

# eLearning Accessibility

An Introduction to Section 508 of the Rehabilitation Act  
and WCAG 2.0 Web Content Accessibility Guidelines

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WNMU

It's about  
accessibility,  
man.



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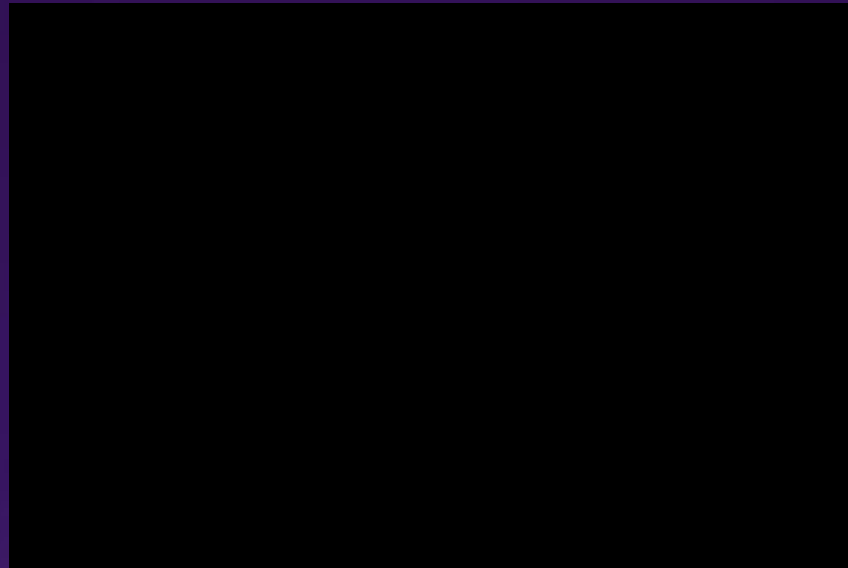
Multiple Means of Representation



Multiple Means of Action & Expression



Multiple Means of Engagement



Video by National Center on Universal Design for Learning. Subtitles available [here](#).

# Universal Design for Learning



Center for Applied Special Technology



National Center on Universal Design for Learning



The ACCESS Project

**UDL Resources**

**Web Accessibility** means that people with disabilities can perceive, understand, navigate, and interact with the Web, and that they can contribute to the Web. Web accessibility also benefits others, including older people with changing abilities due to aging.

**Web Accessibility**

**Web Accessibility** encompasses all disabilities that affect access to the Web, including visual, auditory, physical, speech, cognitive, and neurological disabilities.

**Web Accessibility**

**Web Accessibility** also benefits people *without* disabilities in certain situations, such as people using a slow Internet connection, people with "temporary disabilities" such as a broken arm, and people with changing abilities due to aging.

**Web Accessibility**



- **ADA** (Americans with Disabilities Act)
- **IDEA** (Individuals with Disabilities Education Act)
- **Rehabilitation Act** (Sections 504 & 508)
- **International Law**
- **WCAG 2.0**

## Laws and Standards





## **Section 508 of the Rehabilitation Act (29 U.S.C. 794d)**

Applies to:  
Electronic and Information Technology

This is highly subjective language!

## **Section 508**

# Section 508 of the Rehabilitation Act (29 U.S.C. 794d)



## SEC. 508. ELECTRONIC AND INFORMATION TECHNOLOGY

### (a) REQUIREMENTS FOR FEDERAL DEPARTMENTS AND AGENCIES.--

#### (1) ACCESSIBILITY.--

(A) DEVELOPMENT, PROCUREMENT, MAINTENANCE, OR USE OF ELECTRONIC AND INFORMATION TECHNOLOGY.--When developing, procuring, maintaining, or using electronic and information technology, each Federal department or agency, including the United States Postal Service, shall ensure, **unless an undue burden would be imposed** on the department or agency, that the electronic and information technology allows, regardless of the type of medium of the technology--

(i) individuals with disabilities who are Federal employees to have access to and use of **information and data that is comparable** to the access to and use of the information and data by Federal employees who are not individuals with disabilities; and

(ii) individuals with disabilities who are members of the public seeking information or services from a Federal department or agency to have access to and use of information and data that is comparable to the access to and use of the information and data by such members of the public who are not individuals with disabilities.

(B) ALTERNATIVE MEANS EFFORTS.--When development, procurement, maintenance, or use of electronic and information technology that meets the standards published by the Access Board under paragraph (2) would impose an undue burden, the Federal department or agency shall provide individuals with disabilities covered by paragraph (1) with the information and data involved by an alternative means of access that allows the individual to use the information and data.

# Section 508

# Web Content Accessibility Guidelines

<http://www.w3.org/TR/WCAG20/>



- **Perceivable:** provide text alternatives for all non-text content
- **Operable:** make all functionality available from a keyboard
- **Understandable:** make text content readable and understandable
- **Robust:** maximize compatibility with current and future user agents, including assistive technology

This is highly objective language!

## WCAG 2.0 Accessibility Guidelines

# Web Content Accessibility Guidelines



<http://www.w3.org/TR/WCAG20/>

Three-tiered system of conformance, from minimal alternative formats to fully accessible content designed with Universal Design for Learning in mind.

- **A**: Let's focus on this for now
- **AA**: When all A criteria have been met
- **AAA**: I am unaware of any mainstream websites that are fully AAA compliant.

## WCAG 2.0 Accessibility Guidelines

## Screen Readers:

- Voiceover for Macintosh (output; included in OS)
- Jaws for Windows (output)

## Other Input/Output devices:

- Adaptive Keyboards (input)
- Scroll wheels and large trackballs (input)
- Eye Tracking Devices (input)
- Voice Recognition Software (input)
- Various Prosthetic Devices (input)
- Braille Pads (output)

# Assistive Technology

My primary concern is that hearing impaired students can read audio content and that visually impaired students have an equivalent experience with the course content using a screen reader.

This means subtitles and transcripts for all video and text equivalents for all non-text elements including but not limited to audio, images, graphs and scripts.

**In Short...**

- Use HTML instead of PDF or Word docs
- Use concise ALT tags for images
- Use Video with subtitles and transcripts
- Use Audio with transcripts
- Use descriptive text links instead of URLs
- Use header tags for hierarchical headings
- Use contrasting colors in text and pages
- Use Links instead of iFrames

**What you can do...**

While PDF documents are handy and the reader is free and ubiquitous, HTML is the preferred format for delivering accessible web content because of its inherent accessibility and screen reader-friendly format. Simply put, HTML is the most efficient means of content delivery in a web-based Learning Management System.



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**Use HTML**



Alternative Text Tags (ALT tags) provide a text description of non-text elements on a webpage. Perhaps the most commonly used ALT tags are in HTML code representing images. Be concise!

Western New Mexico University

Richard Helbock    Inbox    Settings    Logout    Help

Courses ▾    Assignments    Grades    Calendar

canvas

★ > MM-101

Multimedia

Change Home Page Layout | See Course Stream

Switch Views

```
<p></p>
```

Page Tools

Insert Content into the Page

Links    Files    Images

Click any image to embed the image in the page.

➕ Upload a new image

🔍 Find images on flickr creative commons

**Use ALT tags**

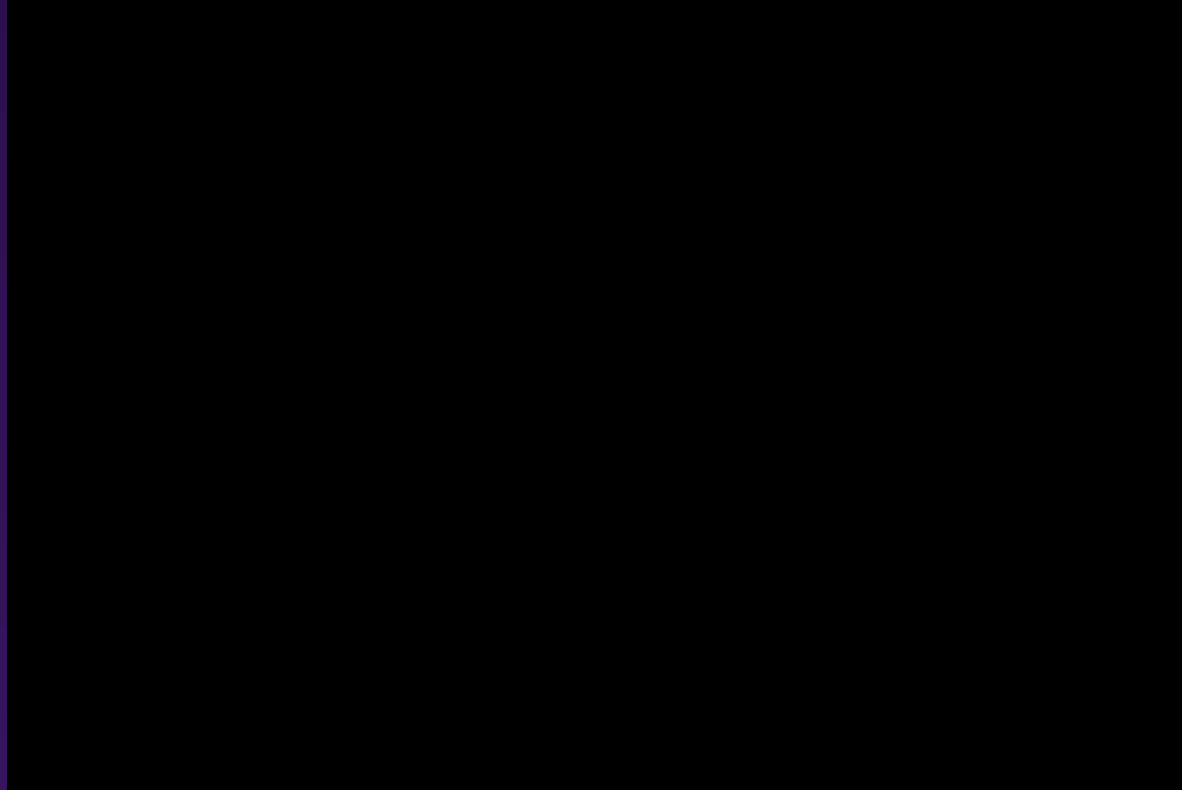
Alternative Text Tags (ALT tags) provide a text description of non-text elements on a webpage. Perhaps the most commonly used ALT tags are in HTML code representing images. Be concise!



`<alt="Holstein cow">`

**Use ALT text tags**

Dr. Joseph Shepard on eLearning:



**Use Video with subtitles**



**Audio transcript:** “Clapping and cheering”.

Include not only spoken words in your transcripts but describe any other relevant sounds.

**Use Audio transcripts**

**Instead of this:**

<http://www.criterion508.com/WebAccessibility.php?gclid=CL-Tt5XvkrUCFbAWMgodpGMAJw>

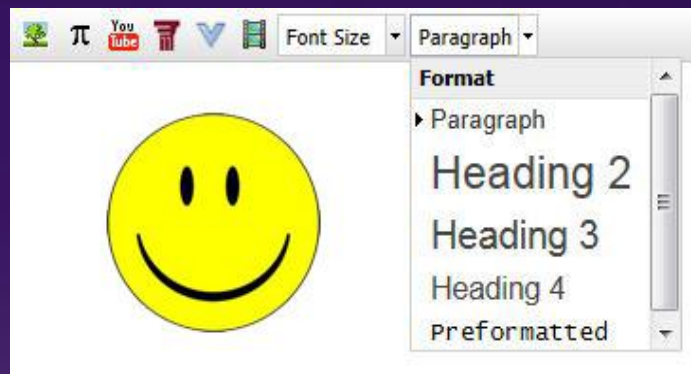
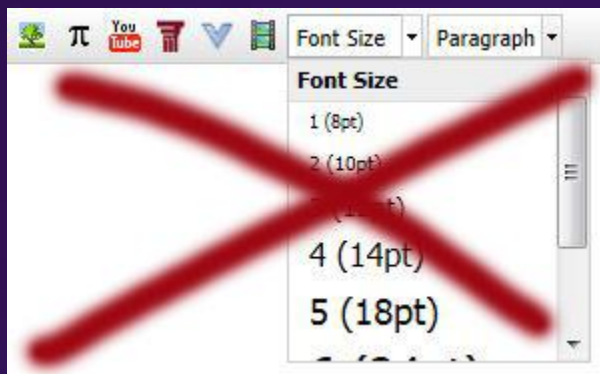
**Use this:** [Criterion Section 508 Compliance](#)

**Or this:**



**Use text and image links**

Use Header Tags (<h1>, <h2>, etc.) instead of different font sizes to denote hierarchical content headings and subheadings.



**Use header tags**

# WNMU Color Palettes

R: 254 G: 190 B: 16 #FEBE10	R: 66 G: 25 B: 111 #42196F	R: 111 G: 72 B: 157 #6F489D	R: 242 G: 101 B: 34 #F26522	R: 252 G: 175 B: 23 #FCAF17	R: 37 G: 64 B: 143 #25408F
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Primary Palette

Secondary Palette

[WebAIM Color Contrast Checker](#)

[Colour Contrast Check](#)

[Vischeck](#) (colorblindness simulator)

**Use contrasting colors**

- [WNMU Faculty Resources Checklist](#)
- [WebAIM: Web Accessibility in Mind](#)
- [WebAIM Wave Evaluation Tool for Firefox](#)
- [W3C Web Content Accessibility Guidelines](#)

## **Accessibility Resources**



- Table header and row tags (Canvas doesn't recognize the code)
- Modify code for forms and other dynamic native features.
- A Canvas Accessibility Review by OCAD University.

**What we can't do in Canvas**

- **HTML 6** with native video management

**In the nearish future...**