<https://www.insidehighered.com/digital-learning/views/2017/05/03/tips-designing-ada-compliant-online-courses>

**5 Tips for ADA-Compliant Inclusive Design**

Two faculty members recommend easy ways for enhancing student learning online while meeting compliance.

By

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May 3, 2017

Online instructors take a great deal of time creating online courses that foster academic growth in their content area; however, they are often unaware of the simple strategies to adapt their courses to meet ADA compliance.

The Americans with Disability Act (ADA) of 1990, Section 504 of the 1973 Rehabilitation Act, states that all individual should have equal accessibility -- including online instructional opportunities. ADA requires that all online courses be fully compliant from the start of the course, which can be challenging.

As instructors, we should do our due diligence to develop ADA-compliant courses. Below are some simple strategies for creating accessible courses and demonstrating due diligence.

**1. Hyperlinks**

To support ADA compliance in online courses, we recommend beginning with ensuring all hyperlinks are text within a sentence to foster readability. The text samples below demonstrate various ways instructors attempt to hyperlink text.

Text 1: To view ADA regulations can be found here: https://www.ada.gov/

Text 2: To view ADA regulations click here.

Text 3: To view ADA regulations visit https://www.ada.gov/

Text 4: ADA Regulations

Although they may all seem correct, only Text 3 and Text 4 are ADA compliant. Text 3 places the link within a sentence (this option should only be used for short links). Text 4 increases readability, especially with longer website links. Text 1 and Text 2 do not lend support for learners who have a screen reader.

**2. Text Design**

When designing informational material, a sans serif font is easiest to read. Sans serif is a font style that does not have additional strokes attached to the letters. Times New Roman and Palatino have the additional strokes and should be avoided. Examples of acceptable sans serif fonts are Arial and Helvetica. Once a sans serif font is selected, it is best to use the same font throughout the course. Minimizing font variation helps make courses ADA compliant, and it can help all learners stay focused.

Another factor to consider with text design is accessibility and usability. For accessibility and usability, it is best to have a dark-colored font on a light-colored background, also known as high contrast. The best option for readability is a black font with a white background. If instructors want to use color, they need to avoid using extremely bright background colors, such as red.

It is especially advantageous to avoid red-green or yellow-blue combinations as contrasting colors because individuals with colorblindness are unable to differentiate the text from the background.

After text colors are chosen, text formatting should be examined. Text formatting should follow the ‘less is more’ rule, particularly with the use of bolds and italics. Use them sparingly and only to emphasize extreme items. Concerning underlining, the only text that should be underlined is text that is hyperlinked to meet ADA compliance.

**3. Images/Graphics**

Images and graphics can be a powerful addition to any course as they can exemplify content; however, even images have ADA regulations. Images and graphics should be relevant to the content, visibly easy to see and in high resolution. It is best to avoid animated or blinking images.

The last step to make images and graphics ADA compliant is to add an alt tag or alt text. Alt text stands for Alternative Text and is a word or phrase that can be added to describe the image or graphic. Most Learning Management Systems (LMS), like Blackboard, Canvas, Moodle, etc., have an alt tag option when adding the image or graphic.

**4. Audio/Video Items**

Just like with images and graphics, it is important to ensure that courses have clear audio and video. Clear audio requires minimal background noises, clear word pronunciation and consistent volume. Clear video has minimal movement to avoid blurred refocusing and high resolution in rendering.

Both audio and video files require written transcription, also known as closed-captioning for videos. Including transcriptions with lectures shows due diligence towards ADA compliance, and so does providing transcripts of audio feedback.

It is best practice to have audio or video clips that are 3 to10 minutes in length. If the content that takes longer to cover, it is best to create short, segmented videos, each ranging from 3 to 10 minutes in length.

The final aspect for audio and video accessibility is to use a universal audio or video player. We recommend using MP3 (audio) or MP4 (video) file formats.

**5. Documents**

All text in a course should be searchable, which allows learners to search for words or phrases within a document. If a PDF document is not searchable, an accompanying plain text version should be available. When linking documents within a course, the label of the link should have the file extension type at the end (.doc or .docx for a Word document, .ppt for PowerPoint, .xlsx or .xltx for Excel, etc.).

Tables and charts can also exemplify content being covered and must adhere to ADA compliance. Any table or chart needs to have identifying headers and labels as well as summaries. In addition, the course syllabus is a document that should include an accessibility statement for students which outlines ADA procedures.

By integrating a few of these steps, instructors are establishing their due diligence towards creating ADA compliant courses. While we exhibit due diligence, we should also strive to meet all ADA compliance regulations as we design and redesign our courses.

**Bio**

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## <https://er.educause.edu/articles/2017/1/ada-compliance-for-online-course-design>

## A Growing Community

These and other colleges and universities have something in common:

* California Community Colleges
* California State University Fullerton
* Florida State University
* Harvard University
* Louisiana Tech University
* Maricopa Community College District
* Massachusetts Institute of Technology
* North Carolina State University
* Ohio State University
* South Carolina Technical College System
* University of California, Berkeley
* University of Cincinnati
* University of Colorado at Boulder
* University of Kentucky
* University of Montana–Missoula
* Youngstown State University

Each has had to resolve a civil rights complaint about the inaccessibility of its information technology, including technology used in online courses. The complaints are usually brought through the Office of Civil Rights of the U.S. Department of Education or the Civil Rights Division of the Department of Justice. Although the University of Washington has not received a civil rights complaint of this type, that has not stopped us from applying lessons learned from the cases involving other colleges and universities.

## The Legal Basis for Civil Rights Complaints

The most common laws referenced in the resolutions are Section 504 of the Rehabilitation Act of 1973 [https://www.dol.gov/oasam/regs/statutes/sec504.htm] and the [**Americans with Disabilities Act of 1990**](https://www.ada.gov/ada_intro.htm), along with its 2008 amendments. These laws establish a firm legal basis for the requirement that IT procured, developed, and used by postsecondary institutions be accessible to individuals with disabilities. Together these statutes require that campus offerings — including those made available through applications software, websites, videos, PDF files, and other IT — be available to all students, faculty, staff, and visitors for whom they are designed, including individuals with disabilities.

## The Meaning of "Accessible"

The definition of "accessible" used by the Office of Civil Rights and the U.S. Department of Education regarding inaccessible IT is as follows:

"Accessible" means a person with a disability is afforded the opportunity to acquire the same information, engage in the same interactions, and enjoy the same services as a person without a disability in an equally effective and equally integrated manner, with substantially equivalent ease of use. The person with a disability must be able to obtain the information as fully, equally, and independently as a person without a disability.1

## The Meaning of "Accommodation"

"Accommodations" are adaptations made for specific individuals when a product or service is not accessible, such as providing captions on a video only when a specific student who is deaf requests them rather than including them in the original product design. Among the most common accommodations made for students with disabilities in online courses are the addition of captions to videos for students who are deaf and the remediation of documents to make them accessible to students who are blind and use screen readers to access content or who have dyslexia and other learning disabilities that make reading easier when they can see printed words and listen to them spoken at the same time. Proactively developing, procuring, and using accessible software, websites, videos, documents, and other IT reduces the need for accommodations.

## Strategies for Making Online Learning Accessible

Providing multiple ways for students to gain knowledge, demonstrate knowledge, and interact goes a long way toward making a course accessible to all students, including those with disabilities. It is also helpful to know a bit about the thousands of assistive technologies that people with disabilities might use to provide input to the computer and gain access to the output. You do not need to be familiar with all of the capabilities of these devices, but it is important to know how they are used and understand some of their limitations.

For example, screen readers have the capabilities to skip from link text to link text in a web page and from heading to heading in a document. These features allow individuals who are blind to skim through a web page to find resources that are linked from the page and through a document to gain an overview of its content and organizational structure. These functions are only useful if web document creators make the text of links meaningful (for example, "DO-IT newsletter" rather than "click here") and appropriately structure headings (for example, using the Style feature of Microsoft Word so that the screen reader knows what text forms a heading).

Table 1 summarizes how accessible practices can be developed in response to limitations of assistive technologies.

**Table 1. Adding accessible functions to assistive technologies**

|  |  |
| --- | --- |
| **Assistive Technology Limitation** | **Solution** |
| Emulates the keyboard but may not fully emulate the mouse | Design websites and software to operate with the keyboard alone |
| Cannot read content presented in images | Provide alternative text |
| Can tab from link to link | Make links descriptive |
| Can skip from heading to heading | Structure the content with hierarchical headings |
| Cannot accurately transcribe audio | Caption video and transcribe audio |

## Tips for Teaching an Accessible Online Course

I taught the first online learning course at the University of Washington in 1995. My co-instructor, Norm Coombs, is blind. We designed the course to be accessible to students who had a broad range of challenges, including those related to vision, hearing, learning, attention, and mobility. We employed the latest technology of the time — e-mail, discussion list, Gopher, file transfer protocol, and Telnet. All online materials were in a text-based format, and videos — which were mailed to the students — were presented in VHS format with captions and audio description.

When asked how many of the students in this course had disabilities, we were proud to say that we did not know. No one needed to request disability-related accommodations because of the accessible design of the course. We offered the class many times over the course of a few years; no student requested an accommodation, even though we knew from voluntary disclosures that some of them were deaf, some were blind, and some had disabilities related to reading. Our accessibility efforts benefited not only students with disabilities but also students who are English language learners and those working in either noisy environments or quiet settings, such as a library where others are working or a dorm room when a roommate is sleeping. Accessible instructional design is good instructional design.

Although the technology today is more advanced and diverse, the basic issues are the same when it comes to accessibility. Faculty and instructional designers need to make sure that screen readers can access content in a text-based format; that content is accessible by using the keyboard alone; that videos are captioned; that content is presented in a clear, consistent, structured format; and so on.

From my experiences teaching online, I have developed a list of 20 tips — with references to in-depth resources for some of the topics — that can help online instructors make their courses accessible to a broad audience: "[**20 Tips for Teaching an Accessible Online Course**](https://www.washington.edu/doit/20-tips-teaching-accessible-online-course)." Although the tips do not cover every potential accessibility issue, they provide a good start.

For [**course web pages, documents, images, and videos**](http://www.uw.edu/accessibility):

1. Use clear, consistent layouts and organization schemes for presenting content.
2. [**Structure headings**](http://www.uw.edu/accessibility/documents/) (using style features built into the learning management system, Word, PowerPoint, PDFs, etc.) and use built-in designs/layouts (e.g., for PPT slides).
3. Use descriptive wording for hyperlink text (e.g., "DO-IT Knowledge Base" rather than "click here").
4. Minimize the use of PDFs, [**especially when presented as an image**](http://www.uw.edu/accessibility/documents/); make sure the text is accessible by testing to see if you can copy and paste it. Always offer a text-based alternative as well.
5. [**Provide concise alternative-text descriptions**](http://www.uw.edu/accessibility/documents/) of content presented within images.
6. Use large, bold fonts on uncluttered pages with plain backgrounds.
7. [**Use color combinations that are high contrast**](http://www.paciellogroup.com/resources/contrastanalyser/) and can be read by those who are colorblind.
8. Make sure all content and navigation is accessible using the [**keyboard alone**](http://www.uw.edu/accessibility/web/).
9. [**Caption or transcribe video and audio content**](http://www.uw.edu/accessibility/videos/).

With respect to [**instructional methods**](http://www.uw.edu/doit/equal-access-universal-design-instruction):

1. Assume students have a wide range of technology skills and provide options for gaining the technology skills needed for course participation.
2. [**Present content in multiple ways**](http://www.uw.edu/doit/equal-access-universal-design-instruction) (e.g., in a combination of text, video, audio, and/or image format).
3. Address a wide range of language skills as you write content (e.g., spell out terms rather than relying on acronyms alone, define terms, avoid or define jargon).
4. Make instructions and expectations clear for activities, projects, and assigned reading.
5. Make examples and assignments relevant to learners with a wide variety of interests and backgrounds.
6. Offer outlines and other scaffolding tools to help students learn.
7. Provide adequate opportunities for practice.
8. Allow adequate time for activities, projects, and tests (e.g., give details of project assignments in the syllabus so that students can start working on them early).
9. Provide feedback on project parts and offer corrective opportunities.
10. Provide options for communicating and collaborating that are accessible to individuals with a variety of disabilities.
11. Provide options for demonstrating learning (e.g., different types of test items, portfolios, presentations, discussions).

Clearly, design of an accessible course involves considerations related to both IT accessibility and pedagogy.

## Benefits of Accessible Design for Individuals without Disabilities

Students in a class can vary by gender, race, ethnicity, culture, marital status, age, communication skills, learning abilities, interests, physical abilities, social skills, sensory abilities, values, learning preferences, socioeconomic status, religious beliefs, and other factors. Many of these individuals might never request a disability-related accommodation but will nevertheless benefit from accessible design. For example, many English language learners benefit from captions on videos so that they can see the spelling of new vocabulary. Other students learning new vocabulary in a technical class can benefit from these captions as well. And everyone benefits from course content that is presented in a logical, consistent manner.

### Resources to Help a Campus Get Started

The Internet contains a wealth of information about accessible IT. These resources can be an excellent place to start on the path to accessible IT.

* [**AccessDL**](http://www.uw.edu/doit/programs/accessdl)
* [**Accessible Technology at the UW**](http://www.washington.edu/accessibility/)
* [**EDUCAUSE's IT Accessibility Risk Statements and Evidence**](https://library.educause.edu/resources/2015/7/it-accessibility-risk-statements-and-evidence)
* [**Laws, Policies, and Standards**](http://www.uw.edu/accessibility/requirements)

### Note

1. See "[**Resolution Agreement: South Carolina Technical College System, OCR Compliance Review No. 11-11-6002**](https://www2.ed.gov/about/offices/list/ocr/docs/investigations/11116002-b.pdf)."

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<https://www.washington.edu/accessibility/documents/>

University of Washington

# Creating Accessible Documents

When creating content, there are a few basic steps that should be followed in order to assure your content is accessible. The core steps needed for accessibility are the same regardless of whether your document is in HTML, Microsoft Word, Adobe PDF, or another document format:

* Use headings
* Use lists
* Use meaningful hyperlinks
* Add alternate text to images
* Identify document language
* Use tables wisely
* Understand how to export from one format to another

To gain a better understanding of these core issues, see our [Overview of accessible documents](https://www.washington.edu/accessibility/documents/overview/).

To apply each of these concepts to a particular document format or authoring workflow, select one of the following topics:

* [Creating accessible documents in Microsoft Word](https://www.washington.edu/accessibility/documents/word/)
* [Creating accessible presentations in Microsoft PowerPoint](https://www.washington.edu/accessibility/documents/creating-accessible-presentations-in-microsoft-powerpoint/)
* [Creating accessible PDFs from Microsoft Word](https://www.washington.edu/accessibility/documents/pdf-word/)
* [Creating accessible PDFs from Adobe InDesign](https://www.washington.edu/accessibility/documents/indesign/)
* [Fixing inaccessible PDFs using Adobe Acrobat Pro](https://www.washington.edu/accessibility/documents/pdf-acrobat/)
* [Creating accessible PDF forms using Adobe Acrobat Pro](https://www.washington.edu/accessibility/documents/pdf-forms/)

## Creating High Quality Scanned Documents

Sometimes it is necessary to scan a document for an instructional need. When documents are in electronic form, they are easier to distribute and can be more accessible than print documents for students with disabilities. However, in order to be fully accessible, certain steps must be followed to be sure the scanned document is of high quality. Even if a document is not needed for a person with disability, a poor scan often negatively impacts the end user’s experience. For details, see [Creating High Quality Scans](https://www.washington.edu/accessibility/documents/scans/).

## Using the UW Document Conversion Service

The UW now offers an online Document Conversion Service to help students, faculty, and staff at the University of Washington to produce alternative versions of documents quickly and easily. The service is free to anyone with a UW NetID, and can be accessed at [tinyurl.com/uw-doc-convert](https://depts.washington.edu/uwitats/conversion/).

Please note the following limitations of this service:

* The source file needs to be of good quality in order to maximize conversion accuracy.
* Some file outputs may require additional editing after conversion.
* This service is intended to provide a quick temporary solution, but is not the final solution for accessibility. For faculty and staff who are producing documents, please consult the above links for information on how to create accessible documents in various document formats.
* Students requesting alternate materials as an accommodation, please contact [Disability Resources for Students](http://depts.washington.edu/uwdrs/).
	+ **Creating Accessible Documents**
		- [Creating Accessible Documents in Microsoft Word](https://www.washington.edu/accessibility/documents/word/)
		- [Creating Accessible PDF Forms Using Adobe Acrobat Pro](https://www.washington.edu/accessibility/documents/pdf-forms/)
		- [Creating Accessible PDFs from Adobe InDesign](https://www.washington.edu/accessibility/documents/indesign/)
		- [Creating Accessible PDFs from Microsoft Word](https://www.washington.edu/accessibility/documents/pdf-word/)
		- [Creating Accessible Presentations in Microsoft PowerPoint](https://www.washington.edu/accessibility/documents/creating-accessible-presentations-in-microsoft-powerpoint/)
		- [Creating High Quality Scans](https://www.washington.edu/accessibility/documents/scans/)
		- [Fixing Inaccessible PDFs Using Adobe Acrobat Pro DC](https://www.washington.edu/accessibility/documents/pdf-acrobat/)
		- [Overview of Accessible Documents](https://www.washington.edu/accessibility/documents/overview/)

## Accessible Technology

* [**UW Policy**](https://www.washington.edu/accessibility/policy/)
* [**IT Accessibility Guidelines**](https://www.washington.edu/accessibility/guidelines/)
* [**IT Accessibility Checklist & Tutorial**](https://www.washington.edu/accessibility/checklist/)
* [**IT Accessibility Leadership**](https://www.washington.edu/accessibility/leadership/)
* [**Progress & Plan**](https://www.washington.edu/accessibility/plan/)
* [**Getting Started**](https://www.washington.edu/accessibility/start/)
* [**Creating Documents**](https://www.washington.edu/accessibility/documents/)
* [**Creating Videos**](https://www.washington.edu/accessibility/videos/)
* [**Developing Websites**](https://www.washington.edu/accessibility/web/)
* [**Designing Online Courses**](https://www.washington.edu/accessibility/online-courses/)
* [**Procuring IT**](https://www.washington.edu/accessibility/procurement/)
* [**Managing for Accessibility**](https://www.washington.edu/accessibility/managing/)
* [**Getting Help**](https://www.washington.edu/accessibility/help/)
* [**Events & Collaboration**](https://www.washington.edu/accessibility/events/)
* [**Laws, Policies & Standards**](https://www.washington.edu/accessibility/requirements/)
* [**Accessible Technology Blog**](https://www.washington.edu/accessibility/blog/)

<https://www.washington.edu/accessibility/policy/>

University of Washington

# UW Policy – IT Accessibility

The University of Washington (UW) strives to ensure that people with disabilities have access to the same services and content that are available to people without disabilities, including services and content made available through the use of information technology (IT).  IT procured, developed, maintained, and used by the UW should provide substantially similar functionality, experience, and information access to individuals with disabilities as it provides to others. Examples of IT covered by this policy include web sites, software systems, electronic documents, videos, and electronic equipment such as information kiosks, telephones, and digital signs.

The policy aligns with:

* the UW’s [vision](http://www.uw.edu/about/visionvalues/) to educate a diverse student body and its [values](http://www.washington.edu/about/visionvalues/) of diversity, excellence, collaboration, innovation and respect.
* the UW’s obligations under [Section 504 of the Rehabilitation Act of 1973](https://www.dol.gov/agencies/oasam/regulatory/statutes/section-508-rehabilitation-act-of-1973).
* the [Americans with Disability Act of 1990 together with its 2008 Amendments](http://www.ada.gov/ada_intro.htm).
* [Washington State Policy #188 – Accessibility](http://ocio.wa.gov/policies/policy-188-accessibility).
* [UW Executive Order 31](http://www.washington.edu/admin/rules/policies/PO/EO31.html) – Nondiscrimination and Affirmative Action.
* [UW Administrative Policy Statement 2.3](http://www.uw.edu/admin/rules/policies/APS/02.03.html) – Information Technology, Telecommunications and Networking Projects and Acquisitions.

Resources that can help individuals and UW units understand and meet their obligations under this policy include:

* [IT Accessibility Guidelines](https://www.washington.edu/accessibility/guidelines/)
* [IT Accessibility Checklist](https://www.washington.edu/accessibility/checklist/)
* [Accessible Technology at the UW](https://www.washington.edu/accessibility/)

<https://www.washington.edu/accessibility/guidelines/>

University of Washington

# University of Washington IT Accessibility Guidelines

IT Accessibility Guidelines were originally signed on May 1, 2015 by Kelli Trosvig, Vice President for UW Information Technology and CIO. This updated version of the Guidelines was signed on March 31, 2017 by Aaron Powell, Interim Vice President for UW Information Technology and CIO. An official copy with Aaron’s signature is available in PDF: [UW IT Accessibility Guidelines (PDF)](https://s3-us-west-2.amazonaws.com/uw-s3-cdn/wp-content/uploads/sites/54/2018/07/23203347/UW_IT_Accessibility_Guidelines_3_31_17.pdf). Sheryl Burgstahler, Director of Accessible Technology Services, is the UW’s IT Accessibility Coordinator; issues regarding IT policy interpretation and implementation can be directed to her at sherylb@uw.edu.

## 1. Purpose

The purpose of this document is to provide guidance to campus units and individuals employed by the University of Washington (UW) for fulfilling the UW’s commitment to equal access to information technology (IT) and complying with the [UW Policy—IT Accessibility](https://www.washington.edu/accessibility/policy/). Following the guidelines helps to ensure that people with disabilities have access to the same services and content that are available to people without disabilities, including services and content made available through the use of information technology.  IT procured, developed, maintained, and used by the UW should provide substantially similar functionality, experience, and information access to individuals with disabilities as it provides to others.

The UW makes its offerings accessible to individuals with disabilities in accordance with [UW Policy—IT Accessibility](https://www.washington.edu/accessibility/policy/), [UW Administrative Policy Statement 2.3](https://www.washington.edu/admin/rules/policies/APS/02.03.html), [UW Executive Order 31](https://www.washington.edu/admin/rules/policies/PO/EO31.html), and [Washington State Policy #188](https://ocio.wa.gov/policy/accessibility). The underlying foundation for the policies and the UW’s IT Accessibility Guidelines is Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990 (ADA) and the Amendments Act of 2008.

## 2. Definition

The UW has adopted the definition of “accessible” used by the U.S. Department of Education in resolutions with postsecondary institutions regarding civil rights complaints about the inaccessibility of their IT.

“Accessible” means a person with a disability is “afforded the opportunity to acquire the same information, engage in the same interactions, and enjoy the same services as a person without a disability in an equally effective and equally integrated manner, with substantially equivalent ease of use. The person with a disability must be able to obtain the information as fully, equally, and independently as a person without a disability (source: [Resolution Agreement: South Carolina Technical College System](https://www2.ed.gov/about/offices/list/ocr/docs/investigations/11116002-b.pdf), OCR Compliance Review No. 11-11-6002).

## 3. Scope

IT covered by the guidelines supports administrative, research, and academic applications, including the following examples:

* Websites
* Video and audio content
* Electronic documents
* Desktop, mobile, and cloud-based applications
* Content and learning management systems
* Email and calendars
* Library resources
* Computers and peripherals
* Information kiosks, telephones, digital signs, and other electronic equipment
* Classroom technologies

## 4. Standards

Technologies and standards evolve at a rapid pace. The UW looks to the Web Content Accessibility Guidelines (WCAG) 2.0 Level AA, developed by the World Wide Web Consortium (W3C), for guidance in meeting its IT accessibility commitments. WCAG 2.0 provides success criteria for measuring web accessibility, as well as provides useful metrics for products and services that are not specifically web-based. Where an IT product cannot be brought into compliance, campus units are responsible for providing an individual with a disability equivalent access.

## 5. Progress and Plan

The University of Washington has a lengthy history of proactively addressing IT accessibility issues. Its [IT Accessibility Progress and Plan](https://www.washington.edu/accessibility/plan/) describes past efforts and future plans as it strives to ensure IT developed, procured, and used at the UW is accessible to individuals with disabilities.

## 6. Resources

The following resources can assist the UW community in understanding and meeting its accessibility goals. These resources can also be used as a reference for vendors and contractors providing IT products and services to the UW.

### Resources and Support for IT Accessibility

* [Accessible Technology at the University of Washington](https://www.washington.edu/accessibility/) (AT-UW)
* [IT Accessibility Checklist](https://www.washington.edu/accessibility/checklist/)
* [Access Technology Center](http://washington.edu/itconnect/learn/accessible/atc/)
* [Web Content Accessibility Guidelines 2.O](http://w3.org/WAI/intro/wcag)

### Additional Campus Resources

* [Disability Resources for Students (DRS)–Seattle](http://depts.washington.edu/uwdrs/)
* [UW Bothell Disability Resources for Students (DRS)](https://www.uwb.edu/studentaffairs/drs)
* [UW Tacoma Disability Support Services (DSS)](http://www.tacoma.washington.edu/drsuwt)
* [Disability Services Office (DSO)](http://washington.edu/admin/dso/) (for staff, faculty, and visitors at all UW campuses)
* [Compliance Services–ADA Coordinator](https://compliance.uw.edu/ADA)

### Legal and Policy Requirements

* [UW Policy–IT Accessibility](https://www.washington.edu/accessibility/policy/)
* [Washington State Policy #188](https://ocio.wa.gov/policy/accessibility)
* [UW Administrative Policy Statement 2.3](https://www.washington.edu/admin/rules/policies/APS/02.03.html)
* [Section 504 of the Rehabilitation Act of 1973](https://www2.ed.gov/about/offices/list/ocr/504faq.html)
* [Americans with Disabilities Act as amended](http://ada.gov/2010_regs.htm)
* [UW Executive Order No. 31](http://washington.edu/admin/rules/policies/PO/EO31.html)

## Approval

Aaron Powell
Interim Vice President for UW Information Technology and CIO
March 31, 2017

# <https://www.washington.edu/accessibility/checklist/>

# IT Accessibility Checklist & Tutorial

Our goal at the University of Washington, as stated in the [University of Washington IT Accessibility Guidelines](https://www.washington.edu/accessibility/guidelines/), is to achieve the success criteria of the Web Content Accessibility Guidelines (WCAG ) 2.0 at Level AA. WCAG 2.0 is the standard for web accessibility developed by the World Wide Web Consortium (W3C).

Our [IT Accessibility Checklist](https://depts.washington.edu/uwitats/checklist) can be completed online, and is based on the WCAG 2.0 Level A and AA standards. It is provided to assist the UW community, including web designers, developers, content creators, and purchasing agents, in creating and procuring accessible IT.  Vendors and contractors can use it to document their level of accessibility when providing products and services to the UW, as explained in [Procurement Procedure 7.2.15 (PDF)](https://finance.uw.edu/ps/sites/default/files/purchmanual/7.2.15ProcuringAccessibleIT01-09-18.pdf). Many of the items in the checklist apply to web pages and web-based applications as well as electronic documents in Microsoft Word, Adobe PDF, and other formats, and other products and services that are not specifically web-based.

The following tutorial explains each of the items in the checklist. Click on any link for additional information about that item.

## Perceivable

Make content and controls perceivable by all users.

1. Do images have **alternative text**? [More about Making Images Accessible](https://www.washington.edu/accessibility/checklist/images/)
2. Does video have **captions** and does audio have a **transcript**? [More about Producing Accessible Multimedia](https://www.washington.edu/accessibility/checklist/multimedia/)
3. Does the web page or document include **headings, lists, ARIA landmarks, and other semantic elements** to communicate document structure? [More about Providing Structure in Web Pages and Documents](https://www.washington.edu/accessibility/checklist/structure/)
4. Is the **tab order** and **read order** logical and intuitive? [More about Ensuring Proper Tab and Read Order](https://www.washington.edu/accessibility/checklist/tab-order/)
5. Do form fields within web pages and documents have appropriately coded **labels and prompts**? [More about Creating Accessible Forms](https://www.washington.edu/accessibility/checklist/forms/)
6. Have you avoided using **visual characteristics** to communicate information (e.g., “click the circle on the right” or “required fields are in red”)? [More about Avoiding Reliance on Visual Characteristics](https://www.washington.edu/accessibility/checklist/visual-characteristics/)
7. Does the interface have **sufficient contrast** between text color and background color? [More about Providing Sufficient Color Contrast](https://www.washington.edu/accessibility/checklist/contrast/)
8. Does the content **scale well when text is enlarged** up to 200 percent? [More about Supporting Enlarged Text](https://www.washington.edu/accessibility/checklist/zoom/)

## Operable

Make content and controls operable by all users.

1. Can all menus, links, buttons, and other controls be operated by **keyboard**, to make them accessible to users who are unable to use a mouse? [More about Designing for Keyboard Accessibility](https://www.washington.edu/accessibility/checklist/keyboard/)
2. Does the web page include a **visible focus indicator** so all users, especially those using a keyboard, can easily track their current position? [More about Providing Visible Focus for Keyboard Users](https://www.washington.edu/accessibility/checklist/focus/)
3. Do features that **scroll or update automatically** (e.g., slideshows, carousels) have prominent accessible controls that enable users to pause or advance these features on their own? [More about Ensuring Accessibility of Scrolling or Updating content](https://www.washington.edu/accessibility/checklist/dynamic-content/)
4. Do pages that have **time limits** include mechanisms for adjusting those limits for users who need more time? [More about Providing Accessible Time Limits](https://www.washington.edu/accessibility/checklist/time-limits/)
5. Have you avoided using content that **flashes or flickers**? [More about Avoiding Flashing or Flickering Content](https://www.washington.edu/accessibility/checklist/flashing-content/)
6. Does the web page or document have a **title that describes its topic or purpose**? [More about Providing an Informative Title](https://www.washington.edu/accessibility/page-or-document-titles/)
7. Are mechanisms in place that allow users to **bypass blocks of content** (e.g., a “skip to main content” link on a web page or bookmarks in a PDF)? [More about Facilitating Efficient Navigation](https://www.washington.edu/accessibility/checklist/navigation-design/)
8. Does the website include **two or more ways of finding content**, such as a navigation menu, search feature, or site map? [More about Providing Multiple Ways of Finding Content](https://www.washington.edu/accessibility/checklist/multiple-ways/)
9. Is **link text** meaningful, independent of context? [More about Using Meaningful Link Text](https://www.washington.edu/accessibility/links/)

## Understandable

Make content and user interfaces understandable to all users.

1. Has the **language** of the web page or document (or individual parts of a multilingual document) been defined? [More about Identifying Language of a Document and its Parts](https://www.washington.edu/accessibility/checklist/language/)
2. Have you avoided links, controls, or form fields that **automatically trigger a change in context**? [More about Providing Predictable Behavior](https://www.washington.edu/accessibility/checklist/predictable/)
3. Does the website include **consistent navigation**? [More about Providing Consistent Site-wide Navigation](https://www.washington.edu/accessibility/checklist/consistent-navigation/)
4. Do online forms provide **helpful, accessible error and verification messages**? [More about Using Accessible Methods of Form Validation](https://www.washington.edu/accessibility/checklist/form-validation/)

## Robust

Make content robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies.

1. Is the web page coded using **valid HTML**? [More about Validating Your Code](https://www.washington.edu/accessibility/checklist/validation/)
2. Do rich, dynamic, web interfaces, such as modal windows, drop-down menus, slideshows, and carousels, include **ARIA markup**? [More about Using ARIA for Web Applications](https://www.washington.edu/accessibility/web/aria/)
	* **IT Accessibility Checklist & Tutorial**
		+ [Avoiding Flashing or Flickering Content](https://www.washington.edu/accessibility/checklist/flashing-content/)
		+ [Avoiding Reliance on Visual Characteristics](https://www.washington.edu/accessibility/checklist/visual-characteristics/)
		+ [Creating Accessible Forms](https://www.washington.edu/accessibility/checklist/forms/)
		+ [Designing for Keyboard Accessibility](https://www.washington.edu/accessibility/checklist/keyboard/)
		+ [Ensuring Accessibility of Scrolling or Updating Content](https://www.washington.edu/accessibility/checklist/dynamic-content/)
		+ [Ensuring Proper Tab and Read Order](https://www.washington.edu/accessibility/checklist/tab-order/)
		+ [Facilitating Efficient Navigation](https://www.washington.edu/accessibility/checklist/navigation-design/)
		+ [Identifying Language of a Document and its Parts](https://www.washington.edu/accessibility/checklist/language/)
		+ [Producing Accessible Multimedia](https://www.washington.edu/accessibility/checklist/multimedia/)
		+ [Providing Accessible Time Limits](https://www.washington.edu/accessibility/checklist/time-limits/)
		+ [Providing Consistent Site-wide Navigation](https://www.washington.edu/accessibility/checklist/consistent-navigation/)
		+ [Providing Multiple Ways of Finding Content](https://www.washington.edu/accessibility/checklist/multiple-ways/)
		+ [Providing Predictable Behavior](https://www.washington.edu/accessibility/checklist/predictable/)
		+ [Providing Structure in Web Pages and Documents](https://www.washington.edu/accessibility/checklist/structure/)
		+ [Providing Sufficient Color Contrast](https://www.washington.edu/accessibility/checklist/contrast/)
		+ [Providing Visible Focus for Keyboard Users](https://www.washington.edu/accessibility/checklist/focus/)
		+ [Supporting Enlarged Text](https://www.washington.edu/accessibility/checklist/zoom/)
		+ [Using Accessible Methods of Form Validation](https://www.washington.edu/accessibility/checklist/form-validation/)
		+ [Validating Your Code](https://www.washington.edu/accessibility/checklist/validation/)
		+ [Making Images Accessible](https://www.washington.edu/accessibility/checklist/images/)

## Accessible Technology

* [**UW Policy**](https://www.washington.edu/accessibility/policy/)
* [**IT Accessibility Guidelines**](https://www.washington.edu/accessibility/guidelines/)
* [**IT Accessibility Checklist & Tutorial**](https://www.washington.edu/accessibility/checklist/)
* [**IT Accessibility Leadership**](https://www.washington.edu/accessibility/leadership/)
* [**Progress & Plan**](https://www.washington.edu/accessibility/plan/)
* [**Getting Started**](https://www.washington.edu/accessibility/start/)
* [**Creating Documents**](https://www.washington.edu/accessibility/documents/)
* [**Creating Videos**](https://www.washington.edu/accessibility/videos/)
* [**Developing Websites**](https://www.washington.edu/accessibility/web/)
* [**Designing Online Courses**](https://www.washington.edu/accessibility/online-courses/)
* [**Procuring IT**](https://www.washington.edu/accessibility/procurement/)
* [**Managing for Accessibility**](https://www.washington.edu/accessibility/managing/)
* [**Getting Help**](https://www.washington.edu/accessibility/help/)
* [**Events & Collaboration**](https://www.washington.edu/accessibility/events/)
* [**Laws, Policies & Standards**](https://www.washington.edu/accessibility/requirements/)
* [**Accessible Technology Blog**](https://www.washington.edu/accessibility/blog/)

<https://www.washington.edu/accessibility/>

Accessible Technology at the UW

## Experiencing inaccessible IT? Please let us know.

The University of Washington (UW) strives to ensure that people with disabilities have access to all services and content, including those delivered using information technology (IT).  If you experience a barrier that affects your ability to access UW websites, videos, on-line forms, or other IT, please send a detailed message to help@uw.edu.

For additional issues or needs related to accessibility or accommodations at the UW, please see our [Getting Help](https://www.washington.edu/accessibility/help/) page.

## UW Promotes IT Accessibility Guidelines

The University of Washington values diverse experiences and perspectives and strives to fully include everyone who engages with the UW. Inaccessible information technology (IT) negatively impacts people with a variety of disabilities, including mobility/orthopedic impairments, sensory impairments, specific learning disabilities, attention deficits, autism spectrum disorders, speech impairments, health impairments, and psychiatric conditions.

For many years, UW-IT Accessible Technology Services and other IT leaders have consulted with campus units in making IT accessible to all faculty, students, staff and visitors.

The UW’s commitment to equal access to IT has been more formally stated through publication of an IT Accessibility Policy and IT Accessibility Guidelines. The Guidelines state that the UW looks to the Web Content Accessibility Guidelines (WCAG) 2.0 developed by the World Wide Web Consortium (W3C) Level AA for guidance in meeting its IT accessibility commitments.

In addition to the Guidelines, UW-IT Accessible Technology Services maintains an IT Accessibility Checklist, which provides specific techniques and testing methods to assist the UW community including web designers, developers, content creators, and purchasing agents, in meeting the Guidelines when creating and procuring IT.

* [IT Accessibility Guidelines](https://www.washington.edu/accessibility/guidelines/)
* [IT Accessibility Checklist](https://www.washington.edu/accessibility/checklist/)

## About This Website

This website serves as the UW’s hub for information about accessible technology. Accessible technology includes electronic documents, websites, videos, software applications, and hardware devices that can be used effectively by everyone, including students, faculty, staff, and visitors with disabilities. The UW community is collectively responsible for assuring the  technologies we choose, use, and create are fully accessible. In addition to the IT Accessibility Guidelines and accompanying Checklist, here are a few additional starting points for learning more about IT accessibility:

* [Getting started with accessibility](https://www.washington.edu/accessibility/start/)
* [Creating accessible documents](https://www.washington.edu/accessibility/documents/)
* [Developing accessible websites](https://www.washington.edu/accessibility/web/)
* [Creating accessible videos](https://www.washington.edu/accessibility/videos/)
* [Procuring accessible IT](https://www.washington.edu/accessibility/procurement/)

## Accessible Technology

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* [**Laws, Policies & Standards**](https://www.washington.edu/accessibility/requirements/)
* [**Accessible Technology Blog**](https://www.washington.edu/accessibility/blog/)

<https://www.washington.edu/accessibility/web/aria/>

# Using ARIA for Web Applications

## Overview

ARIA is a W3C specification that stands for “Accessible Rich Internet Applications”. It consists of markup that can be added to HTML in order to clearly communicate the roles, states, and properties of user interface elements. This information helps screen readers and other assistive technologies to better understand the elements on a web page, and to provide a user interface that enables their users to effectively interact with those elements.

For example, imagine a web page where a user is able to click a button to trigger some action on the page. When they click the button, a message appears at the top of the page informing the user of their success or failure. Using HTML alone, screen reader users would have no idea that this message has appeared, and even if they suspected it had appeared, they might not be able to easily find it. With ARIA, the developer could simply add role="alert" to the container where the message will appear. Then, when the content of that container changes screen readers will interrupt the user by announcing the message content. The user’s focus will remain in their original location so they can resume their work.

If you are developing dynamic, rich, interactive user interface elements for web pages, they must include ARIA markup or there is very little possibility of their being accessible.

## Techniques

If you are choosing widgets, modules or plugins that provide this same sort of functionality, you must research their accessibility, including whether they include ARIA markup.

For help with ARIA, including identifying accessible widgets, modules, or plugins, please see  [Getting Help With Accessibility](https://www.washington.edu/accessibility/help/).

If you are developing your own web applications or widgets, consult the following resources to learn more about how to integrate ARIA into your development.

* [WAI-ARIA Authoring Practices](http://www.w3.org/TR/wai-aria/)This resource from the W3C provides detailed steps for developing rich web applications using ARIA, including example code.
* [WAI-ARIA Design Patterns](http://www.w3.org/WAI/PF/aria-practices/#aria_ex)
This resource is a part of the preceding resource but deserves special mention. It is a growing collection of recommendations for implementing specific web widgets such as accordions, dialogs, and menus. The recommendations, developed with input from a wide variety of stakeholders, include recommended keyboard models and ARIA markup.
* [MDN ARIA Site](https://developer.mozilla.org/en/aria)This site from the Mozilla Developer Network is a hub for excellent information, including tutorials, articles, and examples.
* [Introduction to ARIA](http://dev.opera.com/articles/view/introduction-to-wai-aria/)This article by Gez Lemon on the Dev.Opera site is one of the best at providing an introductory explanation of ARIA.
* [The W3C ARIA Specification](http://www.w3.org/TR/wai-aria/)This is the definitive resource on ARIA, but as a technical spec it is not especially easy reading.

## Testing

* Use the [W3C Markup Validation Service](http://validator.w3.org/) to check your HTML against current web standards. This tool includes checks for valid use of ARIA markup.
* Test your website or web application with multiple browser/screen reader combinations. Support for ARIA is a moving target, and even if your code is valid, there might be problems in the way its rendered with assistive technologies. There is no substitute for testing, especially if your site has rich, interactive content. For help with testing with assistive technologies, please contact the [Access Technology Center](http://www.washington.edu/itconnect/learn/accessible/atc/).

## References

* WCAG 2.0 Success Criterion [4.1.2 Name, Role, Value](http://www.w3.org/TR/WCAG20/#ensure-compat-rsv) (Level A)