

Athens State University

Accessible Technology and Information Guidelines

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Accessible Technology and Information

Websites and learning management systems have a variety of content including web pages, online courses, text files in various formats (Word, PDF, Excel, PowerPoint) and audio/video recordings. This publication, *The Athens State University Accessible Technology and Information Guidelines* is intended to assist faculty and staff in making digital content accessible. This guide provides information on the standards for creating and modifying existing and new digital content that is accessible by all persons with or without disabilities. Additionally, this guide is augmented by the many available resources on accessibility referenced throughout.

Accessibility issues related to the public facing, Athens State University website, are not addressed in this document specifically because the website is centrally managed, however, the same rules apply to the website and all content access through it. Faculty and staff may contribute content for publication on Athens.edu, but do not manage the content directly. The University has already begun the work to address the public facing website accessibility issues.

What is accessible technology and information?

Technology and information is considered to be accessible if it can be accessed in a variety of ways and does not rely on a single sense or ability of the user. Major accessibility issues fall into three broad areas for higher education: web-based learning, in-class technology, and document preparation. Considering document preparation, a PDF document on a web site can be opened and read by a sighted person, but for it to be considered accessible, it should be formatted correctly so that it can also be read out loud by a screen reader for a blind person. This requires the PDF file be structured so that not only can it be read aloud by the screen reader, but, the content is also understandable when read out loud. In-class technology such as a projector might be used to review the PDF document in class. For a live, classroom presentation to be considered accessible, the document should be made available so that a low-vision student can have the chance to read the document before class with a screen reader.

Why is Accessibility Important?

The majority of the work completed at a university relies on the use of technology, therefore, accessible technology and information is important. Following accessibility standards improves content overall because it can serve all users whether or not they are disabled. The captioning of videos not only helps individuals with a hearing impairment, captioning also provides an alternate way for the content to be used by a hearing person.

Background on Accessibility Laws

The Americans with Disabilities Act (ADA) 1990 requires covered entities to furnish appropriate auxiliary aids and services where necessary to ensure effective

communication with individuals with disabilities unless doing so would result in a fundamental alteration of the program/service or cause an undue burden. Examples of auxiliary aids include audio recorded texts, Braille materials, large print, captioning, and any other method that make audio and visual media available.

In 1996, the United States Department of Justice issued a policy ruling stating that ADA Titles II and III require state and local governments along with the business sector to provide effective communication regarding programs, goods, or services when communicating through the Internet. Because of the extent to which government and businesses use web-based delivery of information, goods, and services, it is also necessary to make web content accessible.

Section 508 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794 (d)) in 1998 by Congress, requires Federal agencies to make their electronic and information technology accessible to people with disabilities. An accessible information technology system is one that can be operated in a variety of ways and does not rely on a single sense or ability of the user.

As originally written, Section 508 did not automatically apply to institutions of higher education even if they receive federal funding. However, states that receive funds through the Assistive Technology Act are required to comply with 508. Alabama has received funding through the Assistive Technology Act for STAR – Alabama’s Statewide Assistive Technology Resource.

Content Covered by Section 508

The Web Content Accessibility Guidelines (WCAG) 2.0 are an international voluntary standard for web accessibility that is more comprehensive and up-to-date than the original Section 508 standards. The Section 508 revision was finalized in January 2017 and will require WCAG 2.0 at priority level AA conformance. This revision removes the biggest and most common barriers for disabled users.

The new Section 508 standards apply to the following specific areas:

1. Public-facing content that includes electronic information and data.
2. Non-public facing content that falls within the following nine categories of official communications:
 - a. emergency notifications
 - b. initial or final decisions adjudicating an administrative claim or proceeding
 - c. internal or external program or policy announcements
 - d. notices of benefits, program eligibility, employment opportunity, or personnel action
 - e. formal acknowledgements of receipt
 - f. survey questionnaires
 - g. templates and forms

- h. educational and training materials
- i. intranet content designed as a Web page

The deadline for compliance with Section 508 has been set for January 2018.

Documentation on how the new Section 508 standards were developed can be found at: <https://www.access-board.gov/guidelines-and-standards/communications-and-it/about-the-ict-refresh/final-rule> .

Getting Started with Applying Accessibility Guidelines

This guide has been developed to provide a structured set of resources to raise awareness and the level of understanding about the basic practices that make content accessible. This guide relies on references to other resources to provide relevant, up-to-date information and techniques. There is an abundance of assistance through Internet and in software applications such as Microsoft Office. Training opportunities, both in person and online, will also be made available.

The key to developing accessible content is to understand the obstacles to accessibility and how simple changes can make content accessible. Incorporating rules at the beginning of new content development is highly recommended to save time. However, there is a large amount of existing content that is available through the university web site and through the learning management system Blackboard. As such, all content that will be accessed by the public or accessed by students must be reviewed for accessibility issues.

The following is a set of steps toward addressing accessibility:

1. Become familiar with the WCAG 2.0 principles of accessible content by reading through the specific and useable information contained in this document. Learn about the techniques and application tools that can be used to aid in making digital content accessible.
2. Address immediate needs of students first. If you have a student who identifies their need for an accommodation, you are probably already working with Disability Services on course content modifications so the student can successfully access course content.
3. Review all digital content used in online courses beginning with those that will be taught in the Fall 2017 semester. Although Blackboard is compliant with Section 508 requirements, the content accessed through Blackboard such as a file, an audio/video recording, software application, or another website, must also be accessible.

4. Review the quality of all audio/video recordings. Closed captioning and transcription cannot be completed on low quality recordings without expending a great deal of time and effort.
5. Before purchasing textbooks, software applications, or hardware, go through the review the General Procurement Practices section later in this document. Don't put money into a resource before assessing accessibility and usability. Book publishers are usually very aware of accessibility and have made a lot of effort toward meeting requirements.
6. Review live classroom presentations by considering how an individual might be impacted if there are no alternative ways to access the materials you present. Having content online that follows accessibility standards is a first step to making a live classroom presentation fully accessible to all students. Blackboard has a great site on accessibility at:
<http://www.blackboard.com/accessibility.aspx>
7. Site Improve, a website governance product used to review web site for accessibility violations, has been purchased and is now used to review the public facing Athens.edu website. Site Improve reviews both web page content and PDF documents for compliance to WCAG 2.0. PDF files are created by converting source documents developed in Word, Excel, PowerPoint, to PDF format. You should also review any documents that you authored and published to the Athens State website against the WCAG 2.0 standards so you can modify source documents and republish as necessary.
8. Attend an in-person training session. Learn from your peers and meet the people who will provide support.
9. Be receptive to feedback about your content. As content is reviewed, issues will be found.
10. Remember, you are not alone. Help will be available to work in partnership with all faculty and staff to address the accessibility needs of the entire community.

WCAG 2.0 Guidelines

WCAG 2.0 Guidelines have been adopted as a standard for making technology and information accessible (<https://www.w3.org/WAI/WCAG20/quickref/>). These guidelines cover the four principles of accessible content: perceivable, operational, understandable, and robust that should be applied when developing digital content accessed through a web interface or a standalone computer.

The four principles are described in detail in twelve general guidelines listed below:

1 Perceivable - Web content must be perceivable through more than one sense.

1.1 Provide text alternatives for any non-text content so that it can be changed into other forms people need, such as large print, braille, speech, symbols or simpler language.

1.2 Provide alternatives for time-based media.

1.3 Create content that can be presented in different ways (for example simpler layout) without losing information or structure.

1.4 Make it easier for users to see and hear content including separating foreground from background.

2 Operable – The user interface should be navigable using alternative hardware. Example, have both mouse and keyboard functions.

2.1 Make all functionality available from a keyboard.

2.2 Provide users enough time to read and use content.

2.3 Do not design content in a way that is known to cause seizures.

2.4 Provide ways to help users navigate, find content, and determine where they are.

3 Understandable – Make it understandable by using alternative or supplemental representations of information. Example, supplement text with video, audio, illustrations. Likewise, text in the form of a transcript or closed captions can be added to videos.

3.1 Make text content readable and understandable.

3.2 Make Web pages appear and operate in predictable ways.

3.3 Help users avoid and correct mistakes.

4 Robust – Use consistent and accurate coding so that assistive technologies will work.

4.1 Maximize compatibility with current and future user agents, including assistive technologies.

Microsoft Office Accessibility Rules/Techniques

These accessibility rules apply to all online content. Microsoft Office has a number of features to support the development of accessible content.

Document Layout

Accessibility Rule	Reason/How
Use Style elements in a hierarchical manner.	<p>Why: Assistive Technology such as screen readers can better determine the difference between sections.</p> <p>Examples: Heading 1, Title, Emphasis, Outline, etc.</p> <p>How: Select the text to format and then click the Home tab. Choose the style from the Styles gallery.</p>
No flashing, flickering and/or animated text.	<p>Why: Flashing or flickering content can cause seizures and the Assistive Technology cannot decipher the content. Watch for use in Banner course banners.</p>
Page number must be created by a Microsoft Word process and not manually entered.	<p>Why: Properly formatted page numbers allow assistive technology can identify the page number.</p> <p>How: To add page numbers to a document click the Insert tab, then click the Page Number button in the Header & Footer group.</p>
Footnotes must be created through Word Footnote tool.	<p>Why: Assistive technology recognizes formal footnotes and works them into the body of the text when reading.</p> <p>How: To create a footnote click on the References tab, then click the Insert Footnote button located in the Footnotes group.</p>
Bullet and numbering styles must be used as opposed to manually typed characters such as hyphens or dashes.	<p>Why: Assistive Technology recognizes these items as lists of information and will navigate them accordingly.</p> <p>How: Add bullets or numbers by choosing the Home tab, then select the</p>

Accessibility Rule	Reason/How
	Bullets or Numbering button in the Paragraph group.
Track changes need to be accepted or rejected and then turned off	Why: Assistive Technology cannot consistently read them. How: Turn off track changes in Review tab, and click the Track Changes button in the Tracking group.
Comments and formatting marks must be turned off	Why: Assistive Technology cannot consistently read comments and formatting marks. They get in the way of the intended message within the content. How: To remove Comments select the Review tab. Click the Delete button within the Comments group. You will have the choice to delete comments and markups on the current slide or to the entire presentation.
Final visual document checks need to be in the Print Preview.	Why: This will show items such as headers, footers, page numbers, and repeating table heading rows. How: To view a document click the File tab, and then choose Print. The preview will display in the right panel of the Word window.
All URLs must contain the correct hyperlink and display the fully qualified URL.	Why: Assistive Technology recognizes formal hyperlinks and it helps the impaired users to navigate to the linked destination.
All the URL's must be active and linked to the correct destination.	Why: Assistive Technology recognizes formal hyperlinks and it helps the impaired users to navigate to the linked destination.

Document Images

Accessibility Rule	Reason/How
Complex images must have descriptive text immediately after the image.	Why: The descriptive text is read by the Assistive Technology and provides the impaired individual additional information regarding the image.
The document must be free of background images or watermarks.	Why: Documents for visually impaired individuals are easier to read when they are free of background images or watermarks. How: To remove a watermark, click the Page Layout tab. Select Watermark from the Page Background group, then Remove Watermark.
The image text wrapping style "In Line with Text" must be used for all images.	Why: Assistive Technology reads documents in a sequential order, if the image is not "In Line with Text" the image will be read out of order. How: To make an image "In Line with Text", right-click the image. Choose Wrap Text from the drop down menu, and then select In Line with Text.
Multiple associated images must be Grouped as One Object (i.e., Organizational Charts)	Why: When the images are grouped as one object, only one alt-tag needs to be applied to the non-verbal element.
All multi-layered objects must be flattened into one image and use one Alternative Text (Alt Tag) for the image.	Why: When multi-layered objects are flattened into one image, only one alt-tag needs to be applied to the non-verbal element.
Text boxes must not be used for simple graphics.	Why: Text boxes without content presents confusion to someone using a screen reader because the reader expects something to read.

Document Tables

Accessibility Rule	Reason/How
All tables must read from left to right, top to bottom.	Why: This is for proper reading order by the Assistive Technology How: Plan table content layout so that it reads left to right, top to bottom.
Tables containing 'data' must have the first row designated as a Header Row.	Why: This aids the Assistive Technology in knowing where the heading information is located for each column. How: To designate the heading row(s), select the rows that contain the heading information. Right-click the selected rows and choose Table Properties. In the Table Properties dialog box select the Row tab and check "Repeat as header row at the top of each page".
Tables must not use merged cells.	Why: Assistive Technology cannot match the cells with the appropriate heading rows. How: Don't merge cells
Rows should not break across pages.	Why: It makes it difficult for Assistive Technology to read. How: To stop rows from breaking select the rows that contains the heading information. Right-click the selected rows and choose Table Properties. In the Table Properties dialog box select the Row tab and uncheck "Allow row to break across pages."

Additional Accessible Documents Requirements

The Inspect Document function will check your document for hidden information, comments, track changes, headers, footers, watermarks, and other items.	How: To run the Inspect Document select the File tab. Choose Check for Issues, Check Accessibility. Note: it is good practice to run the Inspect Document on a copy of the file, preserving the original in case there are issues.
The document file name must not contain spaces and/or special characters.	To separate words in a file name use the hyphen (-).
The document file name must be concise, generally limited to 20-30 characters.	File name should make it clear the content of the file clear in the context in which it is presented.
The document must utilize the recommended fonts.	Recommended fonts: Times New Roman, Verdana, Arial, Tahoma, Helvetica and Calibri.
The Document Properties (i.e. Subject, Author, Title, Keywords, and Language) must be properly filled out.	To apply Document Properties click on the File tab, then Properties in the right pane to expand. Choose Show Document Panel to expose the document properties and fill in the fields.
Documents that contain a Table of Contents (TOC) need to be created by Microsoft's Reference tool.	TOC's are generated by the styles that are applied to the document. To create a TOC, click the References tab, then click the Table of Contents button in the Table of Contents group. Choose the style you would like to use, click the style to apply it to the document.
A separate accessible version of the document must be provided when there is no other way to make the content accessible.	Example: An organizational chart

Microsoft Office Online Accessibility Resources

Microsoft has several helpful guides on creating accessible documents. These guides are accessible from within any Office application (hit F1 key and search on the term "Accessibility"). The following links provide web accessible documentation you can read anytime without being in an Office application.

Resource Link	Description
Office Accessibility Center https://support.office.microsoft.com/en-US/Office-Accessibility-Center-ecab0fcf-d143-4fe8-a2ff-6cd596bddc6d	Landing page with links to multiple resources on making content accessible. This page has links to four topics: make content accessible; help for specific Office 365 applications; demos on how to use accessibility features; and what's new in accessibility.
Overview: Creating Accessible Office files https://support.office.microsoft.com/en-US/Overview-Creating-accessible-Office-files-868ECFCD-4F00-4224-B881-A65537A7C155?NS=WINWORD&Version=15&AppVer=ZWD150	This link has a five minute video on creating accessible content using Microsoft Office.
Create accessible Word documents https://support.office.microsoft.com/en-US/Create-accessible-Word-documents-4fbb34d6-264f-4315-98d1-e431019e6137	Online video tutorial on how to create accessible Word documents.
Make your Word documents accessible https://support.office.microsoft.com/en-US/Make-your-Word-documents-accessible-D9BF3683-87AC-47EA-B91A-78DCACB3C66D?NS=WINWORD&Version=15&AppVer=ZWD150	Learn how to create Word documents that are more accessible to people with disabilities, or who are using assistive technologies.

Resource Link	Description
<p>Accessibility Checker</p> <p>https://support.office.microsoft.com/en-US/Accessibility-Checker-a16f6de0-2f39-4a2b-8bd8-5ad801426c7f</p>	<p>A tool used to check Office files for accessibility. A great way to review existing documents.</p>
<p>Rules for Accessibility Checker</p> <p>https://support.office.microsoft.com/en-US/Accessibility-Checker-Rules-651e08f2-0fc3-4e10-aaca-74b4a67101c1#bkmk_checkerrules</p>	<p>One section of the Microsoft Office online resource that explains how the accessibility checker works and rules it follows.</p>
<p>Create Accessible PDF files</p> <p>https://support.office.microsoft.com/en-US/Create-accessible-PDFs-064625e0-56ea-4e16-ad71-3aa33bb4b7ed</p>	<p>PDF file format are widely used on the Internet and websites.</p>
<p>Make your PowerPoint presentations accessible</p> <p>https://support.office.microsoft.com/en-US/Office-Accessibility-Center-ecab0fcf-d143-4fe8-a2ff-6cd596bddd6d</p>	<p>Best practices for making PowerPoint presentations accessible</p>

Multimedia Content Accessibility

Audio and video content will require a readable version (transcription or closed captioning) to make it accessible. Past practices have been to use a third-party to transcribe the content in existing recordings for students who need an accommodation. Third-party use is expensive, inconvenient, and has a long turnaround time.

The ability to create a transcript or closed captioning easily and quickly is the ultimate solution for audio content accessibility. Although this version of the guidelines does not have a final solution for transcription/closed captioning in place, a solution is under review for the campus and more information will be forthcoming.

In the meantime, there are several things that can be done to prepare multimedia content for accessibility. If audio only, be sure the sound is clear, understandable, and well edited to remove extraneous content. Likewise, video content should be understandable and well edited. If content is questionable, consider recording again. If possible, before recording, script out your content then follow the script as you record. This will allow you to publish the script and the recorded content together, thus making it accessible in two formats.

It is recommended for individuals who create multimedia content to review the website <https://www.w3.org/2008/06/video-notes#q1> for helpful information on accessible audio and video recordings.

Online Training Resources

Federal Government Training on Section 508

Understanding Section 508 is important for all faculty and staff. The federal government has a site where our faculty and staff can learn about Section 508 online. Topics addressed at <http://training.section508.gov> include:

Designing Accessible Web Sites

Accessible Conferences

Buying Accessible Electronic and Information Technology products/services


Section 508 Coordinators

As a member of an educational institution, you can access some of the resources on this site by registering with your @Athens.edu e-mail address.

An Official Website of The United States Government Friday, February 17, 2017 Print

Section508.gov
Opening Doors to IT

Resources for understanding and implementing Section 508



You are here: Section 508 Universe Training > Section 508 Universe Training Registration Form

508 Universe Training

Due to upgraded security restrictions Federal users must have .gov, .mil, or .edu, email addresses to register or access the Section 508 Universe training system. If a Federal user has a different email domain (.us), then please contact us at section.508@gsa.gov for access privileges.

Currently registered users and New users who do not have one of the above email extensions will no longer have access to the login feature or the functions of the registration site (Certificates, completed course list, etc.), however, the courses will still be available to you outside of the registration system under the "Courses Offered" link. It is recommended that users without registered accounts (non-Federal) save their certificates of completion to a file for future reference.

508 Universe Training - New User Registration Form
*Note: All fields are required.

First Name:

Last Name:

Email Address:

Password:
(Password must be between 6 and 14 characters)

Re-Enter Password:

For added security, please answer the following question:
What is 7 plus 0?

Register Cancel

Additional Online Training Resources

Mentioned earlier in this document, Microsoft has some excellent online tutorials that provide guidance on creating accessible documents.

(<https://support.office.microsoft.com/client/Create-accessible-Word-documents-4fbb34d6-264f-4315-98d1-e431019e6137>). Also, Search YouTube for "making

documents accessible" and you will find a number of great tutorials on accessibility techniques.

General Procurement Practices

The procurement process at Athens State will include the review proposed purchases for accessibility. Products that will be subject to accessibility review are:

- Software applications
- Web-based internet and intranet information and applications
- Telecommunications products
- Video and multimedia products
- Printers/copier, kiosks, fax machines
- Desktop and portable computers

Products/services will need the following information to determine accessibility compliance:

Who will use the product/service? Campus-wide, academic labs, employee workstations, etc.

Is this a new or previous purchase?

Provide the vendor Voluntary Product Accessibility Template URL

Instructional Resources

Blackboard Learn

The learning management system, Blackboard Learn, has incorporated in the design of its interface the Section 508 and WCAG 2.0, Level AA accessibility standards. This is a great beginning to making course content accessible to all students. However, a web site or document accessed through Blackboard but was developed outside of the Blackboard interface, must also follow accessibility standards.

Textbooks and Academic Software Applications/Websites

Like the general procurement practices described previous, when faculty choose a new textbook and accompanying software applications/guides, accessibility should be part of the review process. Textbook selection, however, differs from general procurement issues because accessibility issues are handled differently. Textbooks are intellectual property and chosen based upon the subject or program requirements. To address accessibility, the availability of an e-text formatted textbook is ideal because the e-text allows for a quicker turnaround time to provide an accommodation for a student. Most large publishing companies have an online request form for e-text versions of the textbook and some may require confirmation of the reason for e-text access and that the student owns a purchased copy of the textbook.

If you receive an e-text of a textbook from the publisher, it may not be in the ideal format for your student, but can be converted to a useable format.

If the same textbook and/or accompanying software application have been used for a long time please to review it for accessibility issues as previously suggested.

Other products/services

Voluntary Product Accessibility Template (VPAT) details how a company will comply with the federal Section 508 standards. Do a Google search on company or product name followed by VPAT and you will find a description of accessibility compliance for that product. While VPATs are currently used to describe Section 508 compliance, any accessibility standards and guidelines, such as WCAG can be applied in a similar format to the VPAT.

Additional Helpful Accessibility Links

<https://support.office.microsoft.com/en-us/word>

<https://section508.gov/content/quick-reference-guide#1194.24>

<https://training.section508.gov/index.cfm>

<http://www.adobe.com/accessibility.html>

https://helpx.adobe.com/acrobat/using/create-verify-pdf-accessibility.html?trackingid=KRRSC&DTProd=Reader&DTServLvl=SignedOut#make_PD_Fs_accessible