MAKING CONTENT ACCESSIBLE:

✓ WEBSITES
✓ PDFs
✓ SOCIAL MEDIA
✓ VIDEO CAPTIONING

Learn more at: cuny.edu/accessibility
MAKING CONTENT ACCESSIBLE:

Anyone developing content (text, images, video, etc.) for online publications or systems should ensure that all the necessary elements are provided to make the content accessible to people with disabilities, including blind, low vision, deaf, and hard of hearing users.

Approximately 9,000 CUNY students self-identify as having a disability. This is thought to represent only about half of the CUNY student population with disabilities. To create an inclusive experience for all users, it is helpful to understand the ways in which different disability types need to access content and what you can do to make your content more accessible to them.

- **Visual Disabilities**
  Blind and low vision users rely on keyboard-only navigation, the use of screen reader technology, and/or screen enlargements. Access to information is dependent on: sizable fonts, good color contrast, well-structured websites that label all graphics, icons, buttons, and multimedia; and using web standards for coding tables, forms, and frames.

- **Hearing Disabilities**
  Deaf and hard-of-hearing users can access multimedia content (video and audio) if captions and transcripts are available. For video content that also has audio without captions or transcripts, only the visual content is accessible. A transcript is the only way to make video or audio content accessible to someone who is both deaf and blind.

- **Motor Disabilities**
  Users with limited mobility are likely to use only a mouse, keyboard, voice or other inputs to navigate the web. Websites developed with multiple input options are more accessible to these individuals. Mouse-only or keyboard-only control requirements will create a barrier for some of these individuals.

- **Cognitive Disabilities**
  Users with cognitive disabilities rely on clear structure, consistent and predictable forms, buttons, links, and other functions.

Learn more about *How People with Disabilities Use the Web* [https://www.w3.org/WAI/intro/people-use-web/diversity](https://www.w3.org/WAI/intro/people-use-web/diversity)
WEBSITES

Web accessibility means that people with disabilities can perceive, understand, navigate, and interact with the Web, and that they can contribute to the Web.

The World Wide Web Consortium (W3C) Web Accessibility Initiative (WAI) develops guidelines widely regarded as the international standard, and provides materials to help understand and implement Web accessibility. The current guidelines are Web Content Accessibility Guidelines (WCAG) 2.0 are available at: https://www.w3.org/WAI/intro/wcag.php

<table>
<thead>
<tr>
<th>Document Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users should always know where they are within your site. The title is the first thing read by a screen reader, and shows in the browser tab for all users. Heading tags tell screen readers which content is most important on a given page.</td>
</tr>
</tbody>
</table>

  • Every page should have a unique <Title>. Use Heading tags to structure your page, not just for styling.

  • Use the <Title> element. Use headings <h1>, <h2-h6> in descending order based upon the structure of your page.

<table>
<thead>
<tr>
<th>Keyboard- Visible Focus and Access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users who do not use a mouse depend on visible focus to determine where they are on the page. They also depend on proper code to access everything on your site.</td>
</tr>
</tbody>
</table>

  • Ensure visible keyboard focus indication for all interactive elements. Ensure keyboard access to all elements on your page.

  • Ensure all elements use the default focus indicator or have a visible :focus style in your css. Put aside your mouse- can you easily follow and access everything on your site using the TAB and arrow keys?
Alternative Text for Images

Alternative text (Alt Text) is read by screen readers in place of images allowing the content and function of the image to be accessible to those with visual or certain cognitive disabilities. It is displayed in place of the image in browsers if the image file is not loaded or when the user has chosen not to view images.

- ALL images must have Alt Text that describe the information or function represented by the images in the alt attribute. Null <alt> “” is appropriate for decorative images.

- Alternative text is usually presented within the <alt> attribute of the <img> element.

Links

Links without accessible names are read by screen readers as “link”, with no indication where the link will take the user. Users of assistive technology will often scan through a list of links on a webpage.

- Each <a> element MUST contain an accessible name. Use descriptive hypertext links, avoiding URLs, “click here”, or “more” where possible.

- Add link text; an <img> element with an <alt> attribute; <ARIA-Label>; or <Title> attribute.

Color Contrast

Items without sufficient color contrast are difficult for color blind and low vision users. They also can be difficult to see using a mobile device in the sun.

- Ensure that foreground and background colors have enough contrast.

- Use a color contrast analyzer to ensure that regular text has a 4.5:1 contrast with background.
| Labeling Form Fields |
Associated Labels allow screen reader users to determine what data the form field is requesting. They also enlarge the target area by allowing the user to select the Label to activate the field. This is especially useful for small radio buttons and checkboxes on mobile.

- Most `<input>` elements, as well as the `<select>` and `<textarea>` elements, need an associated `<label>` element that states the purpose.

- Use the `<label>` element, with the `<for>` attribute of the `<label>` matching the `<id>` of the input field.

| Tables |
Screen readers need column and row headers to associate data cells with the proper description. Screen readers will read multi-row/column layout tables as data tables, unless role=”presentation” is used.

- Tables are for presenting data and require headers to label their data. If you must use layout tables with multiple rows/columns, they should have role=”presentation”.

- Use `<th>` for column and row headers in data tables.

| Zoom on Mobile |
Many users find text and other content too small on mobile devices.

- Do not disable pinch to zoom or place a maximum on the zoom level. Let the user decide what they need.

- Avoid maximum-scale=x, and user-scalable=0

For more details and information visit:
http://www2.cuny.edu/accessibility/content/websites/
PDFs

Properly designed HTML is the most accessible format. PDF files are the most difficult to make accessible. It is recommended to use or link to PDF only when you cannot use HTML or Microsoft Office files.

PDF tags provide a hidden structured, textual representation of the PDF content that is presented to screen readers. They exist for accessibility purposes only and have no visible effect on the PDF file.

The minimum requirements for a PDF document to be accessible include:

• It has to be searchable text and not an “image-only” PDF. You know you have searchable text if you can select document text with your mouse.

• It has to be “tagged” with hidden labels (“tags”) that describe the structure of the document so that it reads in the correct order with a screen reader.

• Charts and images in a PDF require Alternate Text.

• All PDF files should have descriptive Titles in their Properties.

Microsoft Word to PDF

Keep this in mind if you must convert a Word document to PDF:

• Prep the Word document first so that it is accessible using the step by step guide at: http://www2.cuny.edu/accessibility/content/pdf-microsoft/
• Then, if needed, convert it to a PDF.
• If a document needs significant remediation, it is generally easier to remediate the source file within Word than to work with the PDF.
Adobe Acrobat Pro/DC

PDF remediation requires Adobe Acrobat Pro/DC, not Acrobat Reader. All CUNY staff and faculty can request Adobe Acrobat Pro/DC from their IT department.

If you created a PDF from a scanned document you must convert the scanned images of text to searchable content using Optical Character Recognition, and then add tags using Adobe Acrobat’s Autotag feature.

Other features of an accessible PDF include Navigational Aids (table of contents or bookmarks for longer documents), and non-interference with assistive technology. Run Adobe’s Accessibility Checker to catch any other accessibility issues.

Using Adobe Acrobat Pro/DC:
› Open Tools --> Accessibility
› Select Full Check --> Start Checking
› Review Accessibility Checker results
› Select any Issues and right click for additional information.
› Fix as needed, there is no automated solution to make PDFs accessible.

Learn more by taking a detailed tutorial on Creating Accessible PDF with Adobe Acrobat Pro XI at: https://www.section508.va.gov/support/tutorials/pdf/index.asp

Instructions on how to Create and Verify PDF Accessibility are available by Adobe at: https://helpx.adobe.com/acrobat/using/create-verify-pdf-accessibility.html

For more details and information visit: http://www2.cuny.edu/accessibility/content/pdf-microsoft/
PDFs continued

List of Best Practices

• All documents must have descriptive titles.
• Sans serif fonts such as Arial, Helvetica or Verdana work best on screens. Use 12 point or larger.
• If you created a PDF from a scanned document you must convert the scanned images of text to searchable content using optical character recognition.
• The most basic requirement for a PDF document to be accessible is for it to be searchable text and “tagged” with hidden labels (“tags”) that describe the structure of the document.
• Use headings to structure and organize your document. Ensure that all heading styles are applied in a hierarchical manner. Only use headings with a name of Heading 1, Heading 2, etc.
• Include Alt Text for images, tables, and charts and graphs. Also include captions for charts and graphs.
• Do not format images and other objects as floating. Format objects as “In Line with Text”.
• Keep tables simple — do not use nested tables. Do not use tables for layout. Include column headings for tables and specify a header row for tables. Do not split or merge cells, rows, or columns.
• Do not use tabs or spaces to create columns. Instead, use the Page Layout/Columns feature of your software.
• Use descriptive hypertext links.
• Use bulleted and numeric lists for related items.
• Include a table of contents for long documents (which Word can generate if you use styles).
• Avoid watermarks. If you must use one, make sure that the information it contains is also included elsewhere in the document.
• Be cautious as to the colors you choose. Some colors and color combinations can be difficult to read, especially for someone who has color blindness. Provide sufficient color contrast. Also, do not use color to solely convey meaning.
• Include closed captions or transcripts for any audio or video elements.
SOCIAL MEDIA

Social Media platforms are now indispensable tools to reach our wider community, unfortunately they are not accessible on their own. Content owners are responsible to ensure that any material posted on third party software such as: Facebook, Twitter, Instagram and others are accessible.

The general requirements include:
• Contact information in the form of a website, email, phone number or by direct message for further assistance.
• Photos have Alt Text
• Videos are captioned

Facebook

Photos: Include descriptive text to a photo by adding a caption before uploading your post:
 › Select “Say something about this photo”
 › Add a descriptive text about the photo
 › Select “Post” when done

Video Captions: It is easiest to add captions to you YouTube video before uploading onto Facebook, see the Video Captioning section for more information. If you prefer to upload a video directly to Facebook you can do so by adding a SubRip (SRT) subtitle file format to you video. For detail instructions visit: http://tubularinsights.com/how-to-add-closed-captions-facebook-videos/

Adding captions to a video on Facebook:
 › Create a properly formatted and timestamped .srt file for your video
 › Upload the video file
 › Hover over video for “Options” select “Edit this Video”
 › Choose file to “Upload SRT files”
 › Select your .srt file then “Save” when done

For more information visit the Facebook Accessibility for People with Disabilities page: https://www.facebook.com/help/accessibility
Twitter

Photos: Turn on your ability to add Alt Text for images:
   › Settings and Privacy
   › General --> Accessibility
   › Turn on "Compose image descriptions"
   › While tweeting--> attach photo--> on photo tap to "Add Description"--> Apply

Note: the process is slightly different depending on your operating system, for more comprehensive instructions visit: https://support.twitter.com/articles/20174660

Videos: Same as with Facebook, it is easiest to add a YouTube video with captions to Twitter, unlike Facebook you cannot add an SRT file directly. In order to have the video captioned, you will have to embed them directly into the video before uploading using video captioning tools. See the Video Captioning section for more details.

Twitter offers more helpful steps to ensure that all users will have equal access:
   • Use prefixes to indicate whether the hyperlink leads to [AUDIO], [PHOTO], or [VIDEO] use all caps to make it easier to distinguish for sighted user.

   • Use a URL shortener to reduce the number of characters in the hyperlink (screen reader will spell out each letter of the hyperlink)

   • Use camel case by capitalizing the first letter of each word in a hashtag (e.g. use #AccessibleContent instead of #accessiblecontent)

   • Put @mentions and #Hashtags at the end of your post if possible. This allows screen readers to voice the main content before the more confusing text is read.
| Instagram

Instagram does not allow a way to add Alt Text to your photos or caption videos. Use the "Write a caption" field to add details to describe photos and to caption video posts.

| Flickr

Flickr does not give you the option to include Alt Text on your images, so it is important to provide meaningful text-based descriptions to accompany your image posts. Use the “Add description” option.

Flickr automatically inserts the same title as the photo file itself (e.g., “DSC001.jpg”). Change the title to something more descriptive (e.g., “John Smith at Brooklyn College Graduation 2017.jpg”).

| YouTube

Caption your videos. Captions are text files synchronized with audio or video. YouTube allows you to easily add captions to your videos. You can create and edit captions using YouTube or import your own caption files.

- Visit the YouTube support page for detailed instructions: https://support.google.com/youtube/answer/2734796?hl=en
- See the Video Captioning section for more information and guidelines.

For more details and information visit: http://www2.cuny.edu/accessibility/content/social-media/
VIDEO CAPTIONING

All videos on publicly available websites must be captioned.

Captioning makes videos accessible not only to those who are deaf, hard of hearing, or learning disabled, but to everyone as well. Making videos accessible helps those who are learning a new language, those who cannot turn up the volume (such as being in a library), and those who are in a noisy area and do not have access to headphones. By broadening your audience, you are making your videos accessible to all in any environment. Also, viewing captions on videos helps the viewer’s engagement, comprehension, and retention of information.

Captioning Tools

**YouTube** supports creating and adding caption files to your videos.

- Go to your Video Manager by clicking your account in the top right --> Creator Studio --> Video Manager --> Videos.
- Next to the video you want to add captions to, click the drop-down menu next to the Edit button.
- Select Subtitles/CC.
- Click the Add new subtitles or CC button.
- Choose how you want to add or edit captions to your video:
  - Follow the step by step instructions on YouTube [https://support.google.com/youtube/answer/2734796?hl=en](https://support.google.com/youtube/answer/2734796?hl=en)

**MovieCaptioner** software provided by CUNY Assistive Technology Services (CATS), works offline for both Mac and Windows platforms. For a copy of MovieCaptioner, contact CATS: [cats.cuny.edu](http://cats.cuny.edu)

**Amara** is a free open source online captioning tool. Amara also hosts volunteer localization & accessibility communities, and offers professional tools and services for subtitles. To learn more visit [amara.org](http://amara.org)
**Captioning Guidelines**

- One to three lines of text appear onscreen at a time.
- Viewable for three to seven seconds, and then be replaced by another caption.
- Timed to synchronize with the audio.
- Do not cover up graphics and other essential visual elements of the picture.
- Require the use of upper and lowercase letters.
- Use a font similar to Helvetica medium.
- Have good resolution.
- Include no more than 32-characters-per-line.
- Non-verbal sounds, such as music, laughter, or clapping, should be added in square brackets. I.e.: [MUSIC], [LAUGHTER], [APPLAUSE].
- Spelling should be accurate.
- When there is more than one speaker present, identify who is speaking.
- Use italics when a new word is being defined or a word is heavily emphasized in speech.
- Spell out any number that begins a sentence as well as any related numbers.
- If line division is required, the sentence should be broken at a logical point where speech normally pauses unless it would exceed the 32-characters-per-line requirement.
- Do not caption stuttering or hesitation unless it is important for characterization or plot.

- A transcript is also a good idea, and in fact is the only way to make video or audio content accessible to someone who is both deaf and blind. The transcript can be converted into Braille, to be read on a refreshable Braille output device.
Media Accessibility Project (MAP)

The Media Accessibility Project’s (MAP) mission is to help make audio/visual content accessible to all students. Services also include providing training and resources for digital documents, such as Microsoft Word, Microsoft PowerPoint, and PDF documents for online course content. While students with disabilities are the primary beneficiaries of these accommodations, the design and use of accessible course content and materials will benefit all students.

The MAP is a Special Project funded by the CUNY Council on Student Disability Issues (COSDI) to:

• Provide captioning and transcription of inaccessible audio/visual course materials for use by students with disabilities

• Conduct direct training to the assistive technology staff at CUNY campuses so they may in turn provide captioning services and heighten awareness of the benefits of captioning

• Act as liaison and collaborate with CUNY’s instructional designers to raise awareness and provide technical assistance for captioning/transcription

• Increase awareness and application of universal design principles when designing video and audio course content and other services across CUNY

• Establish collaborations across the University to ensure fully accessible audio/visual content

Visit the MAP project webpage: cats.cuny.edu/special-projects/media-accessibilities-project or call 718-281-5104 for immediate attention.
Learn more at:
cuny.edu/accessibility

Additional Resources:

CUNY Assistive Technology Services (CATS)
cats.cuny.edu

CUNY Campus Disability Service Offices
cats.cuny.edu/cuny-ssd-offices

Reasonable Accommodations: A Faculty Guide to Teaching Students with Disabilities
cats.cuny.edu/reasonableaccommodations