

THE REGISTERED APPRENTICESHIP OCCUPATIONS AND STANDARDS CENTER OF EXCELLENCE (AOSC)

Digital Accessibility Technician National Occupational Framework

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Introduction to Using This Document

Under the Registered Apprenticeship Technical Assistance Centers of Excellence award, the Urban Institute leads the Occupations and Standards work. One of the main objectives of Urban's project is to create high-quality, well-researched, consensus-based work process schedules that are nonproprietary and widely available. This document is a product of that work and contains three sections: the occupational overview, the work process schedule, and the related technical instruction.

The **occupational overview** is a general introduction, including alternative job titles, any prerequisites, and, if applicable, the total number of hours needed to complete a time-based or hybrid program.

The **work process schedule** outlines the major job functions, competencies, and/or hours an apprentice completes in a registered apprenticeship program. It outlines what apprentices are expected to learn on the job with the support of a mentor or journeyworker (a worker mastering the competencies of an occupation in a particular industry), including both core competencies and those deemed optional by experts in the field. The work process schedule is the foundational document guiding a program.

Urban works with numerous experts to ensure the content is thoroughly researched and vetted to reflect the expectations of industry, educators, labor unions, employers, and others involved in apprenticeship for this occupation. Sponsors and employers can use the work process schedule as their program standards with assurances it has been approved by experts in the field.

The **related technical instruction** presents considerations for the coursework that apprentices will undertake to supplement on-the-job learning. It is intended to serve as a reference to sponsors exploring their options for the accompanying classroom, virtual, or hybrid training.

How to Use the Work Process Schedule

Sponsors can adapt the work process schedule to accommodate their needs for competency- or time-based or hybrid programs. In a **competency-based** apprenticeship, sponsors assess apprentices' progress across core and optional competencies listed in the work process schedule. In a **time-based** apprenticeship, apprentices complete a predetermined number of hours across major job functions and the program overall. In a **hybrid** apprenticeship, sponsors monitor apprentices' hours spent on major job functions and assess their proficiency across competencies.

Each program type has a different method of assessment:

- **For a competency-based program**, apprentices engage in activities and make progress toward proficiency in the identified competencies. Sponsors overseeing apprentices' work assess their mastery of the outlined competencies using the following rating scale:

4—Competent/proficient (able to perform all elements of the task successfully and independently)

3—Satisfactory performance (able to perform elements of the task with minimal assistance)

2—Completed the task with significant assistance

1—Unsuccessfully attempted the task

0—No exposure (note the reason—absence, skill isn't covered, etc.)

The competencies may be completed in any order. Apprentices must perform at a level 4 or 3 in all competencies listed as “core” to complete the apprenticeship program successfully.

- **For a time-based program**, sponsors monitor apprentices' completion of hours in training across major job functions. The total number of hours recommended for this occupation is listed in the occupational overview and is based on guidance from the US Department of Labor. Generally, apprentices must have at least 2,000 hours overall for on-the-job learning, but occupations of greater complexity may require more hours. Sponsors will provide apprentices with supervised work experience and allocate the total number of hours across the major job functions to adequately train their apprentices.
- **The hybrid approach** blends both competency- and time-based strategies. Sponsors measure apprentices' skills acquisition through a combination of completing the minimum number of hours of on-the-job learning successfully demonstrating identified competencies. Sponsors will assess apprentices' proficiencies as described for competency-based programs with a rating scale of 0–4 for every core competency. Generally, apprentices have at least 2,000 hours overall for on-the-job learning, but occupations of greater complexity may require more hours. Sponsors will document apprentices' completion within a minimum and maximum range of hours assigned for each major job function.

Digital Accessibility Technician Occupational Overview

Occupational Purpose and Context

According to the Centers for Disease Control and Prevention, one in four adults in the United States have some type of disability that impacts major life activities. Accessible design is about creating websites and other digital content that enable users with disabilities, impairments, or other limitations to experience content like any other user. The American Foundation for the Blind's 2023 study revealed 86 percent of participants in their Barriers to Digital Inclusion research had difficulty accessing websites for job searches; 78 percent faced challenges in accessing related apps.

This digital accessibility technician framework introduces the holistic concept of design, development, and quality assurance with accessibility in the forefront and not in support of the other features. When designing an accessible building, each element is looked at individually, often through an Americans with Disabilities Act (ADA) lens; the same principles can be used when building a website or creating a document for online publication. Section 508 of the Rehabilitation Act of 1973 was amended in 1998 to require that all federal agencies make their electronic and information technology accessible. The competencies outlined in this framework can serve as a starting point for accessibility in design of digital content; introductory on-the-job learning and related technical instruction will be built upon throughout the apprenticeship. For example, a basic competency is the ability to work with Hypertext Mark-up Language (HTML), as HTML is enhanced to create tables and introduce JavaScript, ARIA, and various widgets.

Public sector websites are required to utilize accessibility practices (ADA Title II). Having staff who can resolve accessibility issues in the design phase of both internal and public facing websites would allow for government entities to work more effectively and fulfill their ADA requirements. For participation in accessibility by design within the private sector, incorporating these standards into an employer's talent pipeline ensures access to a diverse workforce that often has challenges accessing their job postings or when they are looking for valuable customers for their products and services.

These standards were developed during the summer of 2023 using the WCAG Web Content Accessibility Guidelines 2.1 developed by the World Wide Web Consortium (W3C). Given the rapidly changing landscape of accessibility in the digital workplace, it is expected that WCAG 3.0 accessibility requirements will be introduced in the near future, requiring an update to the competencies and related technical instruction recommended in this framework.

Contextually, digital accessibility comes from a place of empathy and understanding of the barriers that technology places on those with physical, sensory, cognitive, and any other disability to utilize all the information age has to offer. Throughout the research and conversations in the development of these competencies, a recurring theme has emerged: those who create digital content can build accessibility into their work processes to mitigate barriers during the development phase and a cadre of talent is needed to make existing content accessible.

Potential Job Titles

Web accessibility designer, accessible media designer, accessibility app designer, accessibility specialist, digital inclusion specialist or digital accessibility analyst, web accessibility evaluator, web accessibility tester

Apprenticeship Prerequisites

Candidates entering most apprenticeship programs need only a high school diploma and 2.5 high school GPA (though some programs may allow candidates to begin their apprenticeship while still in high school).

Career Ladder

When viewed through a “career lattice” framework, a participant could qualify for a career as a digital accessibility technician, then carry on their apprenticeship to become a digital accessibility designer with the ultimate goal of becoming a digital accessibility engineer which may develop into senior roles in accessibility, with additional training and education. Alternatively, a career progression could begin as a tester and then progress to an accessibility engineer and then to senior accessibility roles and management.

Recommended Length of Apprenticeship (Time-Based/Hybrid Programs Only)

The recommended length of a digital accessibility technician apprenticeship program is 2,500 to 3,000 hours (about 1.5 years) of OJL classroom time with 300 hours of RTI.

Work Process Schedule

Digital Accessibility Technician

ONET Code: 15-1255.00

RAPIDS Code: 2098

Instructions for Use:

Competency-based programs: In the “performance level achieved” column of the work process schedule (see examples starting on the next page), assess apprentices’ performances on each competency with the scale below. No monitoring of hours is required for this approach. See “Guidelines for Competency-Based, Hybrid and Time-Based Apprenticeship Training Approaches,” US Department of Labor, Employment and Training Administration, Office of Apprenticeship, October 20, 2015,

<https://www.apprenticeship.gov/sites/default/files/bulletins/Cir2016-01.pdf>.

- 4—Competent/proficient (able to perform all elements of the task successfully and independently)
- 3—Satisfactory performance (able to perform elements of the task with minimal assistance)
- 2—Completed the task with significant assistance
- 1—Unsuccessfully attempted the task
- 0—No exposure (note the reason—absence, skill isn’t covered, etc.)

Time-based programs: In the “hours” row, specify the number of hours apprentices will fulfill for each job function. No assessment of competencies is required for this approach.

Hybrid programs: In the “performance level achieved” column, assess apprentices’ performances on each competency using the 0–4 scale above. In the “hours” row, identify a range of hours apprentices should spend working on each major job function.

Job Function 1: Demonstrates use of code and security measures

Hours (time-based and hybrid programs only):

Competencies	Core or optional	Performance level achieved (0-4) (competency-based and hybrid programs only)
A. Demonstrates the fundamentals of semantic HyperText Markup Language (HTML) code	Core	
B. Demonstrates the fundamentals of JavaScript code	Core	
C. Demonstrates how to create HTML forms	Core	
D. Demonstrates the use of HTML graphics with Canvas and/or SVG as they relate to accessibility	Core	
E. Demonstrates how to create rich, accessible internet applications with HTML content	Core	
F. Demonstrates the many ways to develop content (e.g., pattern libraries, wire frames, Figma, etc.)	Core	
G. Demonstrates and creates basic HTML/JavaScript code using native widgets	Core	
H. Demonstrates the fundamental skills required to develop and deploy secure database solutions that use web-based protocols	Core	
I. Demonstrates the creation of Accessible Rich Internet Applications (ARIA), landmarks, roles, and widgets, and their use with accessibility	Core	
J. Uses security solutions to diminish or counter threats against web delivery systems and their impacts on accessibility technology solutions and individuals with disabilities	Core	
K. Demonstrates the fundamental skills to use server-side scripting languages to create secure and dynamic web pages	Core	

Job Function 2: Contributes to web development		
Hours (time-based and hybrid programs only):		
Competencies	Core or optional	Performance level achieved (0-4) (competency-based and hybrid programs only)
A. Evaluates websites using knowledge of computer information systems, including accessibility, security, computer concepts, web delivery system architecture, and file management	Core	
B. Researches and utilizes best practices in user interface, user experience, accessibility, and search engine optimization to build complex websites	Core	
C. Uses industry-accepted professional, legal, and ethical practices	Core	
D. Demonstrates the creation and use of personas that define a diverse set of users, including users that have diverse physical, sensory, and developmental disabilities	Core	
E. Evaluates websites to ensure they have multilanguage capabilities for user populations with diverse physical, sensory, and cognitive disabilities	Core	
F. Creates content that has all functionality available from a keyboard, or input devices other than a keyboard, and helps users navigate the content without physical reactions	Core	
G. Evaluates and rehabilitates sites utilizing semantic structure and navigation with general user interface components, visual focus indicators that are easily distinguishable from text, tab order matching the reading order, and data grouped using semantic markup with appropriate headings	Core	
H. Applies principles of project management to prioritize projects and meet deadlines	Optional	
I. Demonstrates how to create complex websites using current standards in HTML, Cascading Style Sheets (CSS), and JavaScript incorporating assistive technology without losing meaning	Optional	

Job Function 3: Supports web and digital development for accessibility

Hours (time-based and hybrid programs only):

Competencies	Core or optional	Performance level achieved (0-4) (competency-based and hybrid programs only)
A. Creates sites which provide text alternatives for non-text content as well as provides captions and other alternatives for multimedia; this includes sourcing or asking for alternative text and descriptions for outside sources	Core	
B. Creates content that has all functionality available from a keyboard, or input devices other than a keyboard, and helps users navigate the content without physical reactions	Core	
C. Ensures that web designs are perceivable: include text alternatives, time-based media (audio-only, captions, audio descriptions, etc.), adaptable, distinguishable (use of color, text flow/spacing, contrast, etc.)	Core	
D. Ensures that web designs are operable: keyboard accessibility, enough time (pause/stop/hide, no timing, interruptions, etc.), seizures and physical reactions (limit flashes, animation from interaction), navigable, input modalities	Core	
E. Conducts research drawing upon a diverse set of resources and utilizing persons with disabilities	Core	
F. Develops sites that use multiple ways to distinguish elements	Core	
G. Develops sites that provide no horizontal viewport overflow under magnification allowing for exceptions in the standards	Core	
H. Ensures that media and videos which contain spoken words or have no words have an accompanying transcript or audio descriptive track	Core	
I. Develops sites using Accessible Rich Internet Applications (ARIA) to make web content more accessible	Core	
J. Ensures that web design is robust and understandable: readable, predictable, and has input assistance	Core	

Job Function 4: Applies digital accessibility within design**Hours (time-based and hybrid programs only):**

Competencies	Core or optional	Performance level achieved (0-4) (competency-based and hybrid programs only)
A. Ensures compliance with digital accessibility regulations by incorporating content accessibility requirements, creating content with accessibility in mind, creating alternatives for media content, using authoring and publishing platforms that support accessibility, partnering with colleagues and team members to prioritize accessibility in content production	Core	
B. Demonstrates knowledge of digital accessibility and disability inclusion through various testing methods, manual and tool-based	Core	
C. Ensures that informative images utilize text alternatives and complex images have extended descriptions	Core	
D. Ensures that scalable vector graphics and other images utilize a text alternative compatible across multiple platforms (macOS, Windows, and iOS and Android on smart phones and tablets)	Core	
E. Creates Canvas elements that ensure accessibility with JavaScript or ARIA	Core	
F. Creates code that uses text alternatives for colors that convey meaning with adequate color contrast	Core	
G. Ensures that text is scalable and flows correctly with enough spacing compatible across multiple platforms (macOS, Windows, and iOS and Android on smart phones and tablets)	Core	
H. Creates accessible content using Portable Document Format (PDF), word processing software, and other tools of digital content creation	Core	

Job Function 5: Integrates accessibility into the user experience and research		
Hours (time-based and hybrid programs only):		
Competencies	Core or optional	Performance level achieved (0-4) (competency-based and hybrid programs only)
A. Creates code that utilizes recognizable design patterns	Core	
B. Creates alt text that is descriptive and concise	Core	
C. Ensures that usability testing includes insights from people with diverse physical, sensory, and cognitive disabilities and is conducted using manual and tool-based methods	Core	
D. Ensures that adequate time and resources are dedicated to usability testing	Core	
E. Maintains current knowledge of the impacts of emerging technologies on accessibility (e.g., artificial intelligence, spatial computing, sensing technologies, etc.) and makes adaptations to incorporate accessibility	Core	
F. Utilizes plain language whenever possible to ensure meaning and predictability	Core	

Job Function 6: Tests for digital accessibility		
Hours (time-based and hybrid programs only):		
Competencies	Core or optional	Performance level achieved (0-4) (competency-based and hybrid programs only)
A. Conducts human-validated testing using automated accessibility, keyboard accessibility, and screen reader testing during the development of the site	Core	
B. Ensures the scope of the evaluation is clearly defined	Core	
C. Conducts comprehensive manual and tool-based testing to amplify quality assurance and identify accessibility issues during each phase of development	Core	

D. Codes for dynamic content that is compatible with screen readers	Core	
E. Ensures nonvisual active elements are compatible with nonvisual desktop access tools (i.e., JAWS screen reader, NonVisual Desktop Access, VoiceOver for iOS, TalkBack for Android, etc.) and that screen readers are compatible across multiple platforms (macOS, Windows, and iOS and Android on smart phones and tablets)	Core	
F. Codes to accessibility standards that are compatible with common keyboard commands for screen readers to achieve functional usability	Core	
G. Ensures simple and complex tables are compatible with screen readers and can be easily navigated	Core	
H. Ensures that accessibility reports are formatted and prioritized to allow designers, developers, and other stakeholders to successfully address any issues	Core	
I. Ensures that testing with simulator or emulator software is conducted, where possible, to catch accessibility and usability issues before live testing	Core	

Job Function 7: Supports inclusion of accessibility in the digital sector		
Hours (time-based and hybrid programs only):		
Competencies	Core or optional	Performance level achieved (0-4) (competency-based and hybrid programs only)
A. Incorporates all types of accessibility into the design: visual (blindness, color blindness), motor/mobility/physical (e.g., wheelchair users), auditory (difficulty with hearing), seizures (e.g., photosensitive epilepsy or vertigo), and cognitive-learning-neurological disabilities	Core	
B. Articulates the benefits of diversity, equity, and inclusion regarding persons with accessibility issues and their value to the workforce	Core	
C. Navigates the challenges of how to make digital products accessible to a diverse set of users with or without barriers to technology	Core	

D. Conducts user research with integrated feedback from users with diverse physical, sensory, and cognitive disabilities	Core	
E. Demonstrates basic coding to current accessibility standards and designs for assistive and adaptive technologies that utilize those standards	Core	
F. Actively seeks professional development through understanding and supporting development and advancement of core standards and adaptive accessibility technologies and how to use those technologies	Core	
G. Leverages opportunities from free software features (e.g., PowerPoint with live captioning) and multimedia sources already utilizing accessibility practices and assesses digital products for accessibility during procurement to create inclusive environments	Core	
H. Utilizes the Web Content Accessibility Guidelines (WCAG) 2.1 developed by the World Wide Web Consortium (W3C) to evaluate the accessibility and usability of a design or product; for example, Perceivable, Operable, Understandable, and Robust (POUR) principles of accessible design	Core	
I. Develops a network of digital accessibility professionals to provide ongoing support and learning opportunities	Core	

Related Technical Instruction

Digital Accessibility Technician

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Instructions for Use:

Registered apprenticeships must include at least 144 hours of related technical instruction (RTI). Courses offered by accredited colleges and universities may be assigned a credit hour determination rather than a contact hour determination. In general, an academic credit unit is the equivalent of 15 clock hours of instruction.

Development and Use of This RTI Outline: Employers and academic institutions may approach RTI in markedly different ways. Our goal was not to identify the single best way to provide RTI or to identify a single provider whose content we deemed superior. Instead, our goal was to survey numerous education providers, including employers, institutions of higher education, high schools, private providers of continuing education, labor organizations, professional associations, and—in some cases— municipalities that provide worker training, to identify topics or courses common among those providers that align with the job functions included in this work process schedule. Those common topics or courses are reflected in the RTI outline provided below, which may be useful in developing your RTI program or communicating your needs to an educational partner.

Licensure or certification requirements: State occupational licensure or certification is not required for digital accessibility technicians; however, some employers give hiring priority to individuals who hold certification from the International Association of Accessibility Professionals (IAAP). The entry-level certification available from IAAP is the Certified Professional in Accessibility Core Competencies (CPACC) credential. Over time, professionals in this field may qualify for the Web Accessibility Specialist credential.

Degree requirements for licensure or certification, if applicable: none known

Accreditation requirements of instructional provider for licensure or certification, if applicable:
N/A

Anticipated changes in licensure or certification requirements, if known: none known

Examples of state licensure or certification requirements: none known

Examples of RTI providers for this occupation

Professional associations and labor organizations: The World Wide Web Consortium (W3C) develops web accessibility standards and provides instruction on tools, techniques and strategies that can be used to create accessible web content. In addition, the IAAP also offers education in support of the certifications they award and provides continuing education to accessibility professionals.

Military: The US military services provide training for visual information specialists, including training in web design and accessibility testing.

Federal and state agencies: The General Services Agency (GSA) provides training in Section 508 compliance at <https://www.section508.gov/training/>. The Department of Homeland Security provides training on Section 508 compliance <https://www.dhs.gov/508-training#:~:text=The%20Department%20of%20Homeland%20Security,to%20the%20Section%20508%20standards>. Many states and municipalities also offer web accessibility design and testing training (see <https://mdod.maryland.gov/news/Pages/Web-Accessibility.aspx>).

Colleges and universities: Many accredited career colleges, community colleges, four-year colleges and universities offer certificate and degree programs in digital accessibility design and assessment.

No-cost online providers: Coursera and EdX platforms provide several learning opportunities in web design and accessibility. However, to participate in exams and projects, or to receive a grade and credits for completing these courses, students are generally required to pay tuition to the institution providing the instruction through the Coursera or EdX platform.

Continuing education or specialty education providers: There are numerous continuing education or specialty education providers that offer courses, certification programs and boot camps in web accessibility design and testing.

Prerequisite knowledge, skills or experience typically required by RTI providers for this occupation

Individuals entering a digital accessibility technician apprenticeship program may be required to have basic working knowledge of computers and the internet and may be expected to have experience as an individual with a disability or in working with individuals who have disabilities.

Computer Basics

Hours: 20–30

Sample learning objectives

- Demonstrate the ability to use desktop computers, laptop computers, and smart devices to send an email, schedule a meeting, share a document, participate in group editing, use track changes to edit a document, maintain version control of documents, convert Word documents to PDF format, create e-fillable and e-signable forms, and create/verify electronic signatures.

- Describe the purpose of network computing and demonstrate the ability to connect devices such as computers, printers, telephones, and tablets to a secure network.
- Explain the significance of document security and the use of passwords and other document storage strategies to maintain document privacy and security.
- Explain the importance of internet security and identify examples of cybersecurity threats, such as malware, Trojan horses, phishing, botnet, spyware, and social engineering.
- Describe effective strategies to prevent cyberattacks, to create and maintain secure passwords and to take the appropriate action when potential cyber threats are identified.
- Explain the significance of HyperText Markup Language (HTML) for tagging text files on webpages to achieve the desired graphic or design effects. Demonstrate the ability to use HTML code to develop a web landing page.

Disabilities, Challenges, and Assistive Technologies (based on the CPACC Certification Content Outline)

Hours: 20

Sample learning objectives

- Explain the various theoretical models of disability, such as the medical model, the social model, the economic model, the biopsychosocial model, the functional solutions model, the charity model, and the social identity of cultural affiliation model.
- Define, describe, and provide examples of the different types of disabilities individuals may experience, including visual, auditory, deaf-blindness, speech, mobility, cognitive, seizure, psychological and multiple disabilities.
- Identify appropriate assistive technologies and adaptive strategies provided to individuals based on their disabilities.
- Demonstrate the ability to interact with individuals with disabilities in appropriate, respectful, and supportive ways.
- Discuss the principles of accessibility and universal design and distinguish between individualized accommodations and digital environments designed to be used by individuals with a wide range of disabilities.
- Name and describe the standards, laws, and regulations that apply to accessibility and universal design, including domain-specific and government procurement laws and regulations.
- Discuss the role of W3C in establishing accessibility standards for digital environments and the basic requirements to comply with these standards.

Principles of Accessible Development

Hours: 40–60

Sample learning objectives

- Explain the use of good principles of digital design, including identifying the interface's purpose; using effective color, typography, and imagery; easy navigation; F-shaped pattern reading; using visual hierarchy to establish a focal point; identifying or creating good content; creating a grid-based layout that improves the user experience; quick load time; and mobile-friendly design.
- Describe the principal elements of effective User Interface Design.
- Explain the principles of User Experience Design.
- Describe the key components of the user experience.
- List and explain the requirements of federal legislation regarding web accessibility.
- Explain the importance of designing websites that are accessible to individuals with disabilities, including blindness, color blindness, deafness or hearing impairment, impaired or limited vision, limited hand and finger mobility or dexterity, and so on.
- Describe the purpose of the Web Content Accessibility Guidelines (WCAG) 2.1 and list key recommendations for making web content more accessible.
- Describe the four main principles of accessibility known by the acronym POUR (perceivable, operable, understandable, and robust).
- Discuss the content of Web Accessibility Initiative–Accessible Rich Internet Applications (WAI–ARIA) guidelines and differentiate between the purpose of WAI–ARIA and WCAG standards.
- Discuss the purpose of the Authoring Tool Accessibility Guidelines (ATAG) and explain the difference between guidelines to improve the user's experience versus those to improve the author's experience.
- Describe the types of assistive devices, tools, and technologies commonly used by individuals with disabilities to effectively interact with web content.
- Discuss strategies for developing websites, including through the use of HTML tags, that support the use of assistive devices and technologies.
- Demonstrate the ability to work as part of a team of web designers, web developers, and web accessibility testers to create effective websites that comply with federal laws and regulations.

Digital Accessibility Testing and Reporting

Hours: 40–60

Sample learning objectives

- Differentiate between automated and manual digital testing and describe the advantages and disadvantages of each as well as the recommended utilization of each technique.
- Describe and demonstrate the ability to use the three-tier testing approach.
- List common tools used to perform automated testing of web materials to evaluate compliance with WCAG principles.
- Demonstrate the ability to perform screen reader and keyboard testing.
- Describe the advantages and disadvantages of various accessibility evaluation tools, such as ANDI (Accessible Name and Description Inspector), HTML CodeSniffer, and tota11y accessibility visualization toolkit.
- List the various browser extensions that can be used to test accessible design and describe the intended use as well as the advantages and disadvantages of each.
- Describe best practices for accessible design as they relate to use of color, forms, images, links, videos, PDFs, and documents. Identify examples of effective and ineffective websites and explain why each is the case.
- Explain how GitHub apps assist accessibility testers in performing their work.
- Demonstrate the ability to properly document accessibility testing results, replicate the findings, describe the findings to web designers and developers, identify the WCAG principle associated with the finding, and make recommendations for correcting the accessibility flaw.

Relevant military experience

Visual Information Specialists may have relevant experience in designing accessible websites.

Diversity, equity, and inclusion

There have been considerable efforts to integrate principles of diversity, equity, and inclusion in web design by designing websites to be accessible to all individuals (including those with disabilities) and incorporating content and images that are inclusive, diverse, and culturally sensitive. However, as websites become more complicated, rely more heavily on complicated graphics and video content, and rely on hypertext links to content provided by others, it becomes more difficult and costly to ensure all content and the overall website design is accessible.

Given society's reliance on digital content and the large numbers of persons with barriers accessing that content, professionals trained to understand and mitigate accessibility issues is significant both

socially and economically. Understanding comes from a place of empathy and mitigation comes from the knowledge to effect meaningful change. Given the shift to putting accessibility in the forefront, there is a lack of professionals, with and without disabilities, in the digital accessibility workspace. Recruitment of people with and without disabilities is imperative to meet the market demand.

Efforts to diversify the web designer workforce have been less successful. Currently, 71 percent of web designers and engineers are males while only 21 percent are female. The majority of web designers—58 percent—are white, followed by Asian (15.8 percent), Black or African American (6.5 percent), unknown (6.5 percent), and American Indian or Alaskan Native (0.4 percent). Data are not available on the participation rates of individuals with disabilities in the field of accessibility; however, given the experience many of these individuals may have using assistive technology, technologies and devices, there should be dedicated efforts to recruit them to this profession.

Works Consulted

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STATEMENT OF INDEPENDENCE

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500 L'Enfant Plaza SW
Washington, DC 20024

www.urban.org