



# The Revision of the Federal Standard Occupational Classification System and its Potential Impacts on the Geospatial Workforce

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# What's the SOC?

## Standard Occupational Classification (SOC)

- “Classifies all occupations in which work is performed for pay or profit.”
- Occupations vs. job titles
  - [Direct Match Title File](#)
- The SOC hierarchy:
  - 23 Major Groups
    - 98 Minor Groups
      - 459 Broad Occupations
      - 867 Detailed Occupations

# Why should you care?

Implications for schools, employers, students, and job seekers

- [Workforce Innovation and Opportunity Act](#) (WOIA) funding and resources
- Academic program development and expansion
- STEM occupation classification
- Occupational information
  - Misleading wage and employment data (only collected for SOC occupations, not O\*NET codes)

# Why should you care? (Cont.)

## Implications for schools, employers, students, and job seekers

onetonline.org/link/summary/17-1021.00

Contents

### Workforce Characteristics

#### Wages & Employment Trends

**Median wages (2023)** \$36.64 hourly, \$76,210 annual

**State wages** Select a State

**Local wages** ZIP Code

**Employment (2022)** 14,000 employees

**Projected growth (2022-2032)** ■ ■ ■ ■ Faster than average (5% to 8%)

**Projected job openings (2022-2032)** 1,000

**State trends** Select a State

**Top industries (2022)** [Government](#)  
[Professional, Scientific, and Technical Services](#)

Source: Bureau of Labor Statistics [2023 wage data](#) and [2022-2032 employment projections](#). "Projected growth" represents the estimated change in total employment over the projections period (2022-2032). "Projected job openings" represent openings due to growth and replacement.

*Workforce data for the SOC code of 17-1021.00: Cartographers and Photogrammetrists*

onetonline.org/link/summary/15-1299.02

Contents

### Workforce Characteristics

#### Wages & Employment Trends

Median wage data for **Computer Occupations, All Other**.  
Employment data for **Computer Occupations, All Other**.  
Industry data for **Computer Occupations, All Other**.

**Median wages (2023)** \$50.44 hourly, \$104,920 annual

**State wages** Select a State

**Local wages** ZIP Code

**Employment (2022)** 449,400 employees

**Projected growth (2022-2032)** ■ ■ ■ ■ Much faster than average (9% or higher)

**Projected job openings (2022-2032)** 33,500

**State trends** Select a State

**Top industries (2022)** [Professional, Scientific, and Technical Services](#)  
[Government](#)

Source: Bureau of Labor Statistics [2023 wage data](#) and [2022-2032 employment projections](#). "Projected growth" represents the estimated change in total employment over the projections period (2022-2032). "Projected job openings" represent openings due to growth and replacement.

*Workforce data for the O\*NET code of 15-1299.02: GIS Technologists and Technicians comes from the SOC code of 15-1299.00: Computer Occupations, All Other*

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# GeoEd Conference Summary: Review current GIS occupations in the SOC System

Placement Logical? Good Title/Description? Need New Code? <https://bit.ly/soccode>

- Major Group (17-0000: Architecture and Engineering Occupations)

- Minor Group (17-1000: Architects, Surveyors, and Cartographers)
  - Broad Occupation (17-1020: Surveyors, Cartographers, and Photogrammetrists)
    - Detailed Occupation

**(17-1021: Cartographers and Photogrammetrists)**

<https://bit.ly/3R1XcTu>



- Major Group (17-0000: Architecture and Engineering Occupations)

- Minor Group (17-3000: Drafter, Engineering Technicians, and Mapping Technicians)
  - Broad Occupation (17-3030: Surveying and Mapping Technicians)
    - Detailed Occupation

**(17-3031: Surveying and Mapping Technicians)**

<https://bit.ly/4e0Vewz>



- Major Group (15-0000: Computer and Mathematical Occupations)

- Minor Group (15-1200: Computer Occupations)
  - Broad Occupation (15-1290: Miscellaneous Computer Occupations)
    - Detailed Occupation (15-1299: Computer Occupations, All Other)
      - O\*NET Code

**(15-1299.02: GIS Technologists and Technicians)**

<https://bit.ly/3V6xC0W>



# GeoEd Conference Summary: Review current GIS occupations in the SOC System

Placement Logical? Good Title/Description? Need New Code? <https://bit.ly/soccode>

- Major Group (19-0000 Life, Physical, and Social Science Occupations)
  - Minor Group (19-4090 Miscellaneous Life, Physical, and Social Science Technicians)
    - Broad Occupation (19-4090 Miscellaneous Life, Physical, and Social Science Technicians)
      - Detailed Occupation (19-4099 Life, Physical, and Social Science Technicians, All Other)
        - O\*NET Code

**(19-4099.01: Remote Sensing Scientists and Technologists)**

<https://bit.ly/3XFo27P>



- Major Group (19-0000 Life, Physical, and Social Science Occupations)
  - Minor Group (19-4090 Miscellaneous Life, Physical, and Social Science Technicians)
    - Broad Occupation (19-4090 Miscellaneous Life, Physical, and Social Science Technicians)
      - Detailed Occupation (19-4099 Life, Physical, and Social Science Technicians, All Other)
        - O\*NET Code

**(19-4099.03: Remote Sensing Technicians)**

<https://bit.ly/4cyjNiL>



# Potential Proposal

- Major Group (15-0000: Computer and Mathematical Occupations)
  - Minor Group (15-1200: Computer Occupations)
    - Broad Occupation (15-1260: Geospatial Technologists and Technicians)
      - Detailed Occupation **(15-1261: GIS Scientists and Technologists)**
        - *O\*NET code: (15-1261.01 GIS Developers)*
      - Detailed Occupation **(15-1262: GIS Technicians)**
      - Detailed Occupation **(15-1263: Remote Sensing Scientists and Technologists)**
        - *O\*NET code: (15-1263.01 Photogrammetrists)*
      - Detailed Occupation **(15-1264: Remote Sensing Technicians)**

## 15-0000 Computer and Mathematical Occupations

- 15-0000 [Computer and Mathematical Occupations](#)
  - 15-1200 Computer Occupations
    - 15-1210 Computer and Information Analysts
      - 15-1211 [Computer Systems Analysts](#)
      - 15-1212 [Information Security Analysts](#)
    - 15-1220 Computer and Information Research Scientists
      - 15-1221 [Computer and Information Research Scientists](#)
    - 15-1230 Computer Support Specialists
      - 15-1231 [Computer Network Support Specialists](#)
      - 15-1232 [Computer User Support Specialists](#)
    - 15-1240 Database and Network Administrators and Architects
      - 15-1241 [Computer Network Architects](#)
      - 15-1242 [Database Administrators](#)
      - 15-1243 [Database Architects](#)
      - 15-1244 [Network and Computer Systems Administrators](#)
    - 15-1250 Software and Web Developers, Programmers, and Testers
      - 15-1251 [Computer Programmers](#)
      - 15-1252 [Software Developers](#)
      - 15-1253 [Software Quality Assurance Analysts and Testers](#)
      - 15-1254 [Web Developers](#)
      - 15-1255 [Web and Digital Interface Designers](#)
    - 15-1290 Miscellaneous Computer Occupations
      - 15-1299 [Computer Occupations, All Other](#)

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# Significant SOC Revisions

Propose significant changes (e.g. occupation title, description, new SOC code, etc.) by submitting a public comment to the SOC Policy Committee (SOCPC).

- The SOC System classifies all of the nation's workers into 867 detailed occupations. It is revised every **TEN** years. Public comments accepted between 6/12/24 and 8/12/24. (<https://bit.ly/socfr1>)
- SOC Classification Principles:  
[https://www.bls.gov/soc/2018/soc\\_2018\\_class\\_prin\\_cod\\_guide.pdf](https://www.bls.gov/soc/2018/soc_2018_class_prin_cod_guide.pdf)
  - Principle 9: **Collectability** - The Bureau of Labor Statistics or the Census Bureau must be able to collect and report sufficient data for a SOC occupation.



# Significant SOC Revisions (Cont.)

Propose significant changes (e.g. occupation title, description, new SOC code, etc.) by submitting a public comment to the SOC Policy Committee (SOCPC).

- Eleven “desired focus of comments”:
  1. Proposed occupation title
  2. Description of nature of the work performed
  3. Compare and contrast with existing SOC occupations
  4. Job titles
  5. Number of jobs or workers in the occupation
  6. Types of employers
  7. Education and training
  8. Licensing
  9. Tools and technologies
  10. Professional trade association and unions
  11. STEM categories



## Where to go from here?

- Share Information with Colleagues and Professional Associations
- Join/Start a Workgroup to Develop Public Comments

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# Thank you!

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