

# An Introduction to Web Accessibility and Resources

Presented by

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# Illinois Center for Specialized Professional Support



The Illinois Center for Specialized Professional Support (ICSPS) creates, supports, and delivers professional development for career and technical education professionals across Illinois. ICSPS provides technical assistance, develops publications, and facilitates program improvement strategies for our partners as they relate to college transition and access. ICSPS also has an expertise in civil rights issues in the secondary and postsecondary education systems.

ICSPS assists the Illinois Community College Board and the Illinois State Board of Education in conducting civil rights compliance reviews.

# Introduction to Accessibility for Online and Electronic Media

- Creating accessible content requires consideration of users with a wide range of disabilities including: visual, auditory, physical, speech, cognitive, language, learning, and neurological disabilities.
- People with disabilities may make use of user agents (devices that allow users to access content) ranging from standard features on web browsers and media players to complex assistive technologies.

## Common Onboard Accessibility features:

- Screen magnification
- Screen readers and voice recorders (MS Office)
- Sticky Keys (allows for one hand keyboard operation)
- Ability to disengage page style sheet.

## Examples of assistive technology:

- Text-to-speech software
- Audio recording devices
- Screen Magnification programs
- Closed Captioning
- Screen navigation devices

# Introduction:

## World Wide Web Consortium's (W3C) 4 Principles of Accessibility

- **Perceivable** - Information and user interface components must be presentable to all users in ways they can perceive. They cannot be invisible.
- **Operable** - User interface components and navigation must be operable. the interface cannot require interaction that a user cannot perform
- **Understandable** - Information and the operation of user interface must be understandable.
- **Robust** - Content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies.  
(as technologies and user agents evolve, the content should remain accessible)

# Guidance and Standards

- Section 504 of the Rehabilitation Act
- Section 508 of the Rehabilitation Act
- Americans with Disabilities Act
- Illinois Information Technology Accessibility Act (2.0 took effect January, 2018)
- WCAG 2.0: provides web content accessibility guidelines that go beyond the legislative requirements and provide a series of best practices, Level AA practices are considered the standard for compliance under the IITAA.
- IITAA Specifically defines the a range of disabilities that must be accommodated and includes: People with Limited Vision, People who are Blind, People with Hearing Loss, People who are Deaf, People with Limited Speech, People with No Speech, People with No Speech, People with No Reach or Touch

# Guidance and Standards Resources

- WC3 Standards: <https://www.w3.org/standards/>
- IITAA – Also contains an FAQ  
<http://www.dhs.state.il.us/page.aspx?item=32765>
- 508 Standards  
<https://webaim.org/standards/508/checklist>
- ICSPS Standards archived webinar – A full description and explanation of Section 504 of the rehabilitation act.  
<https://icsps.illinoisstate.edu/2016/08/electronic-and-web-accessibility-webinar-series/>

# Basic concepts of Document Accessibility

Accessibility rules apply to all posted content that appears on a website. All documents should be constructed so they are navigable by assistive technology.

Several factors to consider are listed below:

- Equivalent Text must be provided for all nontext elements – this applies to tables, pictures, graphs, charts, and multimedia (through alt text, captioning, alternate accessible formats, or other elements).
- Color should not be used as the only means of conveying information.
- Ensure fillable forms are accessible by assistive technology.
- Lists and heading structure makes documents much easier to navigate using assistive technology. Most software has pre-created heading tag styles. If you use these do not skip heading levels.
- Some programs cannot be made fully accessible. For example, fillable forms on a MS word document cannot be accessible. For any PDF to be accessible it must be have tags enabled.
- Accessible alternatives are permissible but should be avoided unless absolutely necessary.
- Reference the standards for specifics.

# Basic Concepts of Document Accessibility Continued

Always check the following elements for accessibility:

- Headings and Structure
- Reading Order
- Images
- Tables
- Lists

When creating a PDF from another program save the document with structure tags enabled:

- Located under the “File” menu – Save As– More Options– PDF from drop down – Options –check Document Structure Tags for Accessibility
- Without this enabled PDFs of this content cannot be made accessible and accessibility features build into word will not be present.

Checklists and tutorials for creating accessible documents can be found at the following pages:

ICSPS Web Accessibility Resources:

<https://icsps.illinoisstate.edu/2016/08/electronic-and-web-accessibility-webinar-series/>

U.S. General Service Administration:

<https://www.gsa.gov/about-us/organization/office-of-the-chief-information-officer/office-of-deputy-cio/office-of-enterprise-planning-and-governance/accessibility-and-section-508/gsa-508-tutorials-guidance-checklists>



# Making Accessible PowerPoint Presentations

## Basic Steps:

- Use built-in slide layouts
- Add Alt text to all images and tables
- Use accessibility check before delivering content.
- Fill out document properties identifying author and title before saving
- Save with tags

## Advanced Features

- Built-in list formatting
- Page numbering
- Tables and charts
- Group complex images
- Touch-up reading order
- Conversion to accessible PDF



# Accessible Slide Example

Figure 1: Section of Department Schedule

Department Code	Class Number	Section
Bio	101	A
Bio	101	B
Bio	201	A
Chem	101	A
Chem	101	B

Accessible features used:

1. Slide layout
2. Alt text
3. List formatting
4. Table formatting
5. Page numbering

Figure 2: Student Enrollment by course.

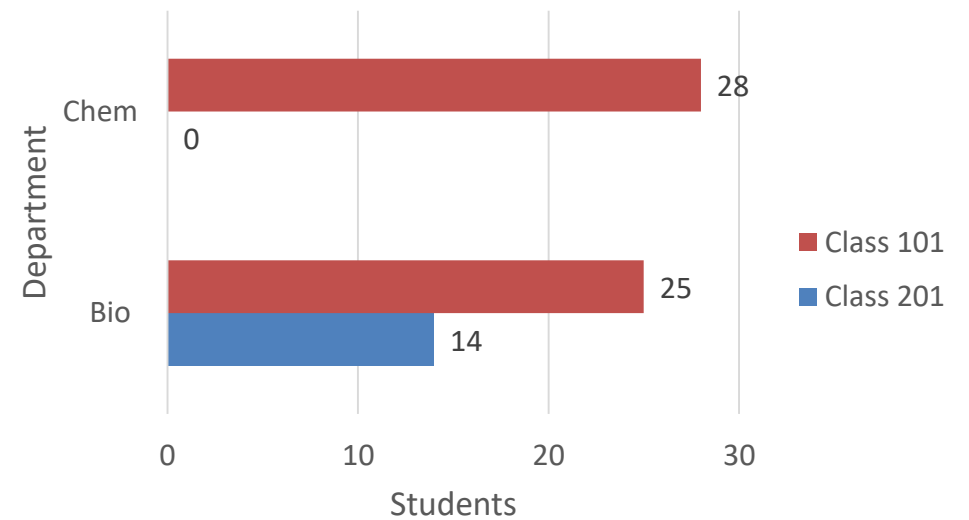
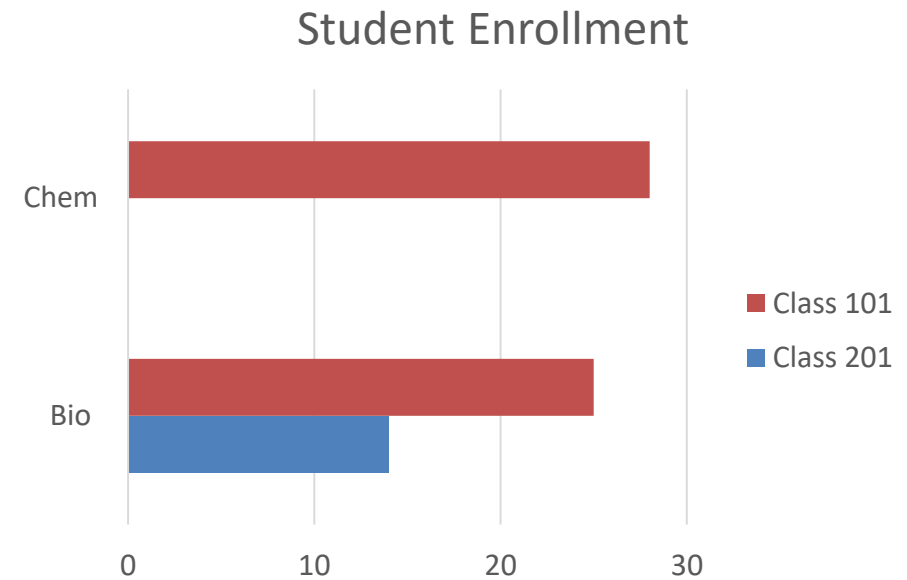


Figure 2 information :Student Enrollment by course  
Bio 101 = 25 Students;  
Bio 102 = 14 Student;  
Chem 101 = 28 Students

# Inaccessible Slide

Department Code	Class Number	Section
Bio	101	A
		B
	102	A
		B
Chem	101	A
		B



## Inaccessible formatting

1. Slide layout
2. Complex table
3. No alt text or explanation of chart data
4. Lists manually entered
5. Page number added with text box

# Accessibility in Other MS Office Documents

- Follow the same basic rules for all forms of MS Office.
- User Interfaces Have Parallel Designs to create a consistent user experience.
- If you cannot find a menu use the search feature.

## Unique Issues

Excel: Tables must be created using the table feature.

- Do not simply create a table using the default cell layout because it will lack structure tags.

Word: heading text and column formats to provide tagging in the document to assist navigation by assistive technology.

- Use the navigation pane to check heading tags in your document, and turn on style pane to see formatting mark up.
- You can modify the look of these heading formats.
- Columns provide proper structure that textual areas made by manipulating spaces lacks
- Turn off auto-hyphenation
- Place graphics “In-line with text”

# PDF accessibility

## PDF Accessibility Checker

- Located under the “Advanced” menu – Accessibility – Quick Check
- Checks alt tags, structural elements, contrast ratios, and other accessibility issues and prompts directs you on how to fix them.

## Touchup Reading Order

- Located under the “advanced” menu – Accessibility – Touchup Reading Order
- Allows you to edit reading order of text for a text reader. Order usually set by order in which content was created, not by logical structure.

## Touch Up Object

- Located under the “tools” menu – Advanced Editing - Touch Up Object
- Allows adjustment of images, their alt text, and tags.

# When in Doubt, Self-Assess

Using Automated Accessibility Checkers is the most efficient form of checking the accessibility of a website or document.

- Free Accessibility Checkers for Websites
  - Wave- Web Accessibility Evaluation Tool: <http://wave.webaim.org/>
    - Identifies potential issues and creates a visual markup of your site to highlight where problems occur.
    - Identifies structural elements that may be problematic, but will require closer examination.
  - Many other options. Resource list at <https://www.w3.org/WAI/ER/tools/>
- Onboard Tools for MS Office: Accessibility Checker
  - Located under the “File” menu – Info – Check for Issues – Check Accessibility
  - Checks alt tags, structural elements, contrast ratios, and other accessibility issues and prompts directs you on how to fix them.
- Onboard Tools for Adobe:
  - PDF Accessibility Checker
    - Located under the “Advanced” menu – Accessibility – Quick Check
    - Checks alt tags, structural elements, contrast ratios, and other accessibility issues and prompts directs you on how to fix them.
  - Touchup Reading Order
    - Located under the “advanced” menu – Accessibility – Touchup Reading Order
    - Allows you to edit reading order of text for a text reader. Order usually set by order in which content was created, not by logical structure.
  - Touch Up Object
    - Located under the “tools” menu – Advanced Editing - Touch Up Object
    - Allows adjustment of images, their alt text, and tags.

# Available recourses

ICSPS Web Accessibility Resources: Full walkthrough of accessibility requirements, checklists, tutorials, and other resources.

<https://icsps.illinoisstate.edu/2016/08/electronic-and-web-accessibility-webinar-series/>

U.S. General Service Administration: Extensive Resource List

<https://www.gsa.gov/about-us/organization/office-of-the-chief-information-officer/office-of-deputy-cio/office-of-enterprise-planning-and-governance/accessibility-and-section-508/gsa-508-tutorials-guidance-checklists>

WebAIM: Comprehensive resources for web accessibility

<https://webaim.org/>

World Wide Web Consortium: WCAG Standards, explanations of specific issues, and best practices

<https://www.w3.org/WAI/standards-guidelines/wcag/>

# Questions?

**Q:** What should be included in alt text descriptions?

**A:** As a general guideline, consider what you might say if you were reading the web page to someone over the telephone. Do not include unnecessary words such as "image of" or "graphic of." Specifically:

- For images that contain words or letters - use alternate text that includes the same words or letters.
- For image links - use alternate text that identifies the link's destination or function. Do not include the words "link to." Provide an alt text description for every separate image in an image map.
- For images that are invisible, purely decorative, do not convey meaning, or are completely redundant with text that is on screen - use alt="" (empty string) to indicate that the image can be ignored by a screen reader.
- For CAPTCHA images, use alt text to indicate that the image is being used for CAPTCHA and provide an alternative test in a non-visual medium (e.g., an audio file).
- When using alt text for complex images or graphs only provide a concise description that functions as a name.
  - Present a full description of a meaningful image either on the page on which the image appears or through a link immediately preceding or following the image.



Q: What requirements exist for captioning of video material and presentations? When is closed-captioning sufficient and when are descriptive texts needed?

A: Synchronized captions are required for all multimedia containing both essential audio and video. A text-based transcript may be provided in cases in which no essential video is presented (example: a person standing and delivering a message, or a PowerPoint presentation in which an accessible version of the presentation document is also provide).

Audio description refers to a process in which important visuals are described during pauses in the regular dialogue. Many speech-intensive events, such as speeches, lectures, or conferences, do not contain essential video and, therefore, do not need audio description. When necessary, audio descriptions are usually best implemented by a professional "audio describer." Carefully consider if the multimedia contains essential information in the form of visuals that is not provided through other audio means. If so audio descriptions may be needed.

Q: What are some guidelines for formatting word documents, spreadsheets, or minutes. Specifically related to general information not related to instruction.

A: As a public institution any documents you provide to the public or post online should be accessible. Open Meetings Act requirements also require compliance with the IITAA. More specific information on how to create documents in specific programs can be found at the resources provided in this slideshow, however, as a rule use built in features like styles, headings, and list tools to improve accessibility. Spreadsheets should meet the requirements laid out for all other documents. For specific information on how to make changes in MS excel visit [support.office.com](http://support.office.com) and search excel accessibility.

Q: How do you fix tables, charts, graphs to become ADA compliant.

A: Processes vary by program, please see the resources provided in this slideshow for specific guidance.

Q:What do you do when a document acts like it can't be checked for ADA compliance. I have seen that on some of our power points.

A: In general, PowerPoint Documents can't be accessible. They should be converted to PDF and then have the accessibility altered in that format. To edit accessibility of a PDF you will need an upgraded version of a PDF software (For example: Adobe Acrobat Pro). The same idea will apply for anything that cannot be checked for accessibility unless you are confident enough to check the features or coding yourself.

Recommendation: MS office has an accessibility tab add-on that can be downloaded for some versions of MS products that makes converting old files to more accessible file types easier. Search for it at Microsoft Garage.

Q: Who bears responsibility for providing the alternative formats for accommodations, the college or the publisher?

A: The college. This requirement is specifically spelled out in legislation and no such requirements are placed on the publisher. However, many publishers will provide accessible formats if requested. And this number is increasing.

Comment: I produced screen-capture videos for each unit/chapter of my Online class this past spring. I have started to edit the first video to provide text for the hearing-impaired. I'm a slow typist and I could see that this would not be complete by the proposed deadline. The option I'm faced with presently is to block the videos and go back to the old tests I gave.

Q: I completely sympathize. Captioning is a time intensive and difficult process. I would recommend you do not resort to such an extreme dichotomy. There may be other ways to achieve accessibility or provide accommodations. Coordinating with disability services is a good place to start, but if no solution can be found Please reach out to me directly. With more information we may be able to find other options. ICSPS is here to help!

Comment: I want to produce videos for my online class but don't want to invest that time if I'm not going to be able to use them due to lack of captioning/ADA compliance.

A: You are required to provide accessible versions of multimedia if requested as an approved accommodation. Additionally, captioning may provide benefits for students without a documented disability. If time is an issue, there are paid captioning services available and many hosting services are available that provide auto captioning. But you are responsible for the accuracy of those captions and court decisions have deemed auto captions without corrections insufficient for providing accessibility.

Q: Do you have any suggestions for help or software to make this go faster? Is there someone who could type the words for the video?

A: Paid services are available. As are programs that make the process more user-friendly. However, generally caption creation is a time-intensive process. Additionally, creating a caption file and merging it to a saved video can be difficult due to the variety of formats that exist in both files.

Q: Kurzweil and JAWS assistance.

A: Questions related to a particular piece of technology or program should be directed to their manufacture or to specialists in assistive technology. If you don't know who to contact or cannot find assistance contact me directly and I can help get you in touch with experts. The following two links are organizations that specialized in assistive technology or provide resources related to interfacing with assistive technology.

<https://www.iltech.org/>

<http://www.adagreatlakes.org/>



Q: How do we provide accommodations for blind student's when using presentation software in class?

A: Providing accommodations for blind students in class require the ability to present visual information in nonvisual ways. Often this requirement can be met by using Universal Design for Learners strategies in the classroom. An awareness of communication methods and an intentional effort to provide verbal explanations of visual material may be all that is needed. Disability services should be your main point of contact as they are the unit that engages in the collaborative process of identifying accommodations needed on an individual basis. Archived material can be more difficult to make accessible and requires proper construction to ensure accessibility. You are allowed to ask students if they are having difficulty interacting with information you provided.

Q: Where do I start?

A: Attending a training session will be the most valuable thing you can do because hands on experience will likely increase the salience of the information. You can also check the resources at <https://icsps.illinoisstate.edu/2016/08/electronic-and-web-accessibility-webinar-series/>

If you get stuck feel free to call or email me at the contact listed on the next slide.

# Thank You for Your Participation!



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