| 24.3 - 28.3 | No structure changes |

Data Example - Abilities to Work Context:

| Abilities Element ID | Abilities Element Name | Work Context Element ID | Work Context Element Name |
|----------------------|------------------------|-------------------------|------------------------------|
| 1.A.1.a.1 | Oral Comprehension | 4.C.1.a.2.c | Public Speaking |
| 1.A.1.a.1 | Oral Comprehension | 4.C.1.a.2.f | Telephone |
| 1.A.1.a.1 | Oral Comprehension | 4.C.1.a.2.l | Face-to-Face Discussions |
| 1.A.1.a.1 | Oral Comprehension | 4.C.1.a.4 | Contact With Others |
| 1.A.1.a.1 | Oral Comprehension | 4.C.1.b.1.e | Work With Work Group or Team |

Skills to Work Activities

Purpose: Provide linkages between skills and relevant work activities.

File Name: Skills to Work Activities.txt

Structure and Description:

| Column | Type | Column Content |
|------------------------------|------------------------|---|
| Skills Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Skills Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| Work Activities Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Work Activities Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |

This file contains linkages between skills and relevant work activities. Occupation-specific ratings for the listed elements may be found in the [Skills](#) and [Work Activities](#) files. Linkages were developed by a panel of experienced industrial/organizational psychologists, and are used in the development of analyst occupational skills ratings.

The file is displayed in four tab delimited fields with the columns named Skills Element ID, Skills Element Name, Work Activities Element ID, and Work Activities Element Name. The four fields are represented by one row. There are a total of 232 rows of data in this file.

For more information, see:

- [O*NET Analyst Occupational Skills Ratings: Procedures Update](https://www.onetcenter.org/reports/AOSkills_ProcUpdate.html) [https://www.onetcenter.org/reports/AOSkills_ProcUpdate.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 24.2 | Added as a new file |
| 24.3 - 28.3 | No structure changes |

Data Example - Skills to Work Activities:

| Skills Element ID | Skills Element Name | Work Activities Element ID | Work Activities Element Name |
|-------------------|-----------------------|----------------------------|---|
| 2.A.1.a | Reading Comprehension | 4.A.1.a.1 | Getting Information |
| 2.A.1.a | Reading Comprehension | 4.A.1.a.2 | Monitoring Processes, Materials, or Surroundings |
| 2.A.1.a | Reading Comprehension | 4.A.1.b.1 | Identifying Objects, Actions, and Events |
| 2.A.1.a | Reading Comprehension | 4.A.2.a.1 | Judging the Qualities of Objects, Services, or People |
| 2.A.1.a | Reading Comprehension | 4.A.2.a.2 | Processing Information |

Skills to Work Context

Purpose: Provide linkages between skills and relevant work context.

File Name: Skills to Work Context.txt

Structure and Description:

| Column | Type | Column Content |
|---------------------------|------------------------|---|
| Skills Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Skills Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| Work Context Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Work Context Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |

This file contains linkages between skills and relevant work context. Occupation-specific ratings for the listed elements may be found in the [Skills](#) and [Work Context](#) files. Linkages were developed by a panel of experienced industrial/organizational psychologists, and are used in the development of analyst occupational skills ratings.

The file is displayed in four tab delimited fields with the columns named Skills Element ID, Skills Element Name, Work Context Element ID, and Work Context Element Name. The four fields are represented by one row. There are a total of 96 rows of data in this file.

For more information, see:

- [O*NET Analyst Occupational Skills Ratings: Procedures Update](https://www.onetcenter.org/reports/AOSkills_ProcUpdate.html) [https://www.onetcenter.org/reports/AOSkills_ProcUpdate.html]

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 24.2 | Added as a new file |
| 24.3 - 28.3 | No structure changes |

Data Example - Skills to Work Context:

| Skills Element ID | Skills Element Name | Work Context Element ID | Work Context Element Name |
|-------------------|-----------------------|-------------------------|---------------------------|
| 2.A.1.a | Reading Comprehension | 4.C.1.a.2.h | Electronic Mail |
| 2.A.1.b | Active Listening | 4.C.1.a.2.c | Public Speaking |
| 2.A.1.b | Active Listening | 4.C.1.a.2.f | Telephone |
| 2.A.1.b | Active Listening | 4.C.1.a.2.l | Face-to-Face Discussions |
| 2.A.1.b | Active Listening | 4.C.1.a.4 | Contact With Others |

Data Collection

Content Model Reference

Purpose: Provide O*NET Content Model elements.

File Name: Content Model Reference.txt

Structure and Description:

| Column | Type | Column Content |
|--------------|-------------------------|-----------------------------------|
| Element ID | Character Varying(20) | Content Model Outline Position |
| Element Name | Character Varying(150) | Content Model Element Name |
| Description | Character Varying(1500) | Content Model Element Description |

This file contains the Content Model elements and descriptions.

The file is displayed in three tab delimited fields with the columns named Element ID, Element Name, and Description. The three fields are represented by one row. There are a total of 627 rows of data in this file.

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 5.0 - 28.3 | No structure changes |

Data Example - Content Model Reference:

| Element ID | Element Name | Description |
|------------|------------------------|---|
| 1 | Worker Characteristics | Worker Characteristics |
| 1.A | Abilities | Enduring attributes of the individual that influence performance |
| 1.A.1 | Cognitive Abilities | Abilities that influence the acquisition and application of knowledge in problem solving |
| 1.A.1.a | Verbal Abilities | Abilities that influence the acquisition and application of verbal information in problem solving |
| 1.A.1.a.1 | Oral Comprehension | The ability to listen to and understand information and ideas presented through spoken words and sentences. |

Occupation Level Metadata

Purpose: Provide O*NET-SOC Occupational Level Metadata associated with the incumbent data collection.

File Name: Occupation Level Metadata.txt

Structure and Description:

| Column | Type | Column Content |
|----------------|------------------------|---|
| O*NET-SOC Code | Character(10) | O*NET-SOC Code (<i>see Occupation Data</i>) |
| Item | Character Varying(150) | Occupation level statistics |
| Response | Character Varying(75) | Type of response |
| N | Integer(4) | Sample size for occupation |
| Percent | Float(4,1) | Percentage of responses |
| Date | Character(7) | Date when data was updated |

This file contains occupational level metadata variables associated with data collection statistics. Refer to [Appendix 3, Key to Occupation Level Metadata](#) for additional descriptions of the data provided in this file.

The file is displayed in six tab delimited fields with the columns named O*NET-SOC Code, Item, Response, N, Percent, and Date. The six fields are represented by one row. There are a total of 31,554 rows of data in this file.

File Structure Changes:

| Release Number | Description of Change |
|----------------|---|
| 5.1 | Added as a new file |
| 6.0 - 20.3 | No structure changes |
| 21.0 | Items added and renamed; see Appendix 3, Key to Occupation Level Metadata |
| 21.1 - 28.3 | No structure changes |

Data Example - Occupation Level Metadata:

| O*NET-SOC Code | Item | Response | N | Percent | Date |
|----------------|--|--|-----|---------|---------|
| 51-9161.00 | Data Collection Mode | Paper | 101 | 64.4 | 08/2023 |
| 51-9161.00 | Data Collection Mode | Web | 101 | 35.6 | 08/2023 |
| 51-9161.00 | Employee Completeness Rate | n/a | n/a | 89.4 | 08/2023 |
| 51-9161.00 | Employee Response Rate | n/a | n/a | 45.6 | 08/2023 |
| 51-9161.00 | Establishment Eligibility Rate | n/a | n/a | 79.9 | 08/2023 |
| 51-9161.00 | Establishment Response Rate | n/a | n/a | 30.4 | 08/2023 |
| 51-9161.00 | How Long at Current Job | 1-5 Years | 101 | 30.7 | 08/2023 |
| 51-9161.00 | How Long at Current Job | 10 Years or More | 101 | 50.5 | 08/2023 |
| 51-9161.00 | How Long at Current Job | 6-9 Years | 101 | 13.9 | 08/2023 |
| 51-9161.00 | How Long at Current Job | <1 Year | 101 | 5.0 | 08/2023 |
| 51-9161.00 | How Long at Current Job | Missing | 101 | 0.0 | 08/2023 |
| 51-9161.00 | Industry Division (Major Group Codes (SIC) within Division in parentheses) | Agriculture, Forestry, Fishing (01-09) | 101 | 0.0 | 08/2023 |
| 51-9161.00 | Industry Division (Major Group Codes (SIC) within Division in parentheses) | Construction (15-17) | 101 | 0.0 | 08/2023 |
| 51-9161.00 | Industry Division (Major Group Codes (SIC) within Division in parentheses) | Financial, Insurance and Real Estate (60-67) | 101 | 0.0 | 08/2023 |
| 51-9161.00 | Industry Division (Major Group Codes (SIC) within Division in parentheses) | Manufacturing (20-39) | 101 | 100.0 | 08/2023 |
| 51-9161.00 | Industry Division (Major Group Codes (SIC) within Division in parentheses) | Mining (10-14) | 101 | 0.0 | 08/2023 |

Level Scale Anchors

Purpose: Provide descriptions of O*NET Level Scale Anchors.

File Name: Level Scale Anchors.txt

Structure and Description:

| Column | Type | Column Content |
|--------------------|-------------------------|---|
| Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| Scale ID | Character Varying(3) | Scale ID (<i>see Scales Reference</i>) |
| Anchor Value | Integer(3) | Anchor value associated with element |
| Anchor Description | Character Varying(1000) | Detail description of anchor associated with element |

This file contains the scale anchors associated with the following four content areas – 1) Abilities, 2) Knowledge, 3) Skills, and 4) Work Activities. It includes all scale anchors utilized in the data collection survey where the scale anchors are variable and item specific. Scale anchors are not included for those survey items where the scale anchors are fixed. This includes the five-point importance scale and the seven-point task frequency scale. (Note: See [O*NET Data Questionnaires \[https://www.onetcenter.org/ombclearance.html\]](https://www.onetcenter.org/ombclearance.html)).

The file is displayed in five tab delimited fields with the columns named Element ID, Element Name, Scale ID, Anchor Value, and Anchor Description. The five fields are represented by one row. There are a total of 483 rows of data in this file.

File Structure Changes:

| Release Number | Description of Change |
|----------------|--|
| 5.1 | Added as a new file |
| 6.0 | Added Scale ID column |
| 7.0 - 8.0 | No structure changes |
| 9.0 | The data for Education, Training, and Experience and Work Context were moved into their own files for data clarity purposes. |
| 10.0 - 28.3 | No structure changes |

Data Example - Level Scale Anchors:

| Element ID | Element Name | Scale ID | Anchor Value | Anchor Description |
|-------------------|-----------------------|-----------------|---------------------|---|
| 1.A.1.a.1 | Oral Comprehension | LV | 2 | Understand a television commercial |
| 1.A.1.a.1 | Oral Comprehension | LV | 4 | Understand a coach's oral instructions for a sport |
| 1.A.1.a.1 | Oral Comprehension | LV | 6 | Understand a lecture on advanced physics |
| 1.A.1.a.2 | Written Comprehension | LV | 2 | Understand signs on the highway |
| 1.A.1.a.2 | Written Comprehension | LV | 4 | Understand an apartment lease |
| 1.A.1.a.2 | Written Comprehension | LV | 6 | Understand an instruction book on repairing Artificial Intelligence systems |
| 1.A.1.a.3 | Oral Expression | LV | 2 | Place an order at a restaurant drive-thru |
| 1.A.1.a.3 | Oral Expression | LV | 4 | Give instructions to a lost motorist |
| 1.A.1.a.3 | Oral Expression | LV | 6 | Explain advanced principles of genetics to college freshmen |
| 1.A.1.a.4 | Written Expression | LV | 1 | Write a note to remind someone to take food out of the freezer |
| 1.A.1.a.4 | Written Expression | LV | 4 | Write a job recommendation for a subordinate |

Scales Reference

Purpose: Provide a reference to the scale names and values.

File Name: Scales Reference.txt

Structure and Description:

| Column | Type | Column Content |
|------------|-----------------------|----------------|
| Scale ID | Character Varying(3) | Scale ID |
| Scale Name | Character Varying(50) | Scale Name |
| Minimum | Integer(1) | Scale Minimum |
| Maximum | Integer(3) | Scale Maximum |

This file contains the Scale information by which the raw values are measured.

The file is displayed in four tab delimited fields with the columns named Scale ID, Scale Name, Minimum, and Maximum. The four fields are represented by one row. There are a total of 29 rows of data in this file.

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 5.0 - 28.3 | No structure changes |

Data Example - Scales Reference:

| Scale ID | Scale Name | Minimum | Maximum |
|----------|---|---------|---------|
| CT | Context | 1 | 3 |
| CTP | Context (Categories 1-3) | 0 | 100 |
| CX | Context | 1 | 5 |
| CXP | Context (Categories 1-5) | 0 | 100 |
| IM | Importance | 1 | 5 |
| LV | Level | 0 | 7 |
| OJ | On-The-Job Training (Categories 1-9) | 0 | 100 |
| PT | On-Site Or In-Plant Training (Categories 1-9) | 0 | 100 |
| RL | Required Level Of Education (Categories 1-12) | 0 | 100 |
| RW | Related Work Experience (Categories 1-11) | 0 | 100 |

Survey Booklet Locations

Purpose: Provide survey item numbers for O*NET Content Model elements.

File Name: Survey Booklet Locations.txt

Structure and Description:

| Column | Type | Column Content |
|--------------------|------------------------|---|
| Element ID | Character Varying(20) | Content Model Outline Position (<i>see Content Model Reference</i>) |
| Element Name | Character Varying(150) | Content Model Element Name (<i>see Content Model Reference</i>) |
| Survey Item Number | Character Varying(4) | Survey Booklet Location Number |
| Scale ID | Character Varying(3) | Scale ID (<i>see Scales Reference</i>) |

This file contains the Content Model elements that have corresponding survey item numbers in the Survey Booklet.

Each survey item number corresponds to a survey question in the [O*NET Questionnaires](https://www.onetcenter.org/ombclearance.html) [https://www.onetcenter.org/ombclearance.html]. The values for incumbent data categories are percentage ratings corresponding to survey question options. Match the element ID(s) from data files to a survey item number using this file.

The file is displayed in four tab delimited fields with the columns named Element ID, Element Name, Survey Item Number, and Scale ID. The four fields are represented by one row. There are a total of 227 rows of data in this file.

File Structure Changes:

| Release Number | Description of Change |
|----------------|-----------------------|
| 5.0 | Added as a new file |
| 5.1 - 12.0 | No structure changes |
| 13.0 | Added Scale ID column |
| 14.0 - 28.3 | No structure changes |

Data Example - Survey Booklet Locations:

| Element ID | Element Name | Survey Item Number | Scale ID |
|------------|--------------------|--------------------|----------|
| 1.C.1.a | Achievement/Effort | KN40 | IM |
| 1.C.1.b | Persistence | KN41 | IM |
| 1.C.1.c | Initiative | KN42 | IM |
| 1.C.2.b | Leadership | KN43 | IM |
| 1.C.3.a | Cooperation | KN44 | IM |
| 1.C.3.b | Concern for Others | KN45 | IM |

Appendices

Appendix 1. Item Rating Level Statistics - Analyst

Rating Level Statistics

For each of the Ability domain and Skills domain elements, additional rating level statistics, such as Standard Error and data flags are included to help provide a description of the quality of the data values. The file has columns to represent these additional values.

The explanations for the Rating Level Statistics columns are explained in the following definitions.

Standard Error - Standard errors were calculated to provide an indication of each estimate's precision. The standard error of the mean (SEM) is the standard deviation of the ratings across analysts divided by the square root of the number of analysts (i.e., eight). Statistics with large standard errors are generally considered less precise than those with small standard errors.

Upper CI Bound and Lower CI Bound - The standard error of the mean (SEM) was used to define a range (confidence interval) around the estimate. The upper and lower bounds of the 95% confidence interval establish this range such that over a large number of sample estimates the probability is .95 that the population mean will be included in a confidence interval of this size. The upper bound of the confidence interval is calculated by taking the SEM and multiplying it by 1.96 and adding that number to the observed mean. The lower bound of the confidence interval is calculated by taking the SEM and multiplying it by 1.96 and subtracting that number from the observed mean.

Recommend Suppress - Users are encouraged to use estimates exhibiting “low precision” with caution and for many applications users are advised to consider suppressing these estimates. Abilities and Skills estimates are considered to have low precision if the standard error is greater than .51. The value of .51 was selected as a suppression criterion because $1.0/1.96 = .5102$. An SEM of $>.51$ means that the upper and lower bounds of the confidence interval are more than 1 scale point away from the observed mean.

Not Relevant –The ability or skill level rating is identified as “not relevant” if 0, 1, or 2 analysts rated importance for that ability ≥ 2 (i.e., six or more analysts rated importance a 1). A value of “Y” indicates 0, 1, or 2 analysts rated importance ≥ 2 . A value of “N” indicates more than 2 analysts rated importance ≥ 2 . Users are encouraged to provide their end-users with an indication that the item level rating is “not relevant” rather than displaying the level value or displaying no level information.

Appendix 2. Item Rating Level Statistics - Incumbent

Rating Level Statistics

For each of the domain elements, additional rating level statistics, such as Standard Error and data flags are included to help provide a description of the quality of the data values. Each of the domain files (Education, Training, and Experience, Knowledge, Tasks, Work Activities, Work Context, and Work Styles) has columns to represent these additional values.

The explanations for the Rating Level Statistics columns are explained in the following definitions.

Standard Error - Standard errors were calculated to provide an indication of each estimate's precision. The standard error is the square root of the variance of the estimate. Statistics with large variances are generally considered less precise than those with small variances.

Upper CI Bound and Lower CI Bound - The standard error was used to define a range (confidence interval) around the estimate. The 95-percent confidence level means that if all possible samples were selected and an estimate of the value and its sampling error were computed for each, then for approximately 95 percent of the samples, the interval would include the "true" average value.

Recommend Suppress - Users are encouraged to use estimates exhibiting "low precision" with caution and for many applications users are advised to consider suppressing these estimates. An estimate is considered to have low precision if any of the following are true: (1) the sample size is less than 10; (2) the variance is 0 and the sample size is less than 15; (3) the relative standard error (RSE) is greater than 0.5. (The RSE of a mean estimate is the ratio of the estimate's standard error to the estimate itself. To calculate the RSE of the estimates expressed as percentages (e.g., the proportion of respondents who indicated they perform a task once per week), the log transformation of the proportion was used.)

Not Relevant – "Level" estimates were flagged as "not relevant" if more than 75% of item respondents to the corresponding "Importance" item rated the item as "not important". Users are encouraged to provide their end-users with an indication that the item level rating is "not relevant" rather than displaying the level value or displaying no level information.

Appendix 3. Key to Occupation Level Metadata

Each O*NET-SOC Code has detailed information associated with the O*NET data collection called Occupation Level Metadata. The name and explanation for each data value in the item column is presented below. The O*NET-SOC Level Sample Distribution Statistics, that are provided in the Percent column of the Occupation Level Metadata file, are unweighted percents. Therefore, these values do not represent the estimated distribution of the O*NET-SOC population.

Data Collection Mode - Incumbents and occupational experts had the option to complete the questionnaire either using a web-based survey or a paper survey. Valid responses are:

- Paper
- Web

Employee Completeness Rate - The employee completeness rate for an occupation is the percentage of total returned non-blank questionnaires that were retained after editing and data cleaning.

Employee Response Rate - The employee response rate is the percentage of eligible employees in the sample who return a non-blank questionnaire.

Establishment Eligibility Rate - The establishment eligibility rate is the percentage of sampled establishments where the target establishment or a similar establishment in the same industry was found to be in operation at the sampled address.

Establishment Response Rate - The establishment response rate is the percentage of sampled eligible establishments for the occupation that agreed to participate.

How Long at Current Job - Incumbents indicated in the background questionnaire how long they had been in their current job. Valid responses are:

- 10 years or more
- 6-9 years
- 1-5 years
- <1 year
- Missing

How Much Experience Performing Work in this Occupation - Occupational experts indicated in the background questionnaire how much experience they have performing work in this occupation. Valid responses are:

- 10+ years
- 5-9 years
- 3-4 years
- 1-2 years
- <1 year
- Never

- Missing

Industry Division (Major Group Codes (SIC) within Division in parentheses) - Each sampled establishment was assigned to one primary industry division in the sampling frame. The Major Industry Group Codes (SIC) within the Division are provided in parentheses. Valid responses are:

- Agriculture, Forestry, Fishing (01 - 09)
- Mining (10 - 14)
- Construction (15 - 17)
- Manufacturing (20 - 39)
- Transportation, Communication, Electric, Gas, and Sanitary Services (40 - 49)
- Wholesale Trade (50 -51)
- Retail Trade (52 - 59)
- Financial, Insurance and Real Estate (60 - 67)
- Services (70 - 89)
- Public Administration (91 - 97)
- Non-classifiable (99)

North American Industry Classification System (NAICS) Sector - Each sampled establishment was assigned to one type of economic activity sector in the sampling frame. Valid responses are:

- Accommodation and food services
- Administrative and support and waste management and remediation services
- Agriculture, forestry, fishing and hunting
- Arts, entertainment, and recreation
- Construction
- Education services
- Finance and insurance
- Health care and social assistance
- Information
- Management of Companies and Enterprises
- Manufacturing
- Mining
- Other services, except public administration
- Professional, Scientific and Technical Services
- Public administration
- Real estate and rental and leasing
- Retail trade
- Transportation and warehousing
- Unclassified
- Utilities
- Wholesale trade

OE Completeness Rate - The OE completeness rate for an occupation is the percentage of total returned non-blank questionnaire sets that were retained after editing and data cleaning.

OE Response Rate - The OE response rate is the percentage of eligible experts selected for the occupation who return a non-blank questionnaire.

SOC Eligibility Rate - The SOC eligibility rate is the percentage of eligible establishments where the target occupation was asked about and present at the sampled address.

Total Completed Questionnaires – Total Completes refers to the total number of incumbents who completed one of the four questionnaire types.

Appendix 4. Content Updates Since Release 4.0

O*NET 28.3 Database

- An updated listing of 168 “Hot Technologies,” based on employer job postings from across all occupations, resulted in 11,500+ occupation linkages.
- Updated “In Demand” technology skill designations, based on employer job postings from within each occupation, led to approximately 2,000 “In Demand” skill linkages across 439 occupations.
- Task statements for 39 occupations were revised to update language related to people with disabilities.
- Sample of Reported Titles for 52 occupations were updated based on a quality control review.

O*NET 28.2 Database

- Related occupations were updated for all 923 data-level occupations.
- 17 new technology skill linkages related to 9 occupations were identified from customer input.
- 6 new tools used linkages related to 2 occupations were identified from customer input.
- Standard Error, Upper CI Bound, and Lower CI Bound metadata fields were expanded from 2 decimal places to 4.

For additional details on the related occupations updates, see [Updates to Related Occupations for the O*NET Program Using the O*NET 28.0 Database](https://www.onetcenter.org/reports/Related_2024.html) [https://www.onetcenter.org/reports/Related_2024.html] in our Reports and Documents area.

Previous releases rounded Standard Error and other metadata to 2 decimal places, resulting in a rounded value of zero when the actual value was very small but greater than zero. This release increases the precision to 4 decimal places, providing additional clarity in these cases.

O*NET 28.1 Database

- RIASEC Occupational Interest Profiles (OIPs) and high-point codes for all 923 data-level occupations were developed using machine learning.
- An updated listing of 162 “Hot Technologies,” based on employer job postings from across all occupations, resulted in 11,400+ occupation linkages.
- Updated “In Demand” technology skill designations, based on employer job postings from within each occupation, led to approximately 2,500 “In Demand” skill linkages across 489 occupations.
- 90+ new technology skill linkages related to 75 occupations were identified from employer job postings.
- 450+ alternate titles related to 237 occupations were added from a review of Registered Apprenticeship Programs (RAPs), customer input, and other sources.
- The Job Zone for 15-1211.00 (Computer Systems Analysts) was revised from Job Zone 3 to Job Zone 4 based on evaluation of contributing data used to assign Job Zones.

To learn more about the successful effort to leverage advances in supervised machine learning to update the vocational interest information in the O*NET System, see: [Using Machine Learning](#)

[to Develop Occupational Interest Profiles and High-Point Codes for the O*NET System](https://www.onetcenter.org/reports/ML_OIPs.html) [https://www.onetcenter.org/reports/ML_OIPs.html].

O*NET 28.0 Database

- Addition and update of Task Statement ratings (importance, relevance, and frequency) for 90 occupations
- Addition and update of Abilities, Skills, Work Activities, Knowledge, and Work Context data for 90 occupations
- Addition and update of Training and Work Experience and Education data for 90 occupations
- Addition and update of Work Styles data for 90 occupations
- Addition and update of Job Zones data for 90 occupations
- Addition and update of Detailed Work Activities (DWAs) and linkages for 65 occupations
- Addition and update of Alternate Titles and Sample of Reported Titles for 90 occupations

O*NET 27.3 Database

- 924 technology skill linkages related to 282 occupations were added from employer job postings.

The [Interests Illustrative Activities](#) file was also updated to fix a typographical error.

O*NET 27.2 Database

- **Basic Occupational Interests** added to the O*NET Content Model - a set of 41 more detailed and precise interest elements
- New file containing action and object keywords for each general (RIASEC) occupational interest
- New file linking each basic occupational interest to relevant general occupational interests
- New file containing illustrative work activities related to the general and basic occupational interests
- New file containing illustrative occupations linked to the general and basic occupational interests
- 1,995 alternate titles related to 629 occupations were added from employer job postings and customer input.

For additional details on the interests updates, see [Updating Vocational Interests Information for the O*NET Content Model](https://www.onetcenter.org/reports/Voc_Interests.html) [https://www.onetcenter.org/reports/Voc_Interests.html] in our Reports and Documents area. Also see the documentation for each of the new files:

- [RIASEC Keywords](#)
- [Basic Interests to RIASEC](#)
- [Interests Illustrative Activities](#)
- [Interests Illustrative Occupations](#)

O*NET 27.1 Database

- 157 technology skills, related to 892 occupations via 10,707 linkages, were identified as “Hot Technologies” using an updated approach.
- 2,515 technology skill linkages were identified as “In Demand” for 478 occupations.
- 641 technology skill linkages related to 215 occupations were added from employer job postings.
- 18 alternate titles related to 13 occupations were added from customer input and other sources.

This release updates the approach to identifying “Hot Technologies” and introduces the concept of “In Demand” technology skills.

- **Hot Technologies** are software and technology requirements most frequently included **across all employer job postings**.
- **In Demand** technology skills are software and technology requirements frequently included in the employer job postings **for a particular occupation**.

The purpose of the two designations is to enable O*NET customers to learn which technology skills employers in the US economy are presently emphasizing and searching for while recruiting employees. For additional details on the Hot Technology and In Demand designations, see [Hot Technologies and In Demand Technology Skills within the O*NET System](https://www.onetcenter.org/reports/Hot_Technologies_Demand.html) [https://www.onetcenter.org/reports/Hot_Technologies_Demand.html] in our Reports and Documents area.

O*NET 27.0 Database

- Addition and update of Task Statement ratings (importance, relevance, and frequency) for 80 occupations
- Addition and update of Abilities, Skills, Work Activities, Knowledge, and Work Context data for 80 occupations
- Addition and update of Training and Work Experience and Education data for 80 occupations
- Addition and update of Work Styles data for 80 occupations
- Addition and update of Job Zones data for 80 occupations
- Addition and update of Detailed Work Activities (DWAs) and linkages for 12 occupations
- Addition and update of Alternate Titles and Sample of Reported Titles for 80 occupations

O*NET 26.3 Database

- New related occupations were added for all 923 data-level occupations.
- 51 technology skills related to 15 occupations were added from customer input.
- 22 tools used related to 4 occupations were added from customer input.

The newly added [Related Occupations](#) file replaces the “Career Changers Matrix” and “Career Starters Matrix” files, which have been removed from the database. These related occupations are developed using an approach which includes three important contributors to occupational similarity: what people in the occupations do, what they know, and what they are called.

For additional details on the Related Occupations project, see [Developing Related Occupations for the O*NET Program](https://www.onetcenter.org/reports/Related_2022.html) [https://www.onetcenter.org/reports/Related_2022.html] in our Reports and Documents area.

O*NET 26.2 Database

- 1,147 technology skills related to 509 occupations were added or updated by occupational analyst review.
- 671 alternate titles related to 222 occupations were added from professional associations, customer input, and other sources.

O*NET 26.1 Database

- 112 alternate titles related to 13 occupations were added from professional associations and customer input.
- 49 occupations were populated with Job Zone assignments.
- 60 Level Scale Anchor descriptions were updated within the Knowledge and Generalized Work Activities domains.
- 1,900 technology skills related to 586 occupations were added or updated from professional associations, customer input, and other sources.
- 3,127 tools used related to 327 occupations were added or updated from professional associations, customer input, and other sources.
- 20 Content Model element names and descriptions were updated with minor edits.

For additional details on the Level Scale Anchors update, see [O*NET Level Scale Anchor Updates: Knowledge and Generalized Work Activities](https://www.onetcenter.org/reports/Anchors_Update_KG.html) [https://www.onetcenter.org/reports/Anchors_Update_KG.html] in our Reports and Documents area.

This release transitioned technology skills and tools information to an organizing structure based on the latest version of the United Nations Standard Products and Services Code (UNSPSC). For details, see [UNSPSC Reference](#).

In this release, the Content Model Reference file was updated to minimize wording and grammar differences between the O*NET Database and [O*NET Questionnaires](https://www.onetcenter.org/questionnaires.html) [https://www.onetcenter.org/questionnaires.html]. These updates also affected other download files where element names or descriptions are included. For more information on the role of questionnaires in our data collection process, see [O*NET Data Collection Overview](https://www.onetcenter.org/dataCollection.html) [https://www.onetcenter.org/dataCollection.html].

O*NET 26.0 Database

- Addition and update of Task Statement ratings (importance, relevance, and frequency) for 100 occupations
- Addition and update of Abilities, Skills, Work Activities, Knowledge, and Work Context data for 100 occupations
- Addition and update of Training and Work Experience and Education data for 100 occupations

- Addition and update of Work Styles data for 100 occupations
- Addition and update of Job Zones data for 100 occupations
- Addition and update of Detailed Work Activities (DWAs) and linkages for 238 occupations
- Addition and update of Alternate Titles and Sample of Reported Titles for 402 occupations
- Update of Level Scale Anchors descriptions for 89 anchors in the Abilities and Skills domains

For additional details on the Level Scale Anchors update, see [O*NET Level Scale Anchor Updates: Abilities and Skills Domains](https://www.onetcenter.org/reports/Anchors_Update_AS.html) [https://www.onetcenter.org/reports/Anchors_Update_AS.html] in our Reports and Documents area.

O*NET 25.3 Database

- 907 technology skills related to 141 occupations were updated from employer job postings and other sources. Currently, 182 “hot technologies” are identified. This update includes information linked to 150 occupations which underwent a “spotlight” or detailed review by occupational analysts.
- 252 alternate titles related to 139 occupations were added from employer job postings.

O*NET 25.2 Database

The 25.2 release of the O*NET database includes the identification of technology skills related to distance learning and remote training. During the current COVID pandemic, schools, teachers, students, families, and businesses often rely on a wide variety of emerging technologies to navigate the challenges of decentralized education and work environments. For an initial listing of over 50 related technology skills, see [O*NET Resource Center — Distance Learning & Remote Training](https://www.onetcenter.org/initiatives.html#distance-learning) [https://www.onetcenter.org/initiatives.html#distance-learning].

[O*NET Hot Technologies](https://www.onetonline.org/search/hot_tech/) [https://www.onetonline.org/search/hot_tech/] were also updated in this release, leading to the following database enhancements:

- 1,206 technology skills related to 232 occupations were updated from employer job postings and other sources. Currently, 182 “hot technologies” are identified.
- 15 tools used related to 4 occupations were updated from customer feedback.

O*NET 25.1 Database – Updating the O*NET-SOC Taxonomy

The O*NET-SOC 2019 taxonomy structure has been revised based on the transition to the 2018 SOC. The O*NET 25.1 Database, which incorporates the new O*NET-SOC taxonomy, includes 1,016 occupational titles, 923 of which represent O*NET data-level occupations.

A technical report, [Updating the O*NET-SOC Taxonomy: Incorporating the 2018 SOC Structure](https://www.onetcenter.org/reports/Taxonomy2019.html) [https://www.onetcenter.org/reports/Taxonomy2019.html], is available which describes the new O*NET-SOC 2019 taxonomy structure. The overall relationship between the O*NET-SOC 2019 and the 2018 SOC is summarized. Code, title, or description changes that occurred from transitioning to the new 2018 SOC structure are detailed in the report. The new O*NET-SOC 2019 structure also includes four cybersecurity-related new and emerging occupations.

For a graphical overview of the new structure see: [About the O*NET-SOC 2019 Taxonomy](https://www.onetcenter.org/taxonomy.html#latest) [https://www.onetcenter.org/taxonomy.html#latest]

Data from the O*NET 25.0 database (O*NET-SOC 2010) has been incorporated into the new O*NET-SOC 2019 taxonomy, including the new O*NET-SOC codes, titles, and descriptions. In the 25.1 release, taxonomy-related updates include:

- Addition of 62 O*NET-SOC 2019 occupations
- Update of O*NET-SOC codes, titles, and/or descriptions for 345 occupations
- Addition and update of Task Statements for 127 occupations
- Addition of Abilities, Skills, Work Activities, Knowledge, and Work Context data for 53 occupations
- Addition of Work Styles data for 53 occupations
- Addition of Job Zones data for 53 occupations
- Addition and update of Detailed Work Activities (DWAs) and linkages for 127 occupations
- Addition and update of Alternate Titles and Sample of Reported Titles for 127 occupations
- Addition and update of Technology Skills and Tools Used for 98 occupations

A total of 874 occupations include data on Knowledge, Skills, Abilities, and other descriptors in this release. 53 of these occupations include data aggregated from one or more predecessor O*NET-SOC 2010 occupations. In these cases, data is marked with “Analyst - Transition” in the Domain Source column. Some ratings, including Education, Training, and Experience ratings, are not available. These occupations will be updated through the O*NET Data Collection program with data from job incumbents and occupation experts, replacing the transitional data in future releases of the O*NET Database.

Apart from the taxonomy changes, alternate titles were added or revised for 370 occupations, as part of the ongoing effort to improve and update the O*NET Database.

Overall, release 25.1 includes the following:

- Codes, titles, and descriptions for 1,016 O*NET-SOC 2019 occupations
- Task statements for 923 O*NET-SOC 2019 occupations in the O*NET Data Collection Plan
- Update of 821 O*NET-SOC 2019 occupations through the O*NET Data Collection program with data from job incumbents and occupational experts
- Addition of transitional data for 53 O*NET-SOC 2019 occupations, based on data previously collected through the O*NET Data Collection program
- Addition and update of Alternate Titles and Sample of Reported Titles for 497 occupations
- Addition and update of Technology Skills and Tools Used for 98 occupations

Release 25.0 included the following:

- Addition and update of Task Statement ratings (importance, relevance, and frequency) for 100 occupations
- Addition and update of Abilities, Skills, Work Activities, Knowledge, and Work Context data for 100 occupations
- Addition and update of Training and Work Experience and Education data for 100 occupations
- Addition and update of Work Styles data for 100 occupations
- Addition and update of Job Zones data for 100 occupations
- Addition and update of Detailed Work Activities (DWAs) and linkages for 79 occupations
- Addition and update of Alternate Titles and Sample of Reported Titles for 245 occupations

Release 24.3 included the following:

- 431 technology skills related to 167 occupations were updated from employer job postings. Currently, 175 “hot technologies” are identified.
- 122 alternate titles related to 80 occupations were added from employer job postings and other sources.

Release 24.2 included the following:

- New “Cross-Domain Linkages” section with linkages between:
 - [Abilities to relevant Work Activities](#);
 - [Abilities to relevant Work Context](#);
 - [Skills to relevant Work Activities](#);
 - [Skills to relevant Work Context](#).
- Removal of:
 - “Tools and Technology” file, which was deprecated in the 23.2 release. Developers should use the [Technology Skills](#) and [Tools Used](#) files instead.
 - “Green Occupations,” “Green Task Statements,” “Green DWA Reference,” and “Tasks to Green DWAs.” Developers interested in retaining this information may continue to use the files as published in the 24.1 release, available on the [Archived data releases](https://www.onetcenter.org/db_releases.html) [https://www.onetcenter.org/db_releases.html] page.
- 441 technology skills related to 98 occupations were updated from employer job postings and other sources. Currently, 161 “hot technologies” are identified. This update includes information linked to 100 occupations which underwent a “spotlight” or detailed review by occupational analysts.
- 162 alternate titles related to 103 occupations were added from employer job postings and other sources.

Release 24.1 included the following:

- 1,416 technology skills related to 322 occupations were updated from employer job postings and other sources. Currently, 161 “hot technologies” are identified. This update includes

information linked to 100 occupations which underwent a “spotlight” or detailed review by occupational analysts.

- 170 alternate titles related to 102 occupations were added from employer job postings and other sources.

Release 24.0 included the following:

- Addition and update of Task Statement ratings (importance, relevance, and frequency) for 100 occupations
- Addition and update of Abilities, Skills, Work Activities, Knowledge, and Work Context data for 100 occupations
- Addition and update of Training and Work Experience and Education data for 100 occupations
- Addition and update of Work Styles data for 100 occupations
- Addition and update of Job Zones data for 100 occupations
- Addition and update of Detailed Work Activities (DWAs) and linkages for 63 occupations
- Addition and update of Alternate Titles and Sample of Reported Titles for 299 occupations

Release 23.3 included the following:

- 197 technology skills related to 101 occupations were updated from employer job postings. Currently, 182 “hot technologies” are identified.
- 209 alternate titles related to 118 occupations were added from employer job postings and other sources.

Release 23.2 included the following:

- 339 technology skills related to 133 occupations were updated from employer job postings and other sources. Currently, 186 “hot technologies” are identified.
- 150 alternate titles related to 84 occupations were added from employer job postings and other sources.

This release adds two new files, [Technology Skills](#) and [Tools Used](#). Developers currently using the “Tools and Technology” file should transition to using these new files instead. The “Tools and Technology” file is deprecated and will be removed in a future release of the O*NET Database.

Release 23.1 included the following:

- 946 technology skills related to 197 occupations were updated from employer job postings. Currently, 192 “hot technologies” are identified.
- 191 alternate titles related to 100 occupations were added from employer job postings and other sources.

Release 23.0 included the following:

- Addition and update of Task Statement ratings (importance, relevance, and frequency) for 100 occupations

- Addition and update of Abilities, Skills, Work Activities, Knowledge, and Work Context data for 100 occupations
- Addition and update of Training and Work Experience and Education data for 100 occupations
- Addition and update of Work Styles data for 100 occupations
- Addition and update of Job Zones data for 100 occupations
- Addition and update of Detailed Work Activities (DWAs) and linkages for 33 occupations
- Addition and update of Alternate Titles and Sample of Reported Titles for 294 occupations

Release 22.3 included the following:

- 460 technology skills related to 125 occupations were updated from employer job postings and other sources. Currently, 186 “hot technologies” are identified.
- 273 alternate titles related to 120 occupations were added from employer job postings and other sources.

Release 22.2 included the following:

- 158 technology skills and 45 tools related to 83 occupations were updated from employer job postings and other sources. Currently, 178 “hot technologies” are identified.
- 215 alternate titles related to 98 occupations were added from employer job postings and other sources.

Release 22.1 included the following:

- 408 technology skills and 88 tools related to 132 occupations were updated from employer job postings and other sources. This update includes information linked to 50 occupations with a bright outlook and/or apprenticeship opportunities which underwent a “spotlight” or detailed review by occupational analysts.
- 352 alternate titles related to 151 occupations were added from employer job postings and other sources.

Release 22.0 included the following:

- Addition and update of Task Statement ratings (importance, relevance, and frequency) for 100 occupations
- Addition and update of Abilities, Skills, Work Activities, Knowledge, and Work Context data for 100 occupations
- Addition and update of Training and Work Experience and Education data for 100 occupations
- Addition and update of Work Styles data for 100 occupations
- Addition and update of Job Zones data for 100 occupations
- Addition and update of Detailed Work Activities (DWAs) and linkages for 38 occupations
- Addition and update of Alternate Titles and Sample of Reported Titles for 121 occupations

Release 21.3 included the following:

- 80 alternate titles related to 40 occupations were added from professional association and customer input, transactional analyses, and occupational code requests.
- 80 technology skill examples related to 54 occupations were added from employer job postings.

Release 21.2 included the following:

- 343 alternate titles related to 140 occupations were added from employer job postings and other sources.
- 69 technology skill examples and 7 tools used related to 59 occupations were added from employer job postings and other sources.

Release 21.1 included the following:

- 178 new technology examples related to 85 occupations were added from employer job postings and other sources.
- Sample of Reported Titles selections for 10 occupations were updated to reflect titles frequently reported by job incumbents.

Release 21.0 included the following:

- Addition and update of Task Statement ratings (importance, relevance, and frequency) for 116 occupations
- Addition and update of Abilities, Skills, Work Activities, Knowledge, and Work Context data for 116 occupations
- Addition and update of Training and Work Experience and Education data for 116 occupations
- Addition and update of Work Styles data for 116 occupations
- Addition and update of Job Zones data for 116 occupations
- Addition and update of Detailed Work Activities (DWAs) and linkages for 56 occupations
- Addition and update of Alternate Titles and Sample of Reported Titles for 116 occupations
- 121 new technologies are added across 134 occupations, including the identification of 17 additional "hot technologies"

Release 20.3 included the following:

- 626 new technology examples related to 144 occupations were added from employer job postings and other sources.
- 30 new alternate titles related to 5 occupations were added from customer and professional association input.

Release 20.2 included the following:

- 857 new alternate titles related to 266 occupations were added from employer job postings and other sources.
- 1,015 new technology examples related to 414 occupations were added from employer job postings and other sources.

Release 20.1 included the following:

- Data from the Lay/Alternate Titles, Sample of Reported Titles, Related Occupations, Tools & Technology, and Emerging Tasks projects are now included in the O*NET Database. These were previously available as separate supplemental file downloads.
- 769 new alternate titles related to 247 occupations were added from employer job postings and other sources.
- 2,332 new technology examples related to 272 occupations were added from employer job postings.
- All database files can be downloaded in Microsoft Excel format, in addition to the existing formats of tab-delimited text, and SQL files for MySQL, Microsoft SQL Server, or Oracle.

Release 20.0 included the following:

- Addition and update of Task Statement ratings (importance, relevance, and frequency) for 102 occupations
- Addition and update of Abilities, Skills, Work Activities, Knowledge, and Work Context data for 102 occupations
- Addition and update of Training and Work Experience and Education data for 102 occupations
- Addition and update of Work Styles data for 102 occupations
- Addition and update of Job Zones data for 102 occupations
- Addition and update of Detailed Work Activities (DWAs) and linkages for 56 occupations

Release 19.0 included the following:

- Addition and update of Task Statement ratings (importance, relevance, and frequency) for 126 occupations
- Addition and update of Abilities, Skills, Work Activities, Knowledge, and Work Context data for 126 occupations
- Addition and update of Training and Work Experience and Education data for 126 occupations
- Addition and update of Work Styles data for 126 occupations
- Addition and update of Job Zones data for 126 occupations
- Addition and update of Detailed Work Activities (DWAs) and linkages for 126 occupations

Release 18.1 contained the following:

This release includes newly developed Detailed Work Activities (DWAs) data, along with broader Intermediate Work Activities (IWAs) and a separate set of Green DWAs. See the report *Work Activities Project Technical Report* for details (http://www.onetcenter.org/reports/DWA_2014.html).

The 18.1 release contains five new files:

- DWA Reference.txt
- Green DWA Reference.txt

- IWA Reference.txt
- Tasks to DWAs.txt
- Tasks to Green DWAs.txt

All other files are unchanged from the 18.0 release.

Release 18.0 contained the following:

- Addition and update of Task Statement ratings (134 occupations)
- Addition and update of Abilities, Knowledge, Skills, Work Activities, and Work Context data (105 occupations)
- Addition and update of Education, Training and Work Experience data (105 occupations)
- Addition and update of Work Styles data (105 occupations)
- Addition and update of Interests data (83 occupations)
- Addition and update of Job Zones (105 occupations)
- Updated Occupation Level Metadata (105 occupations)

Release 17.0 contained the following:

- Addition and update of Task Statement ratings (108 occupations)
- Addition and update of Abilities, Knowledge, Skills, Work Activities, and Work Context data (108 occupations)
- Addition and update of Education, Training and Work Experience data (108 occupations)
- Addition and update of Work Styles data (108 occupations)
- Addition and update of Work Values data (83 occupations)
- Addition and update of Job Zones (108 occupations)
- Updated Occupation Level Metadata (108 occupations)
- Update of Green Task Statements data (6 occupations)

Release 16.0 contained the following:

- Addition and update of Task Statement ratings (107 occupations)
- Addition and update of Abilities, Knowledge, Skills, Work Activities, and Work Context data (107 occupations)
- Addition and update of Education, Training and Work Experience data (107 occupations)
- Addition and update of Work Styles data (107 occupations)
- Addition and update of Job Zones (107 occupations)
- Updated Occupation Level Metadata (107 occupations)
- New Occupational Level Metadata
 - O*NET-SOC Eligible Expert Response Rate
- Addition of Green Occupations data (204 occupations)
- Addition of Green Task Statements data (140 occupations)

O*NET Database 15.1 – Updating the O*NET-SOC Taxonomy

The O*NET 15.1 Taxonomy Preview Database aligns the O*NET-SOC taxonomy with the 2010 SOC (Office of Management and Budget, 2010). Data from the O*NET 15.0 database (O*NET-

SOC 2009) has been incorporated into the new O*NET-SOC 2010 taxonomy, including the new O*NET-SOC codes, titles, and descriptions. For 838 data-level occupations, the data remains unchanged from its publication in the O*NET 15.0 database. This occurs where the O*NET-SOC 2010 occupation is a clear successor of the O*NET-SOC 2009 occupation. There are 6 exceptional cases where data has been aggregated from one or more source occupations.

Changes made to the O*NET 15.1 Database are summarized below. A historical summary of all database changes since the release of the O*NET 4.0 Database are provided in [O*NET Database Content Changes 5.0 - 15.1](#). In the O*NET 15.1 Database, 545 occupations had changes to their code, title, and/or description that are reflected in the Occupational Data file.

In 15.1, changes in the Domain Files fall into three categories:

- 50 occupations with data in the 15.0 release have a new O*NET-SOC Code in the 2010 taxonomy. The data and metadata for these occupations are unchanged, but the O*NET-SOC Code field now reflects the latest taxonomy. These code changes impact all domain files, and also the Occupation Level Metadata file.
- 6 exceptional occupations feature data aggregated from one or more occupations from the O*NET-SOC 2009 taxonomy. In these cases, “Recommend Suppress” and “Not Relevant” variables carry a “Y” value if ANY of the source occupations carried that value; no other metadata variables are included. Some data elements were not aggregated and are not present for these occupations, including all Education, Training, and Experience elements and all task ratings. These 6 occupations, listed below, will be updated through the O*NET Data Collection program with data from job incumbents and occupation experts.

| | |
|------------|---|
| 13-1071.00 | Human Resources Specialists |
| 15-1143.00 | Computer Network Architects |
| 23-1012.00 | Judicial Law Clerks |
| 51-5112.00 | Printing Press Operators |
| 51-5113.00 | Print Binding and Finishing Workers |
| 51-9151.00 | Photographic Process Workers and Processing Machine Operators |

- 26 occupations newly added in the 2010 taxonomy carry new task statements, but not task ratings. This includes the 6 exceptional occupations cited above. With these additional statements, all 974 occupations in the O*NET Data Collection Plan carry full task lists in the 15.1 release.

| | |
|------------|---------------------------------------|
| 11-9013.02 | Farm and Ranch Managers |
| 11-9061.00 | Funeral Service Managers |
| 13-1071.00 | Human Resources Specialists |
| 13-1075.00 | Labor Relations Specialists |
| 13-1131.00 | Fundraisers |
| 13-2071.00 | Credit Counselors |
| 15-1143.00 | Computer Network Architects |
| 15-1152.00 | Computer Network Support Specialists |
| 21-1094.00 | Community Health Workers |
| 23-1012.00 | Judicial Law Clerks |
| 25-2051.00 | Special Education Teachers, Preschool |

| | |
|------------|--|
| 25-2052.00 | Special Education Teachers, Kindergarten and Elementary School |
| 29-1125.01 | Art Therapists |
| 29-1125.02 | Music Therapists |
| 29-1128.00 | Exercise Physiologists |
| 29-2035.00 | Magnetic Resonance Imaging Technologists |
| 29-2057.00 | Ophthalmic Medical Technicians |
| 29-2099.05 | Ophthalmic Medical Technologists |
| 29-2099.07 | Surgical Assistants |
| 31-1014.00 | Nursing Assistants |
| 31-1015.00 | Orderlies |
| 31-9097.00 | Phlebotomists |
| 49-2021.00 | Radio, Cellular, and Tower Equipment Installers and Repairers |
| 51-5112.00 | Printing Press Operators |
| 51-5113.00 | Print Binding and Finishing Workers |
| 51-9151.00 | Photographic Process Workers and Processing Machine Operators |

Release 15.1 contained the following:

- Codes, titles, and descriptions for 1,110 O*NET-SOC 2010 occupations
- Task statements for 974 O*NET-SOC 2010 occupations in the O*NET Data Collection Plan
- Update of 838 O*NET-SOC 2010 occupations through the O*NET Data Collection program with data from job incumbents and occupation experts

Release 15.0 contained the following:

- Addition and update of Task Statement ratings (120 occupations)
- Addition and update of Abilities, Knowledge, Work Activities, and Work Context data (120 occupations)
- Addition and update of Education, Training and Work Experience data (120 occupations)
- Addition and update of Work Styles data (120 occupations)
- Addition and update of Job Zones (120 occupations)
- Updated Occupation Level Metadata (120 occupations)
- Addition and update of Skills data (853 occupations)

O*NET Database 14.0 – Updating the O*NET-SOC Taxonomy

The O*NET 14.0 database is the 1st database release to reflect the updated O*NET-SOC 2009 taxonomy. This taxonomy update is the second major change to the taxonomy since 2000 with its conversion to a SOC-based taxonomy (O*NET-SOC 2000). This new taxonomy contains an additional 153 New and Emerging (N&E) occupations. For more information about N&E, see *New and Emerging Occupations of the 21st Century: Updating the O*NET-SOC Taxonomy* (March, 2009). This report and an O*NET-SOC 2006 to 2009 “look-up” file are available for download from the O*NET Resource Center web site (<http://www.onetcenter.org/taxonomy.html>).

Release 14.0 contained the following:

- Addition and update of Task Statement ratings (117 occupations)
- Addition and update of Abilities, Knowledge, Work Activities, and Work Context data (117 occupations)

- Addition and update of Education, Training and Work Experience data (117 occupations)
- Addition and update of Work Styles data (117 occupations)
- Addition and update of Job Zones (117 occupations)
- Updated Occupation Level Metadata (117 occupations)
- Addition and update of Interests and Work Values data (96 occupations)

Release 13.0 contained the following:

- Addition and update of Task Statement ratings (106 occupations)
- Updated Abilities, Knowledge, Skills, Work Activities, and Work Context data (106 occupations)
- Additional Work Context data (106 occupations)
- Addition and update of Education, Training and Work Experience data (106 occupations)
- Addition and update of Work Styles data (106 occupations)
- Addition and update of Job Zones (108 occupations)
- Updated Occupation Level Metadata (106 occupations)
- Addition and update of Interests and Work Values data (812 occupations)

Release 12.0 contained the following:

- Addition and update of Task Statement ratings (100 occupations)
- Updated Abilities, Knowledge, Skills, Work Activities, and Work Context data (100 occupations)
- Addition and update of Education, Training and Work Experience data (100 occupations)
- Addition and update of Work Styles data (100 occupations)
- Addition and update of Job Zones (101 occupations)
- Updated Occupation Level Metadata (100 occupations)

Release 11.0 contained the following:

- Addition and update of Task Statement ratings (101 occupations)
- Updated Abilities, Knowledge, Skills, Work Activities, and Work Context data (101 occupations)
- Addition and update of Education, Training and Work Experience data (101 occupations)
- Addition and update of Work Styles data (101 occupations)
- Updated Job Zones (101 occupations)
- Updated Occupation Level Metadata (101 occupations)

O*NET Database 10.0 – Updating the O*NET-SOC Taxonomy

The O*NET 10.0 database was the 1st database release to reflect the updated O*NET-SOC 2006 taxonomy. This taxonomy update is the first major change to the taxonomy since 2000 with its conversion to a SOC-based taxonomy (O*NET-SOC 2000). A summary of this update and implementation of the O*NET-SOC 2006 taxonomy can be found in our *Updating the O*NET-SOC Taxonomy Report* (April, 2006). The report is available for download from the O*NET Resource Center site (<http://www.onetcenter.org/reports/UpdatingTaxonomy.html>).

Release 10.0 contained the following:

- Addition of Task Statement ratings (100 occupations)
- Updated Abilities, Knowledge, Skills, Work Activities, and Work Context data (100 occupations)
- Addition of Education, Training and Work Experience data (100 occupations)
- Addition of Work Styles data (100 occupations)
- Updated Job Zones (100 occupations)
- Updated Occupation Level Metadata (100 occupations)

Release 9.0 contained the following:

- Addition of Task Statement ratings (100 occupations)
- Updated Abilities, Knowledge, Skills, Work Activities, and Work Context data (100 occupations)
- Addition of Education, Training and Work Experience data (100 occupations)
- Addition of Work Styles data (100 occupations)
- Updated Job Zones (100 occupations)
- Updated Occupation Level Metadata (100 occupations)

Release 8.0 contained the following:

- New and revised Task Statements (98 occupations)
- Addition of Task Statement ratings (100 occupations)
- Updated Abilities, Knowledge, Skills, Work Activities, and Work Context data (100 occupations)
- Addition of Education, Training and Work Experience data (100 occupations)
- Addition of Work Styles data (100 occupations)
- Updated Job Zones (100 occupations)
- Updated Occupation Level Metadata (100 occupations)

Release 7.0 contained the following:

- Addition of Task Statement ratings (100 occupations)
- Updated Abilities, Knowledge, Skills, Work Activities, and Work Context data (100 occupations)
- Addition of Education, Training and Work Experience data (100 occupations)
- Addition of Work Styles data (100 occupations)
- Updated Job Zones (100 occupations)
- Updated Occupation Level Metadata (100 occupations)

Release 6.0 contained the following:

- New and revised Task Statements (140 occupations)
- Addition of Task Statement ratings (126 occupations)

- Updated Abilities, Work Activities, Knowledge, Skills, and Work Context data (126 occupations)
- Addition of Training and Work Experience, and Education data (126 occupations)
- Addition of Work Styles data (126 occupations)
- Updated Job Zones (126 occupations)
- Addition of scale anchors for both the Work Context and for the Education, Training and Experience domains.
- Updated Occupation Level Metadata (126 occupations)

Release 5.1 contained the following:

- New and Revised Task Statements (69 occupations)
- Updated Job Zones (54 occupations)
- Level Scale Anchors for Skills, Knowledge, Ability, and Work Activity Domains
- New Occupational Level Metadata
 - O*NET-SOC Establishment Response Rate
 - O*NET-SOC Employee Response Rate
 - O*NET-SOC Case Completeness Rate
 - Total Completes for O*NET-SOC
- New Occupational Level Distribution Statistics
 - Data Collection Mode
 - How long at Current Job
 - Industry
- New Ratings Level Metadata
 - Standard Error
 - Lower 95% Confidence Interval Bound
 - Upper 95% Confidence Interval Bound
 - Sample Size
 - Recommended Suppression
 - “Not Relevant for the Occupation” flag

O*NET Database 5.0 – First Data Collection Release

The April 2003 release of the O*NET 5.0 Database represented the first database release to incorporate data from the data collection program. It was the first of planned semi-annual updates of the database to update all O*NET-SOC occupations.

Release 5.0 contained the following:

- New and revised Task Statements (455 occupations)
- Addition of Task Statement ratings (54 occupations)
- Updated Abilities, Work Activities, Knowledge, Skills, and Work Context data (54 occupations)
- Addition of Training and Work Experience, and Education data (54 occupations)
- Addition of Work Styles data (54 occupations)
- Addition of metadata to the file structure to specify source of data and date of update

- Addition of Emerging Task Statements
- Addition of Detailed Work Activities

O*NET Database 4.0 – Final Analyst Database

The O*NET 4.0 database represents the final version of an “analyst ratings only” O*NET Database. The ratings for each of the 900+ O*NET-SOC occupations in the 4.0 database were developed by occupational analysts and every occupation contains ratings for the same range of descriptors. The ongoing O*NET data collection program is gradually replacing these original analyst ratings with ratings derived primarily from job incumbents, as well as, ratings from an updated analyst procedure. The database structure and content changes incorporated in 4.0 were made to make the database consistent with data collection program. For more details about these changes, please refer to *Summary of O*NET 4.0 Content Model and Database* (October 2001) (<http://www.onetcenter.org/resData.html#summary>)

Appendix 5. Historical Summary of Database Content Changes

Click a file name to jump to full description and history. **Note:** **U** = content changes resulting from the data collection program; **N** = data elements/types/descriptors first appearing in the database; and **C** = any other edits made. Shaded cells indicate a file was not present in that release.

| | Release | | | | | | | | | | | | | | | |
|---|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|
| | 25.1 | 25.2 | 25.3 | 26.0 | 26.1 | 26.2 | 26.3 | 27.0 | 27.1 | 27.2 | 27.3 | 28.0 | 28.1 | 28.2 | 28.3 | |
| Knowledge | C | | | U | | | | U | | | | U | | C | | |
| Skills | Content Changes 25.1 - 28.3 | | | | | | | | U | | | U | | C | | |
| Abilities | C | | | U | | | | U | | | | U | | C | | |
| Education, Training, and Experience | C | | | U | | | | U | | | | U | | C | | |
| Education, Training, and Experience Categories | | | | | | | | | | | | | | | | |
| Job Zones | C | | | U | C | | | U | | | | U | | | | |
| Job Zone Reference | | | | | | | | | | | | | | | | |
| Interests | C | | | | | | | | | | | | U | | | |
| Work Values | C | | | | | | | | | | | | | | | |
| Work Styles | C | | | U | | | | U | | | | U | | C | | |
| Task Statements | U,C | | | U | | | | U | | | | U | C | | C | |
| Task Ratings | C | | | U | | | | U | | | | U | | C | | |
| Task Categories | | | | | | | | | | | | | | | | |
| Emerging Tasks | C | | | U | | | | U | | | | U | | | | |
| Technology Skills | U | U | U | | U | U | U | | U,N | | U | | U | U | U | |
| Tools Used | U | U | U | | U | U | U | | | | | | | U | | |
| UNSPSC Reference | | U | | | U | | | | | | | | | | | |
| Work Activities | C | | | U | | | | U | | | | U | | C | | |
| IWA Reference | | | | | | | | | | | | | | | | |
| DWA Reference | U | | | U | | | | | | | | | | | | |
| Tasks to DWAs | U,C | | | U | | | | U | | | | U | | | | |
| Work Context | C | | | U | | | | U | | | | U | | C | | |
| Work Context Categories | | | | | | | | | | | | | | | | |
| Occupation Data | C | | | | | | | | | | | | | | | |
| Alternate Titles | U,C | | U | U | U | U | | U | U | U | | U | U | | U | |
| Sample of Reported Titles | U,C | | U | U | U | U | | U | | U | | U | | | U | |
| Career Changers Matrix | C | | | | | | | | | | | | | | | |
| Career Starters Matrix | C | | | | | | | | | | | | | | | |
| Related Occupations | | | | | | | N | | | | | | | U | | |
| Content Model Reference | | | | C | C | | | | | C | | C | | | | |
| Occupation Level Metadata | C | | | U | | | | U | | | | U | | | | |
| Level Scale Anchors | | | | C | C | | | | | | | | | | | |
| Scales Reference | | | | | | | | | | | | | | | | |
| Survey Booklet Locations | | | | | | | | | | | | | | | | |
| Abilities to Work Activities | | | | | | | | | | | | | | | | |
| Abilities to Work Context | | | | | | | | | | | | | | | | |
| Skills to Work Activities | | | | C | | | | | | | | | | | | |
| Skills to Work Context | | | | C | | | | | | | | | | | | |
| RIASEC Keywords | | | | | | | | | | N | | | | | | |
| Basic Interests to RIASEC | | | | | | | | | | N | | | | | | |
| Interests Illustrative Activities | | | | | | | | | | N | N | | | | | |
| Interests Illustrative Occupations | | | | | | | | | | N | | | | | | |

O*NET Database Content Changes 22.0 - 25.0

| | Release | | | | | | | | | | | | |
|---|---------|------|------|------|------|------|------|------|------|------|------|------|------|
| | 22.0 | 22.1 | 22.2 | 22.3 | 23.0 | 23.1 | 23.2 | 23.3 | 24.0 | 24.1 | 24.2 | 24.3 | 25.0 |
| Knowledge | U | | | | U | | | | U | | | | U |
| Skills | U | | | | U | | | | U | | | | U |
| Abilities | U | | | | U | | | | U | | | | U |
| Education, Training, and Experience | U | | | | U | | | | U | | | | U |
| Education, Training, and Experience Categories | | | | | | | | | | | | | |
| Job Zones | U | | | | U | | | | U | | | | U |
| Job Zone Reference | | | | | | | | | C | | | | |
| Interests | | | | | | | | | | | | | |
| Work Values | | | | | | | | | | | | | |
| Work Styles | U | | | | U | | | | U | | | | U |
| Task Statements | U | | | | U | | | | U | | | | U |
| Task Ratings | U | | | | U | | | | U | | | | U |
| Task Categories | | | | | | | | | | | | | |
| Emerging Tasks | U | | | | U | | | | U | | | | U |
| Technology Skills | | | | | | | N | U | | U | U | U | |
| Tools Used | | | | | | | N | | | U | | | |
| Tools and Technology | | U | U | U | | U | U | U | | U | | | |
| UNSPSC Reference | | U | U | | | | | | | | | | |
| Work Activities | U | | | | U | | | | U | | | | U |
| IWA Reference | | | | | | | | | | | | | |
| DWA Reference | | | | | | | | | U | | | | |
| Tasks to DWAs | U | | | | U | | | | U | | | | U |
| Work Context | U | | | | U | | | | U | | | | U |
| Work Context Categories | | | | | | | | | | | | | |
| Occupation Data | | | | | | | | | | | | | |
| Alternate Titles | U | U | U | U | U | U | | U | U | U | U | U | U |
| Sample of Reported Titles | U | | U | U | U | U | U | U | U | U | U | U | U |
| Career Changers Matrix | | | | | | | | | | | | | |
| Career Starters Matrix | | | | | | | | | | | | | |
| Green Occupations | | | | | | | | | | | | | |
| Green Task Statements | U | | | | U | | | | U | | | | |
| Tasks to Green DWAs | U | | | | U | | | | U | | | | |
| Green DWA Reference | | | | | | | | | | | | | |
| Content Model Reference | | | | | | | | | | | | | |
| Occupation Level Metadata | U | | | | U | | | | U | | | | U |
| Level Scale Anchors | | | | | | | | | | | | | |
| Scales Reference | | | | | | | | | | | | | |
| Survey Booklet Locations | N,C | | | | | | | | | | | | |
| Abilities to Work Activities | | | | | | | | | | | N | | |
| Abilities to Work Context | | | | | | | | | | | N | | |
| Skills to Work Activities | | | | | | | | | | | N | | |
| Skills to Work Context | | | | | | | | | | | N | | |

O*NET Database Content Changes 16.0 - 21.3

| | Release | | | | | | | | | | | | |
|---|---------|------|------|------|------|------|------|------|------|-------|------|------|------|
| | 16.0 | 17.0 | 18.0 | 18.1 | 19.0 | 20.0 | 20.1 | 20.2 | 20.3 | 21.0 | 21.1 | 21.2 | 21.3 |
| Knowledge | U | U | U | | U | U | | | | U | | | |
| Skills | U | U | U | | U | U | | | | U | | | |
| Abilities | U | U | U | | U | U | | | | U | | | |
| Education, Training, and Experience | U | U | U | | U | U | | | | U | | | |
| Education, Training, and Experience Categories | | | | | | | | | | | | | |
| Job Zones | U | U | U | | U | U | | | | U | | | |
| Job Zone Reference | | | | | C | | | | | C | | | |
| Interests | | | U | | | | | | | | | | |
| Work Values | | U | | | | | | | | | | | |
| Work Styles | U | U | U | | U | U | | | | U | | | |
| Task Statements | U,C | U | U | | U | U | | | | U | | | |
| Task Ratings | U | U | U | | U | U | | | | U | | | |
| Task Categories | | | | | | | | | | | | | |
| Emerging Tasks | | | | | | | N | | | U | | | |
| Tools and Technology | | | | | | | N | U | U | U,N | U | U | U |
| UNSPSC Reference | | | | | | | N | U | | | U | U | |
| Work Activities | U | U | U | | U | U | | | | U | | | |
| IWA Reference | | | | N | | | | | | | | | |
| DWA Reference | | | | N | U | | | | | | | | |
| Tasks to DWAs | | | | N | U | U | | | | U | | | |
| Work Context | U | U | U | | U | U | | | | U | | | |
| Work Context Categories | | | | | | | | | | | | | |
| Occupation Data | | | | | | | | | | | | | |
| Alternate Titles | | | | | | | N | U | U | U | | U | U |
| Sample of Reported Titles | | | | | | | N | | | U | U | | U |
| Career Changers Matrix | | | | | | | N | | | | | | |
| Career Starters Matrix | | | | | | | N | | | | | | |
| Green Occupations | N | | | | | | | | | | | | |
| Green Task Statements | N | U | U | | U | U | | | | U | | | |
| Tasks to Green DWAs | | | | N | U | U | | | | U | | | |
| Green DWA Reference | | | | N | | | | | | | | | |
| Content Model Reference | | | | | N,C | N,C | | | | N,C | | | |
| Occupation Level Metadata | U,C | U | U | | U | U | | | | U,N,C | | | |
| Level Scale Anchors | | | | | | | | | | | | | |
| Scales Reference | | | | | | | | | | | | | |
| Survey Booklet Locations | C | | | | C | | | | | | | | |

O*NET Database Content Changes 5.0 - 15.1

| | Release | | | | | | | | | | | | |
|---|---------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|
| | 5.0 | 5.1 | 6.0 | 7.0 | 8.0 | 9.0 | 10.0 | 11.0 | 12.0 | 13.0 | 14.0 | 15.0 | 15.1 |
| Knowledge | U | N | U | U | U | U | U,C | U | U | U | U | U | C |
| Skills | U,N | N | U | U | U | U | U,C | U | U | U | U,C | U | C |
| Abilities | U,N | N,C | U | U | U | U | U,C | U | U | U | U | U | C |
| Education, Training, and Experience | N | N | U | U | U | U | U,C | U | U | U | U | U | C |
| Education, Training, and Experience Categories | | | | | | C | | | | | | | |
| Job Zones | | N | U | U | U,C | U,C | U,C | U | U,C | U | U | U | C |
| Job Zone Reference | | | | | | C | | | | | C | | |
| Interests | N | | | | | | C | | | U | U | | C |
| Work Values | N | | | | | | C | | | U | U | | C |
| Work Styles | N | N | U | U | U | U | U,C | U | U | U | U | U | C |
| Tasks | U,N | U,N,C | U,N,C | U,N,C | U,N,C | U,N,C | U,N,C | U | U | | | | |
| Task Statements | | | | | | | | | | U,C | U | U | C |
| Task Ratings | | | | | | | | | | U,C | U | U | C |
| Task Categories | | | | | | | | | | C | | | |
| Work Activities | U,N | N | U | U | U | U | U,C | U | U | U | U | U | C |
| Work Context | U,N | N | U | U | U | U | U,C | U | U | U | U | U | C |
| Work Context Categories | | | | | | C | | | | | | | |
| Occupation Data | | | U,C | | C | C | C | | | | C | U | C |
| Content Model Reference | | | | | | C | | C | | N,C | | | |
| Occupation Level Metadata | | N | U | U | U | U | U,C | U | U | U | U | U | C |
| Level Scale Anchors | | N | U | | C | C | | | | | | | |
| Scales Reference | | C | | | | | | | | C | | | |
| Survey Booklet Locations | N | | | | | | | | | N,C | | | |