



Digital Accessibility 101



Goals for Today



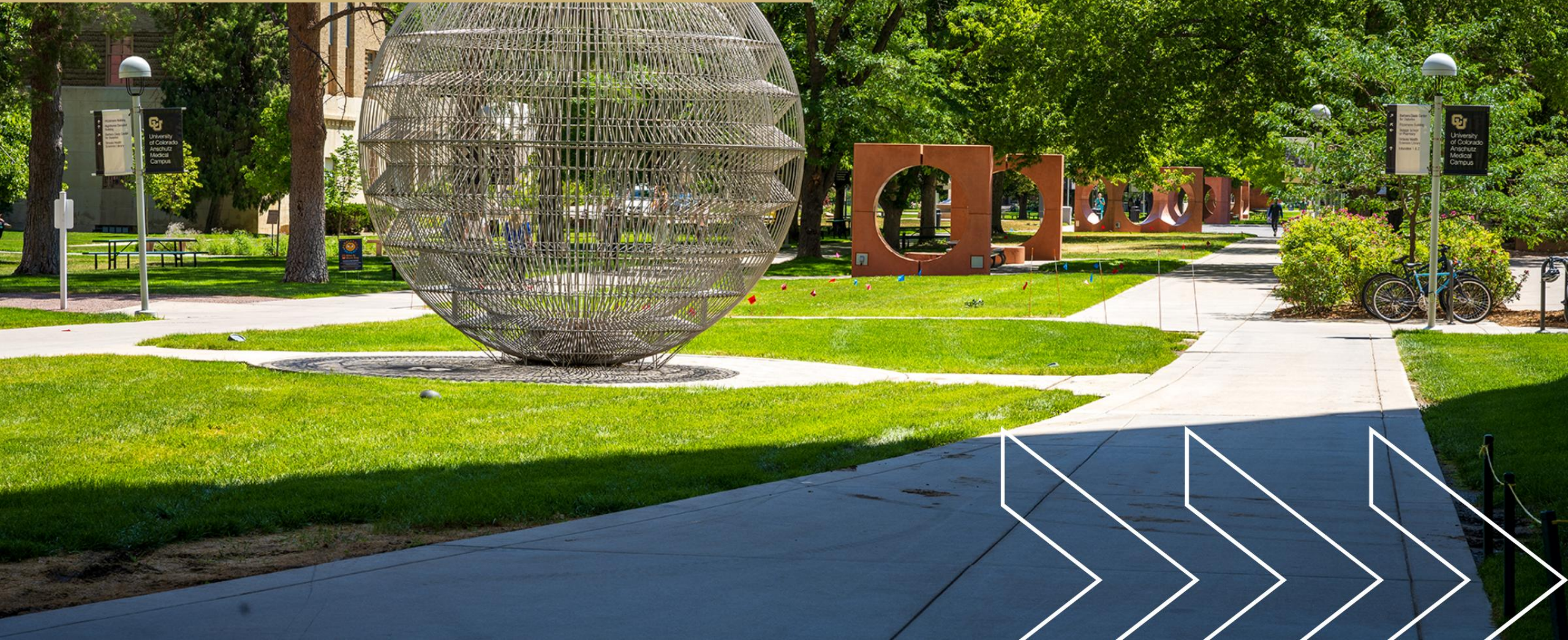
- Introduce accessibility and why it matters.
- Review campus compliance requirements.
- Explore practical strategies for integrating accessibility into everyday work.
- Share resources and tools available to support accessibility efforts.

Agenda



- **Overview & Compliance** – Tarah Dykeman, Information Strategy & Services
- **Web Accessibility** – Christopher Rodriguez, Information Strategy & Services
- **Digital Communications** – Nicole Lawrence, Office of Communications
- **Course Materials** - Lynée Sanute, Office of Digital Learning
- **Student Accommodations** – Lauren Fontana, Office of Disability, Access & Inclusion
- **Employee Accommodations** – Steven Blackwell, HR – ADA Compliance
- **Q&A**

Overview & Compliance



Understanding Accessibility



- **Accessibility:** Products, devices, services, environments, and facilities are usable by as many people as possible, including those with disabilities.
- **Digital Accessibility:** All people should have the opportunity to access the same information and services in the digital environment without facing undue barriers or burdens.

Source: Indiana University, CU Boulder

Examples of Accessibility



Digital

- Alt text for images
- Color contrast standards
- Heading levels and reading order

Physical

- Curb cuts
- Ramp entrances to buildings
- Push buttons for doors

Why does accessibility matter?



- It's the law. It's a civil right. It's a human right.
- Over 28% of the U.S. population has a disability (more than 1 in 4).
- Improves user experience and promotes equal access.
- Aligns with our values of excellence and community.

HB21-1110 Compliance



- Proactively provide accessible digital content and information and communication technology (ICT) that meets [established technical standards](#)
- Provide reasonable accommodations or modifications upon request
- Demonstrate ongoing progress in accessibility efforts

FAQ: [Understanding HB21-1110 Compliance](#)

Top Accessibility Issues



- Using CU gold text on a white background (and vice-versa)
- Using long URLs or non-descriptive link text ([Click here!](#))
- Not applying heading levels and proper heading structure
- Inaccessible images
- Using inaccessible PDFs

Guidelines to Remember



- Progress, not perfection
- Do not remove inaccessible content

Prioritizing Efforts



- **High:** Widely used, public-facing, legally required, or required to complete important tasks
- **Medium:** Internally used but frequent or essential for operations
- **Low:** Rarely accessed, supplemental information, or complex to remediate

General Resources



- [Digital Accessibility Standards and Resource Library](#)
 - [CU Accessibility Fundamentals \(Skillsoft\)](#)
 - [Accessibility Planning Template](#)
 - [Accessibility Testing Tools](#)
- Consultation Requests: Email DigitalAccessibility@cuanschutz.edu
- Join the [Digital Accessibility Community](#)
- [Accessibility Barrier Reports and Accommodation Requests](#)
- [Procurement and Accessibility Assessments \(requires university sign in\)](#)

Tips & Strategies





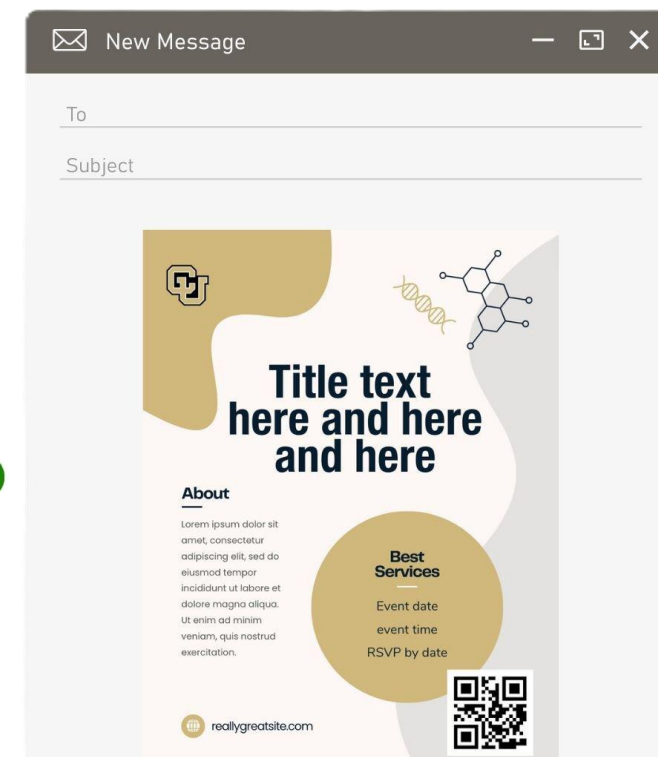
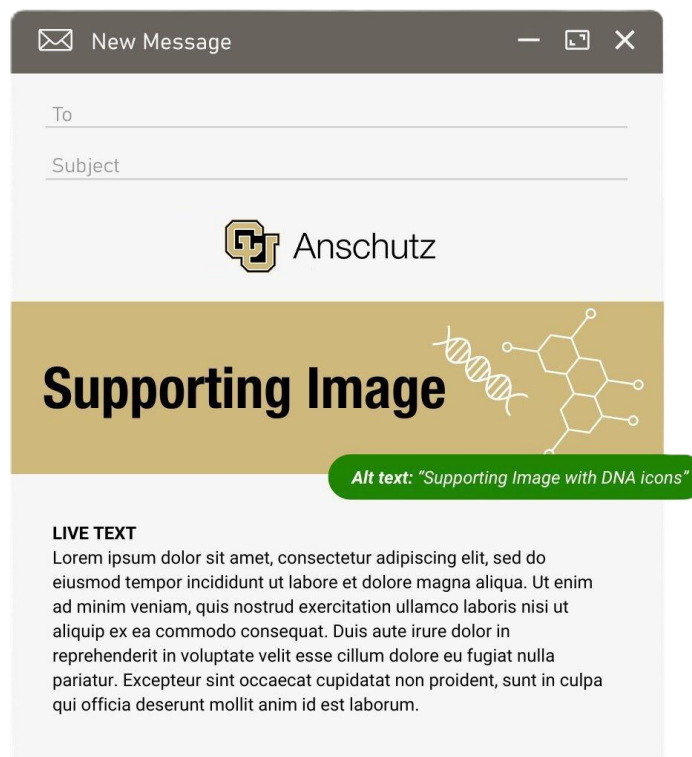
Digital Asset Accessibility

Digital Asset Accessibility

Correct Use of Imagery



- Use images to support, not replace text
- Avoid images of text, unless necessary



Digital Asset Accessibility

Use Descriptive Text Alternative



- **Images:** Add meaningful alt-text
- **Video & Audio:** Captions and transcripts



Alt text: "Supporting Image with DNA icons"



Digital Asset Accessibility

Design with Color Contrast in Mind



- Strong color contrast between text and background
- CU gold on white and vice versa not accessible



Digital Asset Accessibility

Create Structured Content



- Use proper HTML tags (H1, H2, H3, etc.) to organize content



Heading 1

Heading 2

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Heading 1

Digital Asset Accessibility

Use Legible Fonts



- Minimum font size: 14pt
- Preferred fonts: Roboto or Arial
- Line spacing: 1.5



Arial Title

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Script Font Title

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Digital Asset Accessibility

Make Hyperlinks Accessible



- Use descriptive link text
- Ensure link is visually distinct



[This is an example link to our home page](#)



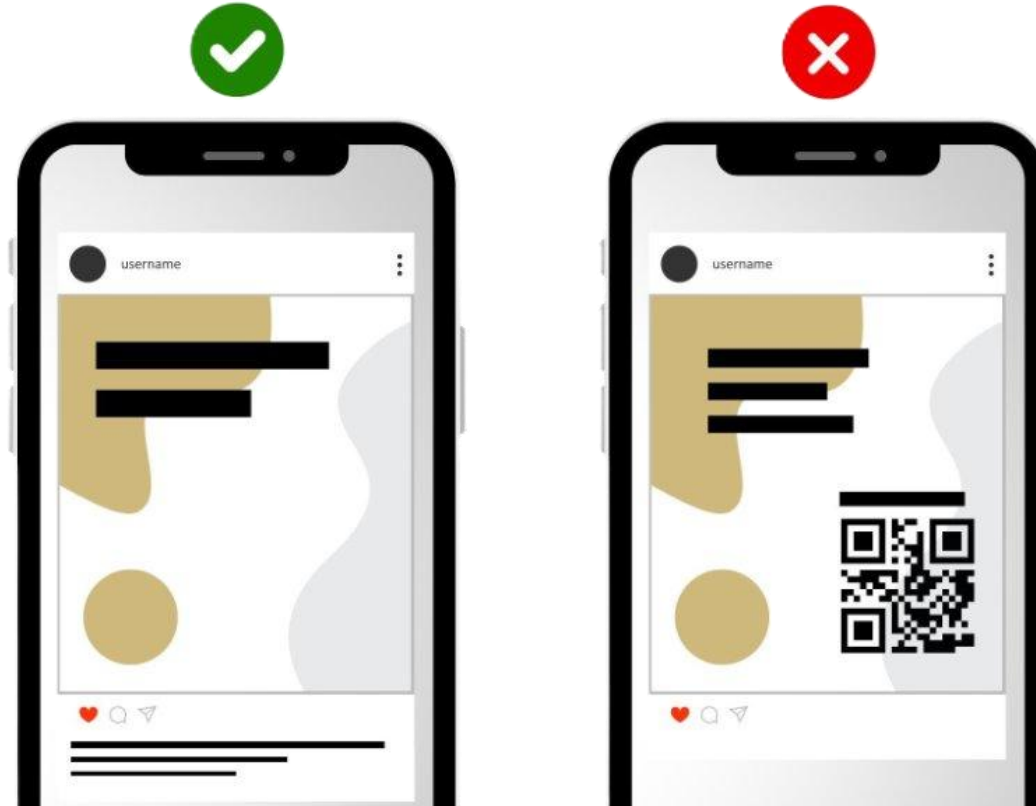
Click Here

Digital Asset Accessibility

Avoid QR Codes



- QR codes are not clickable in digital formats
- Use only when bridging gap between physical and digital (posters, flyers, etc.)



Digital Asset Accessibility Resources



- [Digital Asset Accessibility Guidelines](#)
- [Alt-Text Best Practice](#)
- [Color Contrast Checker](#)
- [CU Colors](#)
- [Information on Captioning](#)
- [Accessible Design Templates](#)



Web Accessibility

Web Accessibility

Web Accessibility means that websites, tools and technologies are designed and developed so that people with disabilities can use them. More specifically people can:

- Perceive, understand, navigate and interact with web content
- Contribute to the Web

Web Accessibility Continued

Types of disabilities that affect access to web content:

- **Auditory** (Deafness, Hearing Loss)
- **Cognitive** (Dyslexia, Sensory Overload)
- **Neurological** (Seizure Disorders)
- **Physical** (Motor Impairments, Limited Mobility)
- **Visual** (Blindness, Color Blindness, Low Vision)

Examples of Assistive Technologies:

- **Screen Readers** (JAWS, NVDA, VoiceOver)
- **Speech Recognition Software** (Dragon, Google Assistant)
- **Screen Magnifiers** (physical and virtual software)
- **Braille Displays** (Translate on screen text into braille, allowing users to read web content through touch)
- **Closed Captions**

Assistive Technologies – Screen Readers

What is "focus"? - refers to any web element on the page a user is currently interacting with.

Focus Order – the sequence or order in which elements on a web page are navigated through using keyboard inputs.

Focus Outline – the visual outline interactive elements get when in keyboard focus.

Screen reader users navigate through a webpage using the keyboard tab button, arrow buttons and other keyboard inputs. When a web element is in focus, it should be announced to a screen reader.

WCAG

To address global web accessibility concerns, the W3C (worldwide web consortium) established the international Web Content Accessibility Guidelines (WCAG) in 1999.

- Currently at WCAG 2.2 (2023) with thirteen guidelines.
- WCAG 3.0 currently in development.

The current thirteen guidelines are organized under four guiding principles which are: perceivable, operable, understandable and robust, often referred to as **POUR**.

WCAG - Perceivable

Perceivable - Information must be presented in a way that users can perceive it using one of their senses. It can't be blocked from all senses. Here are a few examples:

- Captions or descriptions for audio and video content where appropriate.
- Color contrast ratio is at least 4.5:1, color not only method used to convey info.
- Text can be resized without loss of content or functionality.



WCAG - Operable

Operable - If all users can effectively navigate a website, it's considered operable. If a site requires users to interact in a way that's not possible for them, a website is not meeting this principle. Examples include:

- People who can't use a mouse should be able to effectively navigate a website using just the keyboard or voice controls.
- Users can pause, stop or hide content that automatically moves, blinks or scrolls and lasts longer than five seconds.
- Users are provided enough time to read content.

WCAG - Understandable

Understandable - The principle of understandable is just as it seems—users must be able to understand the information as well as understand how to operate within the user interface.

Examples include:

- The language of the page is specified.
- Labels are provided when content requires input from the user, buttons are labeled.
- Navigation is consistent and predictable across site making it easy for users to find their way around pages and site.



WCAG - Robust

Robust - content must be flexible enough that it can be interpreted by a wide variety of possible user agents, as well as technologies that may evolve. Examples include:

- Site is compatible with assistive technologies such as screen readers.
- Clean, well structured code with complete start and end tags.
- Future Proofing - designing content with future technologies in mind ensuring it remains accessible as technology changes (mobile, tablets, etc).

WCAG Conformance

WCAG guidelines are categorized by three levels of conformance:

- A = the lowest, or bare minimum conformance level. Web content **must** comply with these requirements.
- AA = the mid-range conformance level. Web content **should** comply with requirements.
- AAA = the highest level of conformance. Web content **may or may not** comply with requirements.

The typical goal for most website owners is AA conformance. AA is also the standard by which most legal requirements are judged.

Web Accessibility Testing Process:

- Pages are initially checked with an automatic web evaluation tool such as the WAVE plugin or Siteimprove.
- Pages are manually checked for keyboard accessibility (detailed information can be found at our [@web page](#)).
- Pages are checked in mobile view and when content is scaled up to 200%.
- Pages are tested with a screen reader. We test to make sure all critical content, interactive elements, inputs and functions are understandable and usable by screen reader users. Any dynamic page changes (announcements, notifications, pop-ups, page reloads, etc) are accurately being conveyed to screen reader users.

Web Accessibility Essentials

Audio and Video Content

- Audio only (such as podcast): **Transcript required at WCAG Level A.**
- Video only (no audio): **Transcript or audio description required at WCAG level A.**
- Video with audio: **Captions are WCAG level A**
- Videos should avoid flashing content altogether. Otherwise, it should be limited to less than 3 flashes per second.

Zoom in to 200%

- Does any of the content overlap or become far apart?
- Do you have to scroll horizontally to read anything, is content cut off?
- Do links, buttons, forms, and menus still function with the content zoomed?

Mobile View

Check web content on a mobile device, or by using [browser developer tools which simulate a mobile view.](#)

- Is content still viewable? Is anything being clipped or overlapping?
- Are interactive elements such as buttons and links big enough to be tapped on by a user?

Color

- Check that the text and background color has a contrast ratio of at least 4.5:1. Color contrast can be checked using this [online tool](#). The [WAVE plugin](#) can detect color contrast issues automatically.
- Ensure color is not used as only way of conveying meaning or information.

Web Accessibility Essentials Cont.

Images

- All non-decorative images should have alternative text.
- Images of text content are generally discouraged. If they are used, confirm text is present either in the body text accompanying the image, or in the alt text.
- Decorative images should have alt text = ""

Forms & Buttons

- Make sure form controls and buttons have labels.
- If a label is not visible, check for a hidden `<label>`, `aria-label`, or `title` attribute in the code.

Body Text

- Confirm that page titles are unique and descriptive, marked as `<h1>`. There should only be one `<h1>` per page.
- Look for generic link text like "read more" or "click here." These should be changed to better reflect the description of the link.
- Links in body text should be underlined and have a differing color from surrounding text. Usually a dark blue.

Tables

- Tables should only be used for tabular data, not for content layout.
- If data tables are present, ensure there are row and/or column headers. This gives context to users (especially screen reader users) about the data.

Web Accessibility Resources

- [W3C](#)
- [WCAG 2.2 Guidelines](#)
- [Wave Browser plugin](#): a free browser plugin that automatically checks page content for accessibility issues.
- [NVDA screen reader](#): a free downloadable screen reader.
- [UCDenver/Anschutz @Web Accessibility page](#)
- [Siteimprove](#)



Course Materials

Top 3 Issues in Canvas Courses



Documents



Images



Text
Organization

Accessible Course Materials



Find Your Motivation

Create a Plan: Work Smarter, not Harder

- Block Time
- Respond to Immediate Needs
- Batch Tasks
- File Organization

Remember: Progress, not Perfection

Free On Demand Training



Foundations of
Accessibility

Course
Remediation
Tips and Tricks

Microsoft
Accessibility
Tips

Accessibility
Challenge: Can
You Spot the
Best Practice?

Accessibility
Adventure:
Productivity
Edition

Course Materials Resources



- [Office of Digital Learning Live & On-Demand Training](#)
- [Creating Accessible Equations and Formulas](#) (includes an open-source math



Accommodations

Student Accommodations



- In general, faculty are responsible for ensuring that their course materials meet digital accessibility requirements
 - With help from instructional design teams (where available) and the Office of Digital Learning
- If course materials are inaccessible, student may obtain an accommodation through the Office of Disability, Access, and Inclusion (ODAI) to ensure accessible materials

Student Accommodations: Course Materials



- Alternative format textbooks
 - ODAI obtains for student
- Closed captioning and transcripts
 - ODAI provides for students with accommodations

Student Accommodations: Assessments



- Text-to-speech software for assessments
 - ODAI provides software
 - Faculty provides accessible version of assessment
- Electronic version of paper assessments
 - Faculty provides to ODAI
- Paper version of electronic assessments
 - Faculty provides to ODAI

Employee, Applicant, & Visitor Accommodations



- Human Resources partners with colleges, schools and units to coordinate accommodations for **employees, applicants, and visitors**.
 - **Promoting** accessibility beyond the classroom and office — including events, trainings, and sponsored content (e.g. conference materials).
 - **Communicating** our commitment to accessibility and providing a clear, simple process for requesting accommodations.
 - **Evaluating** requests and determining reasonable accommodations.
 - **Connecting** with internal and external resources to meet accommodation needs.
- Contact us at hr.adacoordinator@cuanschutz.edu

Accommodations Resources



- [ODAI Faculty Resources: Implementing Accommodations](#)
- [Using the AIM Faculty Portal](#)

Q&A



PDF Tips



PDFs can be challenging to make accessible. Consider alternative formats: HTML webpages, Microsoft Word & PowerPoint, forms

If you do need a PDF:

- Start with an accessible document, then export to PDF
- OCR (Optical Character Recognition) image-only/scanned PDFs
- Use Adobe Acrobat to check and remediate accessibility

Resource: [PDF Accessibility Guide](#)

PowerPoint Tips



- Slides require unique titles for each slide. For example: *Headings, Headings (continued)*
- Always add alt text to images in your presentation. Do not use images of text.
- Check color contrast. Do not use color alone to convey meaning.
- Use fonts that are easy to read and sans serif (such as Roboto or Arial).
 - Body text font size should be 18 or larger.
 - Heading text font size should be 24 or larger.

Resource: [Accessible Presentations Guide](#)



Thank you!

