Web Accessibility Basics

ATI Virtual Open House

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Today’s Agenda

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• Session will cover the following:
  • Importance of creating accessible websites
  • Implementing accessible websites/web-based applications, and
  • Basic tips for ensuring your social media is accessible
ATI’s Role...

- In addition to the provision of assistive technology resources, the ATI works to ensure equivalent access to ICT resources for individuals with different learning styles and abilities in the Mason community through:
  - Provision of alternate formats (textbooks, assessments)
  - Captioning/transcription
  - Web and document accessibility
  - Training
IMPORTANCE OF WEB ACCESSIBILITY
Since Oct. 2013, U.S. DOE’s Office of Civil Rights (OCR) has issued over 800 resolution agreements regarding digital accessibility in higher education, public school districts, library systems, etc., [OCR Search Letters & Agreements](#).
Collective Issues identified from complaints…

Instructional Resources

- Inaccessible E-Learning Technologies
  - Educational technologies (i.e., captions, documents, LMS, CMS, supplemental applications, polling, library databases, etc.)
  - Websites/non-academic web-based resources

- All involved students with sensory loss (i.e., blind, low vision, deaf, hard of hearing)

Websites

- ~95% of the issues are “hit-and-run” complaints (both nationally and in Virginia)

- Only a handful are based on a specific complaint from an individual with a disability that impacts instructional access (both nationally and in Virginia)

  - E.g., Registration systems, Events, Videos, Health services, etc.
WEB A11Y
SERVICES AND SUPPORT
@MASON
Web A11y Services & Supports

Mason Websites and web/based applications

Architecture Standards Review Board

Instructional Resources

Icons courtesy of Icons8
TOP 10
ACCESSIBILITY CHECKS
(WHAT ARE WE REVIEWING?)
Top 10 Accessibility Checks

• Unique Page Titles
• Alternative Text for Images
• Use of Color
• Keyboard Accessibility
• Meaningful Hyperlink Text
• Headings
• Forms
• Tables
• Documents (i.e., identifying formats on website)
• Multimedia (Audio/Video)
A FEW EXAMPLES…
Choose “Born Accessible” ICT products

Whenever possible, start with ICT resources that are accessible out of the box!
Example:
Library Databases (Full-text HTML, ReadSpeaker)

- Ability to translate text
- Downloadable mp3 file
- Built-in text-to-speech capability
- Text Highlighting

Also available as separate PDF
Example:
WordPress (Adding Alt Text)

Simple alt text

Long Descriptions (complex images like charts or graphs)
Use Meaningful Hyperlink Text

Hyperlinks should inform users where clicking the link will take them (WCAG 2.4.4).

• E.g., Using descriptive links, not URLs, “click here”, or “read more”
  • E.g., Use George Mason University Home Page as opposed to http://www.gmu.edu

Image taken from https://www.shutterstock.com/search/click+here+button
Example: Screen Reader Links List (e.g., Jaws)

Hard to tell the difference between purpose of one link vs. the other

Image taken from Best Practices in Accessible Online Design – CSU-Ohio
Use of Color

**Good color contrast** is defined as having a contrast ratio of 4.5:1 ([WCAG 1.4.3](https://www.w3.org/TR/ACCESSIBLE-DOCUMENTS/)).

This benefits individuals who may have colorblindness or those with low vision. It is also beneficial for drawing interest to important content.

- **Small text (~4.5:1)**
  - Orange (#FF5D00) on white
  - Purple (#CC21CC) white
  - Blue (#000063) on gray (#808080)
  - Red (#E60000) on yellow (#FFFF47)

- **Large text (~3:1)**
  - Gray (#949494) 18 point text on white
  - Purple (#C86ff1) 14 point + bold text on white

Image taken from [Web Accessibility 101: Color Contrast](https://www.w3.org/TR/ACCESSIBLE-DOCUMENTS/)
Colour Contrast Analyser (Paciello Group)

Works with all applications (desktop and web-based)
Example:
Colorblinding (Chrome Extension)

Works only in the Chrome browser

Image taken from Chrome Web Store
Example:
Web Disability Simulator (Chrome Extension)

Image taken from Chrome Web Store
When using tables, keep it simple

- **Table headers must be identified**
  - Screen readers use `<th>` tags and `scope` attributes to identify which cells in the table are row or column headers.

- **Make data predictable and easy to navigate** (i.e., one column row header, one row for column headers)

- When possible, **avoid using split or merged cells**
### Example:
Screen readers and tables (without markup)

<table>
<thead>
<tr>
<th>Dept. Code</th>
<th>Course #</th>
<th>Section</th>
<th>Max. Enrollment</th>
<th>Current Enrollment</th>
<th>Room Number</th>
<th>Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO</td>
<td>100</td>
<td>1</td>
<td>15</td>
<td>13</td>
<td>5</td>
<td>Mon, Wed, Fri</td>
</tr>
<tr>
<td>ENGL</td>
<td>200</td>
<td>2</td>
<td>15</td>
<td>7</td>
<td>8</td>
<td>Tues, Thurs</td>
</tr>
<tr>
<td>PSYCH</td>
<td>100</td>
<td>1</td>
<td>15</td>
<td>15</td>
<td>13</td>
<td>Wed</td>
</tr>
</tbody>
</table>

**Table Without Markup (Read Left-to-Right, Top-to-Bottom)**

Department Code, Class Number, Section, Max Enrollment, Current Enrollment, Room Number, Days, BIO, 100, 1, 15, 13, 5, Mon, Wed, Fri, ENGL, 200, 2, 15, 7, 8, Tues, Thurs, PSYCH, 100, 1, 15, 15, 13, Wed

Table adapted from [WebAIM: Creating Accessible Tables](https://webaim.org/techniques/tables/).
Example:
Screen readers and tables (without markup) cont.

Screen reader only accesses information from individual data cell

Table Without Markup (Read Left-to-Right, Top-to-Bottom)

Department Code, Class Number, Section, Max Enrollment, Current Enrollment, Room Number, Days, BIO, 100, 1, 15, 13, 5, Mon, Wed, Fri, ENGL, 200, 2, 15, 7, 8, Tues, Thurs, PSYCH, 100, 1, 15, 15, 13, Wed

Table adapted from WebAIM: Creating Accessible Tables
Example:
Screen readers and tables
(with `<th>` tags and scope attribute for column and rows)

Screen reader accesses information from **both** individual data cell and table headers.

<table>
<thead>
<tr>
<th>Department Code</th>
<th>Class Number</th>
<th>Section</th>
<th>Max Enrollment</th>
<th>Current Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGL</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table adapted from [WebAIM: Creating Accessible Tables](https://webaim.org/resources/accessible-tables/)
Tips for Social Media

• Follow best practices!
• Some basic considerations below…
  • Alternative text descriptions for images: Facebook, Twitter, LinkedIn, Instagram

• Multimedia accessibility
  • Add captions for video: Facebook, Twitter
  • Link to transcripts for audio

• Limit use of emoji’s
Next Steps

More Target Training Workshops in coming weeks…

**Web Accessibility**
- Using Automated Testing Tools (e.g., WAVE, ANDI, Colour Contrast Analyser)
- 5 Easy Fixes to Improve the Accessibility and Usability of your website
- Creating Accessible Social Media content

**Assistive Technology**
- Notetaking Strategies for Online Courses

**Document Accessibility**
- Making Word, PPT, and PDF Documents Accessible

**Multimedia**
- Live Captioning Solutions (using ASR)
To learn about our workshops…

ATI Website, [http://ati.gmu.edu](http://ati.gmu.edu)

Office of Provost Newsletter
- Starting June 10th

Direct Email
- Please email us at [ati@gmu.edu](mailto:ati@gmu.edu) if you would like us to contact you directly.
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