Effective Use of Assistive Technology

Part I

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Caveat

These materials are provided for informational purposes only and are not to be construed as legal advice. You should seek independent or house counsel to resolve the individualized legal issues that you are responsible for addressing. Further, any policy or procedure additions or revisions should be reviewed by your college’s legal counsel prior to implementation.
Effective Use of Accessible Technology – Part 1
Defining Assistive Technology

• Many people automatically think individuals with disabilities.

• **Assistive technology** is any kind of **technology** that can be used to enhance the functional independence ....
Understanding AT

• I like to think a simple definition of AT is: anything designed differently to make it easier to use by anyone.

• Understanding of AT is very similar to the definition of Universal Design: Universal design is a design concept that recognizes, respects, values and attempts to accommodate the broadest possible spectrum of human ability in the design of all products, environments and information systems.
AT or UD, which is it?

• It’s both!

• Finding ways to include assistive technology in the classroom while finding ways to integrate universal design within courses and University infrastructure.

• Why look at both?
Tools of the Trade: Assistive Technology and Creating Accessible Instructional Materials
Types of Impairment and Assistive Technology

- **Sensory** (Loss of vision, hearing, or both)
  - Screen readers and refreshable braille devices for people who are bling or have other print disabilities
  - Open or closed captioning for people who are deaf

- **Learning/Cognitive**
  - Tools for organizations

- **Physical**
  - Alternatives input tools, such as speech-to-text software, for people who cannot use a computer mouse
Read and Write Demo

• E.g. Imagine the possibilities if all students had access to technology like this, not just those with disabilities ….
Would you consider a robot AT?
Jaws Screen Reader Demo

• E.g., Navigating a Word Document (a screen reader user’s perspective)

Video courtesy of High Tech Center at Taft College:
https://www.youtube.com/watch?v=D8xFkGMF0sw
What exactly does Electronic and Information Technology (EIT) Accessibility ‘look’ like?

• Creating Accessible Instructional Materials (Demos and Examples)
  – Documents Accessibility (Word, PPT, PDF)
  – Web Accessibility
  – Supplemental applications (Web-based)
  – Video Accessibility
How Does Everything Tie Together?

Equal Access for Everyone!
Anatomy of an Accessible Document

Before and After Demo - Websites

• E.g., Improving a website using Web Content Accessibility Guidelines (WCAG) 2.0, http://www.w3.org/WAI/demos/bad/
Understanding Web Accessibility

• E.g., **Labeling Images/Graphics**
  – Graphics should have meaningful labels:
    • **E.g.,** “Photo of Secretary of Education Arne Duncan reading to children at Central Elementary School.”
    • **Not:** “Photo.jpg”
  • The labels can be visible to everyone, or they can be hidden in the programing of the web page. Designer’s choice!
Understanding Web Accessibility

• E.g., Using descriptive links, not URLs
  –Provide users with the proper context of where clicking the link will take them.

• E.g., Use George Mason University Home Page as opposed to http://www.gmu.edu
Understanding Web Accessibility

• E.g., Color Contrast
  – Meaningful information should be conveyed through more than just color.
  
  • E.g., Individuals unable to identify color would not know which fields were required. A simple fix is to add an asterisk(*) next to the required fields.
Understanding Web Accessibility

- E.g., Keyboard Navigation
  - Users should be able to “tab” through the page and get to all information and functions.
  - Pages should not require users to manipulate a mouse for navigation.
Web-based Tools – Films on Demand (Captions and Transcripts)

Captions

Interactive Transcript

Searchable Video Content
Video Accessibility

- Captioning
- Audio Description – Chemistry video
- Accessibility of Video Player
Creating Accessible Videos

• What’s involved in making videos accessible?
  – Providing captions for videos, transcripts for audio files, descriptive video (or audio description) for individuals with visual impairments
  – Be practical!

• Setting up a process...
  – Consider 3rd party vendors, in-house staffing, or a combination of the two.
  – E.g., For audio description, Outsource (3rd-party vendor) vs. In-house (YouDescribe)

• What platform will you use?
  – Video platform is important! E.g., Free (YouTube, Vimeo) vs. Paid (Panopto, Kaltura)
  – Are video player controls keyboard accessible? Free of keyboard traps? All features available? Interface with LMS?
  – Accessible Video Player example, http://www.accessibilityoz.com/ozplayer/
Creating Accessible Videos – Tips

• What about automatic captioning tools?
  – E.g. YouTube CAPTION FAIL – Jamaican Hoax Video,
    https://www.youtube.com/watch?v=23H8IdaS3tk
  – Takeaway? There is no cheap and easy fix!
<table>
<thead>
<tr>
<th></th>
<th>FY12*</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY 16 (so far)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Minutes</td>
<td>3,453</td>
<td>7,309</td>
<td>16,419</td>
<td>19,261</td>
<td>14,766</td>
</tr>
<tr>
<td>Total Hours</td>
<td>57.55</td>
<td>121.82</td>
<td>278.4</td>
<td>321</td>
<td>241</td>
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<tr>
<td>Total Jobs</td>
<td>195</td>
<td>371</td>
<td>1034</td>
<td>1296</td>
<td>876</td>
</tr>
<tr>
<td>Hours (Outsourced)</td>
<td>18.63</td>
<td>68.97</td>
<td>222.55</td>
<td>275.95</td>
<td>241</td>
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<td>Jobs (Outsourced)</td>
<td>24</td>
<td>177</td>
<td>901</td>
<td>1136</td>
<td>876</td>
</tr>
<tr>
<td>Avg. Cost/Min (Outsourced)</td>
<td>$2.94</td>
<td>$2.73</td>
<td>$2.35</td>
<td>$1.88</td>
<td>$1.39</td>
</tr>
<tr>
<td>Hours (In-house)*</td>
<td>38.92</td>
<td>52.85</td>
<td>51.1</td>
<td>45.05</td>
<td>2.68</td>
</tr>
<tr>
<td>Jobs (In-house)*</td>
<td>171</td>
<td>194</td>
<td>133</td>
<td>160</td>
<td>70</td>
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<tr>
<td>Total Costs (In-house)*</td>
<td>$13,723.45</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
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<tr>
<td>Avg. Cost/Min (In-house)*</td>
<td>$5.87</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
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<tr>
<td>Cost Savings</td>
<td>($6,858.55)*</td>
<td>$10,163.36</td>
<td>$13,420.31</td>
<td>$9,050.83</td>
<td>$7,180.02</td>
</tr>
</tbody>
</table>

*In FY12, all in-house work is attributed solely to grad students. That work is now shared amongst a number of Mason staff/faculty since FY13.
What the overall numbers show…

Completed Acc Media Requests

<table>
<thead>
<tr>
<th>Year</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16 (so far)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>147</td>
<td>337</td>
<td>1034</td>
<td>1296</td>
<td>877</td>
</tr>
</tbody>
</table>
What the breakdown shows

Compliance Breakdown vs Accommodation

- Compliance DE
  - FY 12: 23
  - FY 13: 133
  - FY 14: 990
  - FY 15: 64
  - FY 16 (so far): 17

- Compliance Web
  - FY 12: 17
  - FY 13: 12
  - FY 14: 40
  - FY 15: 24
  - FY 16 (so far): 226

- Accommodation
  - FY 12: 14
  - FY 13: 150
  - FY 14: 256
  - FY 15: 181
  - FY 16 (so far): 226
Improved Access to Library Resources

• How does this effect captioning?

Library purchases media databases as well as provide media to be loaned out. Captioning and audio description still come in as requests.

• Library established an **Accessibility Coordinator/Instruction Designer** position
  - Liaison between our office and library staff/resources

• This has led to:
  - Improved hand-off when captioning library resources
  - Improved coordination with Copyright Office
  - Informal process for review of library technology purchases – For example, helping library Procurement to ensure responsibility of captioning isn’t solely on Mason if a media database is purchased.
What the breakdowns show part 2

Breakdown of Delivery of Media File

<table>
<thead>
<tr>
<th></th>
<th>EMAIL</th>
<th>KALTURA</th>
<th>LIBRARY (DATABASES)</th>
<th>YOUTUBE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall #s</td>
<td>546</td>
<td>1326</td>
<td>26</td>
<td>1640</td>
</tr>
</tbody>
</table>
Document Accessibility
Scanning Documents

• Things you CAN do to help make it accessible.

• Scanning:
• Whether you have an electronic file or a hardcopy:
  – Use software that came with your scanner to import document—this will produce a TIFF file.
  – Save file

• What NOT to do ….

• Always use OCR
  Never assume that a copy is screen reader ready because it “looks” clean.
Converting Documents

• **OCR software** – open your scanned document with:
  – ABBYY Pro
  – Adobe Acrobat Pro
  – Read & Write Gold

• **Save to desired format(s)** – PDF, Word, RTF, Text etc.

• **Editing**
  – Some editing may be needed to assure accessibility
  – Depending on final format needed - editing can be performed through OCR software or Word.
Microsoft Built-In Accessibility Checker

When you go to file, you’ll see on the left side a “Check for Issues” and when selecting that you’ll find “Check Accessibility”

Adobe Reader Accessibility Features

• There are some helpful accessibility features in the free Adobe PDF reader. For example, any PDF file open in Adobe reader can be read aloud with the "Read Out Loud" option.

• Under the 'View' menu, select 'Read Out Loud', then 'Activate Read Outloud'.

• The Read Out Loud feature of Adobe Reader can be accessed with Keyboard Commands, as listed below.

  – Activate Read Out Loud: Shift + Ctrl + Y
  – Read This Page Only: Shift + Ctrl + V
  – Read To End of Document: Shift + Ctrl + B
  – Pause/Resume: Shift + Ctrl + C
  – Stop: Shift + Ctrl + E
Next Steps

• **Create Workflow**
  • Find key stakeholders (DE, Library, Instructional Designers, etc.)
  • Start or continuing tracking data such as websites, media, databases, etc. find new areas for tracking
  • All options on table!

• **Create campus buy-in**
  • Educate
  • Train targeted areas to help build allies
  • Locate and advertise everything accessibility in one place

• **Improve success**
  • Survey students and staff
  • Start or keep testing for accessibility

• **PART 2 IS COMING UP!**  Want to learn more about implementation of accessibility at a campus level? Join me at 3:30!
Questions and Answers

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Effective Use of Accessible Technology
Part II

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George Mason University

April 2016
Let’s look to see what we need to put the puzzle pieces together:

- Partnerships
- Training
- Marketing and Awareness

- Accessibility Plan
  - Policy and Procurement Language
  - Web Accessibility
  - Accessible Media
  - E-Learning
  - Student Services (AT and Universal Design)
It doesn’t matter where you start your focus, it is a continuation cycle that constantly helps meet the needs of all students.
Building Accessibility Into the Process

Policy
- Procedure
- Remdiation
- Procurement
- ASRB
- Vendor relationships
- IT Accessibility Committee

Web Accessibility
- Automated
- Manual Process
- Checklist
- Initiative
- Databases
- Procurement
- Gaps

Accessibility Plan
- Training
- Marketing
- Partnerships

Proactive
- Training
- Marketing
- Partnerships

E-Learning
- DE Audit
- Accessible Docs
- Supplemental Applications

Student Services n(Text)
- Process
- AT
- Universal Design
- RWG
- Self Scan
- Mobile Apps

Accessible Media
- Captioning
- Process
- Media Players

Reactive
- Training
- Marketing
- Partnerships

Proactive
- Training
- Marketing
- Partnerships

Accessibility Plan
- Training
- Marketing
- Partnerships

E-Learning
- DE Audit
- Accessible Docs
- Supplemental Applications

Student Services n(Text)
- Process
- AT
- Universal Design
- RWG
- Self Scan
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Accessible Media
- Captioning
- Process
- Media Players

Reactive
- Training
- Marketing
- Partnerships
Laying the Foundation: Building an Accessible Institution
What We Know...

Disability Rates in Higher Education

- Increasing # of SWDs enrolling in higher education (U.S. GAO, 2009).

- Greater variation in types of disabilities reported (Digest of Education Statistics, 2011).

- SWDs have lower participation and completion rates in higher education than their nondisabled peers (Mamiseishvili & Koch, 2011).

- Existing strategies for supporting SWDs in higher education rooted in “medical model” (Burgstahler, 2012).

Growing Role of Online Learning in Higher Education

- Increasing role of online learning in higher education (Allen & Seaman, 2013).

- Increasing adoption of newer and more innovative EIT (Kim, 2011).

- Inaccessible EIT can adversely impact the ability of a SWD to access course content (Bühler, Fisseler, & others, 2007; Fichten, Asuncion, Barile, Ferraro, & Wolforth, 2009).

- Growing number of legal challenges against higher education institutions for implementing inaccessible EIT.
Roadmap to Electronic Information Technology Accessibility (EITA)

It may be a slippery ride .......

Careful you don’t want to find yourself going the
Recent legal actions against higher education institutions related to the inaccessibility of information technology (IT) can serve to inform higher education institutions as to best practices and strategies for providing accessible IT in accordance with federal legislation.

The following promising practices are among those suggested by resolution agreements and settlements:

- Conduct an audit of the **accessibility of IT**, and develop a corrective action strategy to address problems identified in the audit.
- Set institutional standards relating to **accessible technology** and create a method to monitor compliance.
- Provide training and education about accessibility to anyone on campus who is responsible for creating or procuring **IT**, as well as those responsible for creating content.
- Institute procedures for addressing accessibility as a requirement within the procurement process.
- Provide and publicize a mechanism by which students, faculty, staff, and members of the public can report access barriers.
Definition of “Accessible”

OCR resolutions with the South Carolina Technical College System, University of Cincinnati and Youngstown State, all define “accessible” 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.

List of Topic Areas Covered, but not limited to …..

- Accessibility Audit and Corrective Action Strategy
- Policy
- Training and Education
- Procurement
- Websites
- Learning Management Systems
- Classroom Technologies (Podiums, Display Equipment, and “Clickers”)
- Banks and ATMs
- Grievance Procedure
- Captioning
- (My personal favorite) Ownership of Accessibility
Identify your Strategic Partnerships

Start with the obvious!

– How many students and faculty are registered with disabilities?
– What general support services do students and staff maximize overall? (Libraries, Writing or Tutoring Center, etc.)
– What offices are academic units are a MUST for students or staff to access? (Registrar, Admissions, HR, etc.)
– What groups design course, websites, other technology used throughout the school? (IT, Distance Education, Instructional Designers, Communications and Relations, Marketing, etc.)
– Getting on the schedule of Key Authority Administration (The Decision Makers and Money Shakers)

On our campus…

– Getting Started
  • Kellar Institute for Human disAbilities (KIHd)
– Ongoing
  • Disability Services (DS)
  • Information Technology Unit (ITU)
    – Online Learning Services
    – Instructional Design Team (ID)
  • University Libraries (UL)
  • Distance Education (DE)
Establishing a Framework

Budget/Prioritization
- Where is the money coming from?
- Whose managing the service?

How are you staffing the service?
- Disability Services
- ADA Coordinator
- HR

Infrastructure?
- Investing in Online Learning or Focus is F2F Learning? Consider using E-Learning to cover all aspects - Platforms (e.g., Blackboard, Desire2Learn, Canvas, etc.)
- Built-in tools (e.g., UDoIT by UCF)

Develop policies and procedures
- IT Accessibility, Procurement
- Procedures for various services (Accessible Text, Media, Web, Purchasing, Grievance, etc.)
- How will you handle outside policy and procedures such as Libraries, Bookstore, etc.?
Customizing a Framework

1. Setting an Institutional Goal – Getting Top Approach Buy In;
2. Set Specific Technical Standards – Section 508, WCAG 2.0, etc. areas that it covers;
3. Involve Accessibility in Procurement – New purchases and renewal contracts of existing purchases;
4. Continuing Coordination of EIT with Stakeholders – Ensuring communication and training across all levels;
5. Ensuring Compliance – Identify measurable, track, test, repeat!
6. Provide Notice - Improvement, Remediation, Grievance, etc.
Roles and Responsibilities within Mason’s Policy

The Senior Vice President, Provost, Vice President of Information Technology and CIO, or designee, will ensure that personnel responsible for electronic and information technology procurement, programs and services will possess the necessary technical knowledge related to accessibility standards. Refer to the Procedure documents for additional guidance on roles and responsibilities.

- **Deans, Directors, and Managers** will provide oversight of training and education of all staff and ensure compliance with federal and state laws, regulations, and Mason policies governing accessible technology.

- **Teaching Faculty** will ensure accessibility of instructional materials to allow for equally effective access for all faculty and students, as documented in the campus guidelines and plans for accessible technology.

- **Purchasing and Procurement** will ensure compliance with the guidelines for electronic and information technology procurement, including the acquisition of all technology with a user interface.

- **Developers and Content Managers** will ensure accessibility of campus web sites, web applications, and web content, as documented in the campus guidelines and plans for accessible technology.
Roles and Responsibilities: How are you involved with accessibility?

- Do you use Blackboard or another Learning Management System (LMS)?
- Do you use websites in class or for posting information?
- Do you create or post documents or videos online for class?
- Do you use technology (i.e., wikis, etc.) for your class assignments?
- Do you use visuals or play audio/video in the classroom that give important info pertaining to the class?
- Do you use webinars, or other classroom capture or conference technology or record your class for review?
Roles and Responsibilities: How are you involved with accessibility?

- When overseeing or working on projects do you integrate accessibility into the planning process?
- Do you train your staff on accessibility so it comes from a top-down approach?
- Do you influence or decide on technology purchases, if so have you considered accessibility?
- Do you oversee computer classroom settings, is it accessible?
- Do you develop Policies, procedures or guidelines for you offices or employees? If so, have you included accessibility?
- When creating committees, have you included someone from the ATI office to help with accessibility?
Roles and Responsibilities: How are you involved with accessibility?

- Do you influence or decide on technology purchases?
- Do you develop websites, applications or documents?
- Do you oversee computer classroom settings?
- Do you manage others who may work on the above mentioned?
- Do you work in multimedia or telecommunications?
- Do you use or help faculty use webinars, other classroom capture or conference technology?
If you answered “Yes” to any of these questions, you may be ......

- Posting,
- Distributing,
- Creating/Developing,
- Using,
- Maintaining ...... Inaccessible Information.

What can you do to make it accessible?
Roles and Responsibilities broken down on Website

The image contains a section about web accessibility, listing roles and responsibilities such as Research and Academic Faculty, Web Developers/Content Managers, Administrative Staff, Purchasing and Procurement, Students, and Web Accessibility Testing. It also mentions that everyone in the Mason community has some responsibility when it comes to accessible web content. The role of the ATI is to help understand one’s part and work collaboratively with units throughout the University to provide resources and training. The responsibility is to hold ourselves accountable to the standards in which we ask the Mason community to follow regarding web content and documents. The goal is to provide a university-wide awareness of what web accessibility is and how it may affect oneself, a student or a co-worker.
Un-Webbing the Web of Accessibility into an Enterprise Inclusion

- Breakdown of areas involving accessibility;
- Understanding needs
- Offering choices to meet needs
  - Corralling all faculty
  - Setting standards that stay relevant
  - Require approval; pick from authorized list?
- Working across functions
Setting Priorities

- New vs Old Purchases Procurement Policy in place helps draw a line for Legacy Systems.

- Institutions might wish to prioritize compliance initiatives targeting new websites and content with a commitment to improve access to existing and archived sites
  - This focuses on Websites, Documents, Videos, etc.
    - A number of resolution agreements target compliance in this manner
The Web of Accessibility

- Websites
- E-Learning
- Library
- Policy
- Documents
- Supplemental Material
- Videos
- Textbooks
- Training
- Content
- Design
- Procurement
- Databases
Accessibility Policy Included:

Mason is committed to maintaining a diverse and inclusive academic community, where all students are afforded the opportunity for a transformational learning experience. This commitment must and does include individuals with disabilities. Therefore, the **procurement, development, maintenance, and/or implementation of electronic and information technology** will conform to the accessibility standards specified in Section 508 of the Rehabilitation Act of 1973 and WCAG 2.0, appropriately tailored to the specific circumstances of the University. **All colleges, schools, departments, auxiliaries, research, and administrative entities that do not comply with the standards herein are responsible for any costs associated with remediating accessibility issues.**
Procurement

• Mason created an Architecture Standards Committee in 2008.
  – The Architecture and Standards Committee (ASC) is responsible for reviewing, verifying compliance and providing recommendations with regards to new/upgrade software or hardware procurement projects.

  – The ASRB is under the Architecture Standards Committee (ASC) and is responsible only for approving the beginning of a given project. This initial review will include an accessibility review by ATI and any other reviews necessary. At the ASRB’s discretion, changes in the architecture, design, security, accessibility, data access, or other elements can be required before approving a project.
ASRB Reviews from 2011 - today

![Bar chart showing the number of requests for ASRB reviews from 2011 to Spring 2015. The chart includes the following data points:
- Year 2011: 14
- Summer 2012: 16
- Fall 2012: 10
- Spring 2013: 12
- Summer 2013: 8
- Fall 2013: 6
- Spring 2014: 35
- Summer 2014: 16
- Fall 2014: 15
- Spring 2015: 29]
E.g., Sample Accessibility Language

- GMU’s Sample Accessibility language (RFP’s, contracts and contract addendums):
  All e-learning and information technology developed, purchased, upgraded or renewed by or for the use of George Mason University shall comply with all applicable University policies, Federal and State laws and regulations including but not limited to Section 508 of the Rehabilitation Act (29 U.S.C. 794d), the Information Technology Access Act, §§2.2-3500 through 2.2-3504 of the Code of Virginia, as amended, and all other regulations promulgated under Title II of The Americans with Disabilities Act which are applicable to all benefits, services, programs, and activities provided by or on behalf of the University. The Contractor shall also comply with the Web Content Accessibility Guidelines (WCAG) 2.0.

Is it necessary to be this specific??

Other accessibility language examples – [NCDAE](https://www.ncdae.org), [University of California](https://www.ucop.edu/accessibility/).
Web Accessibility - Testing Websites and Applications

• Where do I start?
• Do you have an automated testing application?
• Do you have students you could ask to test?
• Do you have a testing process?
• Minimum – ask for a VPAT (Voluntary Product Accessibility Template)
**E.g., VPAT**

<table>
<thead>
<tr>
<th>SECTION 1194.22 WEB-BASED INTERNET INFORMATION AND APPLICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Criteria</strong></td>
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<tr>
<td>(a) A text equivalent for every non-text element shall be</td>
</tr>
<tr>
<td>provided (e.g., via alt, longdesc, or</td>
</tr>
<tr>
<td>inline element content).</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>(b) Equivalent alternatives for any non-media presentation</td>
</tr>
<tr>
<td>shall be synchronized with the presentation.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Alt-text for images (i.e., non-text elements)

Taken from [http://udloncampus.cast.org/page/policy_template](http://udloncampus.cast.org/page/policy_template)
## E.g., VPAT Matrix (GMU)

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Software (stand alone and web)</th>
<th>Websites</th>
<th>Developed components</th>
<th>Telecommunications</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 508 1194.25</td>
<td>Section 508 1194.21</td>
<td>Section 508 1194.21</td>
<td>Use WCAG 2.0 as checklist during development</td>
<td>Section 508 1194.23</td>
<td>Please contact ATI</td>
</tr>
<tr>
<td>Section 508 1194.26</td>
<td>Section 508 1194.22</td>
<td>Section 508 1194.22</td>
<td></td>
<td></td>
<td>VOIP? Please refer to Software</td>
</tr>
<tr>
<td>Section 508 1194.31</td>
<td>Section 508 1194.31</td>
<td>Section 508 1194.31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section 508 1194.41</td>
<td>Section 508 1194.41</td>
<td>Section 508 1194.41</td>
<td>Use additional language – ATI must review prior to implementation</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>WCAG 2.0</strong></td>
<td><strong>WCAG 2.0</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Videos included? If so, Section 508 1194.24</td>
<td>Videos included? If so, Section 508 1194.24</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Automated Testing Tools

- SSB Bart’s AMP
- OzArt
- WAVE
- WAT Toolbar
- Chrome Color Contrast Analyzer
- Accessibility Evaluator for Firefox
- N-WAX (NHN Web Accessibility eXtension for Firefox)
Manual Testing Tools

• Standard QWERTY keyboard
• JAWS
• NVDA
• Supplemental tools: VoiceOver (Mac/iOS); Dragon Naturally Speaking

• Browsers typically used: I.E., Firefox, Chrome
• Supplemental browsers: Safari
Manual Testing Checklist Items

• Keyboard Access
• Links and Link Titles (Example: “Click Here”)
• Skip Navigation Link or Mechanism to skip to main content
• Logical Headings
• Table Headings
• Alt Text for Images
• Form Fields & Labels (Error Messages on Forms)

• For a complete listing of errors we commonly see visit: ATI Web Accessibility – Roles and Responsibilities – Web Developers
Web Accessibility Reviews

Number of Reviews vs. Year or Semester

- Automated
- Manual

Year or Semester:
- 2010
- 2011
- Spring 2012
- Summer 2012
- Fall 2012
- Spring 2013
- Summer 2013
- Fall 2013
- Spring 2014
- Summer 2014
- Fall 2014
- Spring 2015
INTEGRATING ACCESSIBILITY INTO THE ONLINE COURSE DEVELOPMENT PROCESS
Things to help with accessibility

- Keyword searching.
- Ability to browse topics.
- Intuitive interface.
- Content optimized (OCR)
- Quick information retrieval.
- Good indexing (Metadata)
Baseline Design Considerations for Online Courses

• Visual:
  – Provide alternative text descriptions for all meaningful graphics (images, charts, graphs, SmartArt, objects)
  – Provide descriptions for videos where visual content is important to understanding subject matter.
  – Use styles in Office documents, headers to mark-up tables or frames (for websites)
  – Choose applications that support keyboard navigation and are compatible with screen readers

• Hearing:
  – Provide captions for all videos
  – For audio, provide transcripts

• Cognitive, Neurological:
  – Use consistent navigation, tab order, appropriate language level
Areas where Accessibility May Apply

- Obtaining information
  - E-Reserves
  - Databases
  - Audio and Video
  - Books (hard copy and electronic)

- Web-based material
  - Websites
  - Applications
  - Bibliography Software

- Procurement
  - Library has its own
How do Libraries apply?

Therefore, all libraries need to comply with Section 508's requirements for accessibility of public information technologies for both their patrons and their employees.

What is an "accessible" information technology?

Technology with a user interface that is accessible to individuals with disabilities. It can be used through a variety of senses and does not depend on one mode of use. For example, a system that provides output only in audio format would not be accessible to people with hearing loss, and a system that requires mouse actions to navigate would not be accessible to individuals who cannot use a mouse because of a dexterity or visual disability.
E-Learning Courses

Which also ties in Video and Documents
Includes a review of the following areas:

1. Syllabus and Course Readings
2. Bb Learn
3. Word
4. PPT
5. PDF
6. Multimedia
7. Supplemental Applications

The following checklist verifies that the instructional documents, audio, and video content used in Mason’s distance education courses are in accordance with Section 508 and WCAG 2.0 Level AA accessibility guidelines. While not a comprehensive review of all the areas covered by these guidelines, this checklist does examine areas that would have the most significant impact on the ability of assistive technology users to independently access their instructional materials (e.g., alt text, keyboard navigation, captions, transcripts, etc.).

PLEASE NOTE: This is NOT a comprehensive review of the accessibility of the faculty member’s course. The reviewers will examine snapshots (i.e., Course readings, LMS layout/structure, 2-3 documents of each type – i.e., Word/PDF/PPT, 2-3 videos, and supplemental applications) of the elements highlighted in the table below and provide feedback/guidance to the instructor on how to correct any accessibility issues that are identified.

UNDERSTANDING THE REVIEW PROCESS:
Reviewers examined selected examples of the elements highlighted in the attached checklist (i.e., course readings, LMS layout/structure, 2-3 documents of each type – i.e., Word/PDF/PPT, 2-3 videos, and supplemental applications) and provided feedback and resources for the instructor on how best to remediate any accessibility issues that were identified.

Tools used for testing accessibility:
Website Accessibility Reviews – WAVE Toolbar
MS Office Accessibility Reviews – Built-in MS Office Accessibility Checker

<table>
<thead>
<tr>
<th>0.0 – Syllabus and Textbooks/Course Readings (Required and Supplemental)</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID</td>
<td>Textbooks/Course Readings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.1</td>
<td>Is an electronic equivalent provided for all print reading materials?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.2</td>
<td>Do all web articles/readings have a PDF/Word version available?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Syllabus</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>0.3</td>
<td>Course syllabus includes disability statement?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.4</td>
<td>Instructor offers multiple formats/options for</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Sample – ATI Course Evaluation Document

Includes the following:

• Priority Recommendations and Resources
• Understanding the Review Process (i.e., testing tools used and process)
• Findings

ATI Course Accessibility Evaluation

As a part of the Office of Distance Education’s Open Call Course Portfolio Review process, the instructional materials used in your course (i.e., documents, audio, video, websites, and web applications) were examined to determine if they are accessible and usable by Mason students, including those with disabilities, in accordance with University Policy 1308.

This is not a comprehensive evaluation of all the areas covered by this policy; rather this review focuses on those areas that have traditionally had the most significant impact on the ability of students with disabilities to independently access instructional materials (e.g., alternative text descriptions, keyboard navigation, captions, transcripts, etc.).

**COURSE:**

Term: Spring 2015
Professor: 
Course Evaluated: 
Course Reviewer: 

**PRIORITY RECOMMENDATIONS and RESOURCES:**

<table>
<thead>
<tr>
<th>Priority Issue</th>
<th>Action Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensure all course videos have synchronized captions and/or transcripts.</td>
<td>Go to the ATI’s Accessible Media Request page for information on requesting this service.</td>
</tr>
<tr>
<td>Ensure all course videos are streamed through an accessible video playback platform (i.e., Kaltura, YouTube).</td>
<td>Upload course videos using the &quot;Kaltura My Media&quot; link in MyMason/Courses Tab. For assistance, contact the ATI Office and/or Learning Support Services.</td>
</tr>
</tbody>
</table>
Visit ATI Website: Creating Accessible Documents |
DE Course Review Findings

- Not having various Syllabus formats: 13%
- Improper Hyperlink Text: 17%
- Word Inaccessible: 13%
- PDF Inaccessible: 8%
- PPT Inaccessible: 7%
- Video Platform Inaccessible: 4%
- Videos not captioned and/or transcribed: 15%
- Unused tools Hidden: 9%
- BB Course Structure: 1%
- 3rd Party Supplemental App/Websites: 13%

(Chart shows the distribution of issues found in DE courses.)
Training and “Marketing”

- You can’t “sell” accessibility – but you can “share” information that could make it easier for everyone:
Additional Resources to Consider

• Web Compliance
  – Ex: NC State Global Accessibility Awareness Day Website Challenge

• Policy
  – Ex: Example policies in higher education

• Procurement
  – Ex: George Mason University Procurement – ASC Review Board

• Training/Awareness
  – Ex: University of Wisconsin-Madison Web Accessibility 101

• Buy-In
  – Ex: Are you the next example?
Questions and Answers

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