UNSW | Guidelines for Accessible Blended and Online Courses

The PVC(E) is committed to supporting student access to, and participation in, blended and online learning. These guidelines have been written to support you in designing and developing accessible online content. They are mapped to the international Web Content Accessibility Guidelines (WCAG) 2.0, which specify three levels of conformance: A (lowest), AA, and AAA (highest).

This document considers levels A and AA, noting that AA is the minimum legal requirement in Australia and the standard you should aim to achieve.

To ensure your blended and online courses are accessible, you should:

1. Design the online learning environment to guide and support student learning.
2. Ensure online content can be accessed by screen readers.
3. Provide text alternatives for media.
4. Design for the various ways learners access and engage with online content.
5. Make iterative improvements.

1. Design the online learning environment to guide and support student learning.

The online learning environment should be accessible to all learners.

This begins by providing learners with a proper orientation to the online environment and support to move easily through the online learning sequence. Where there are different learning paths, learners should be clearly presented with their options for engaging with the materials. They should be aware of the overall course structure, including all assessment due dates, and they should have a clear sense of how the online activities fit into the overall structure.

To meet this guideline:

- Ensure site navigation is clear and consistent.

- Provide an online welcome area, such as a page or book with appropriate orientation materials and a welcome video.

- Provide visual aids — such as a timetable or course map — to help learners visualise the structure of the course.

- Organise the online materials so that they are easy for students to understand and navigate.

- Provide informative and consistent titles that are specific and unique for all activities and resources.

- Provide signposts and instructions to help guide students through the online materials.

- Adopt a weekly format with a consistent structure or learning sequence for each week.

- Provide avenues for support, such as moderated help forums.

This guideline encompasses the following WCAG 2.0 checkpoints:

- [2.4.2 (A) Pages Titled](#)

- [2.4.5 (AA) Multiple Ways](#)

- [2.4.6 (AA) Headings and Labels](#)

- [3.2.3 (AA) Consistent Navigation](#)

- [3.2.4 (AA) Consistent Identification](#)

- [3.3.2 (A) Labels or Instructions](#)

Did you know?

Screen readers will generally provide users with a list of all the hyperlinks on a web page. If the linked text is generic (e.g. "click here!") it will be difficult for the user to understand the meaning of the link. Instead, you should make the link text the same as the title of the item being linked to, such as [Web Content Accessibility Guidelines (opens in new tab)](#) or [UNSW Equity, Diversity](#)

[and Inclusion Policy (PDF)](#). Alternatively, the link text can state the purpose of the link, in a verb-the-noun format (eg., "Begin your test", "Download the sample").

2. Ensure online content can be accessed by assistive technology.

In accessible web design, there is a separation between the way content is structured (HTML) and the way it is graphically displayed (CSS). We can compare the process to writing a book. The title, chapter headings, paragraphs and images form the **content layer**. The way the content appears, such as the layout, font, line spacing and colour, form the **design layer**. The content could be displayed in many different ways, but this would not change the overall structure or content of the book.

A screen reader, commonly used by people with vision impairments, is an **assistive technology** that reads out the content layer to the user. Screen readers are used through the keyboard controls. As screen reader users may only have access to the content layer (HTML) of webpages and not to the design layer, it is important that you structure your content properly using **HTML** structural elements. This also impacts users on low bandwidth connections whose browsers cannot display CSS.

Additionally, it is important that all images have **alternative text**. When a screen reader encounters an image, it will read out the alternative text to the user. Without alternative text, the user will not know what is being displayed.

This guideline applies to any online or digital content created for your course, including your Moodle site, documents (e.g. Word, Powerpoint and pdf files) and any third party tools or content.

To meet this guideline:

- Ensure all functionality of the content is operable through the keyboard. It is especially important to test this when using 3rd-party (external provider) tools.

- Use heading elements (<h1>, <h2>, <h3>) to structure content.

- Use list elements (<ul> , <ol>, <li>) to organise serial data (e.g. a list of names, recipe, or address). In most authoring tools, this can be done by clicking on the "bullets" or "numbers" icons in the toolbar.

- Use table elements (<table>, <th>, <td>, <tr>) to organise tabular data. In most authoring tools, this can be done by clicking on the table icon in the toolbar. You should always designate the header row (<th>).

- Provide alternative ("alt") text for images. Alternative text should be a short visual description of the image for users who cannot see or load the image.

- Use text, as opposed to images of text.

- Ensure that the purpose of each hyperlink can be determined from the link text alone.

- Specify the language of an entire document or section of a document (e.g. Italian, Chinese, French) so a screen reader can read it properly. In MS Word, this can be done with Review > Language > Set Proofing Language.

- Give the document an informative title. For most document types, this is done in the document properties.

- Ensure PDFs are correctly tagged, and reading order is correct (see PDF accessibility link below).

- Avoid the use of HTML elements to achieve a visual design (e.g. a table should not be used to define a graphical layout).

See also:

- [Introduction to visual disabilities (WebAIM)](#)
- [Introduction to cognitive disabilities (WebAIM)](#)
- [Designing for screen reader compatibility (WebAIM)](#)
- [Creating accessible tables (WebAIM)](#)
- [Alternative text (WebAIM)](#)
    - [Adding alt text to Word documents (WebAIM)](#)
    - [Adding alt text to images in PDFs (WebAIM)](#)
    - [Adding image descriptions (alt text) in Moodle (UNSW Teaching Gateway)](#)
- [Creating Accessible Word documents (Microsoft)](#)
- [PDF accessibility (WebAIM) and tagging](#)
- [Adobe Accessibility guide (Adobe)](#)
- [Making GoogleDocs accessible (Google)](#)

This guideline encompasses the following WCAG 2.0 checkpoints:

- [1.1.1 (A) Non-text Content](#)
- [1.3.1 (A) Info and Relationships](#)
- [1.3.2 (A) Meaningful Sequence](#)
- [1.4.5 (AA) Images of Text](#)
- [2.1.1 (A) Keyboard](#)
- [2.4.2 (A) Pages Titled](#)
- [2.4.4 (A) Link Purpose (In Context)](#)
- [2.4.6 (AA) Headings and Labels](#)
- [3.1.1 (A) Language of Page](#)

- [3.1.2 (AA) Language of Parts](#)

If using 3rd-party tools, the following WCAG 2.0 checkpoints also apply:

- [2.1.2 (A) No Keyboard Trap](#)

- [2.4.1 (A) Bypass Blocks](#)

- [2.4.3 (A) Focus Order](#)

- [2.4.7 (AA) Focus Visible](#)

- [3.2.1 (A) On Focus](#)

- [3.2.2 (A) On Input](#)

- [3.3.1 (A) Error Identification](#)

- [3.3.2 (A) Labels or Instructions](#)

- [3.3.3 (AA) Error Suggestion](#)

- [3.3.4 (AA) Error Prevention (Legal, Financial, Data)](#)

- [4.1.1 (A) Parsing](#)

- [4.1.2 (A) Name, Role, Value](#)

Did you know?

Microsoft Word allows you to [apply styles to different elements of a document (opens in new tab)](#). This is similar to the CSS layer of a webpage. For example, you can define a default font, line spacing and colour for all level-two (h2) headings. This might be different than the style applied to top-level (h1) headings and body paragraphs.

You should always use the 'Modify style' option to control how your content appears in MS Word. For example, to create additional spacing between paragraphs, modify the style of the body text (instead of adding an extra return).

3. Provide text alternatives for media.

Learners who cannot access audio or visual information will need access to the same information in an alternative format.

When using figures or graphs, video, audio, animations or other multimedia in your course, provide equivalent information for those who cannot access the visual or auditory content. These resources may also be useful for learners with cognitive disabilities or from non-English speaking backgrounds.

To meet this guideline, provide:

- Text descriptions for images (such as graphs and charts). The description can be included in the surrounding text and should be descriptive enough to serve as an equivalent to the image.

- Transcripts for pre-recorded audio-only media (e.g. podcasts).

- Captions for pre-recorded videos.

- Alternatives (text or audio description) for the visual content of pre-recorded videos.

- Captions for live videos (e.g. live stream lecture recordings). Note that this may not be feasible in all teaching situations but is a requirement for AA compliance.

See also:

- [Introduction to visual disabilities (WebAIM)](#)

- [Introduction to auditory disabilities (WebAIM)](#)

- [Introduction to cognitive disabilities (WebAIM)](#)

- [Caption Quality (Media Access Australia)](#)

- [Captions, transcripts, and audio description (WebAIM)](#)

- [Edit captions in YouTube (Google)](#)

This guideline encompasses the following WCAG 2.0 checkpoints:

- [1.1.1 (A) Non-text Content](#)

- [1.2.1 (A) Audio-only and Video-only (Prerecorded)](#)

- [1.2.2 (A) Captions (Prerecorded)](#)

- [1.2.3 (A) Audio Description or Media Alternative (Prerecorded)](#)

- [1.2.4 (AA) Captions (Live)](#)

- [1.2.5 (AA) Audio Description (Prerecorded)](#)

Did you know?

Video captions can be a great benefit to learning. They support learners with hearing impairments and non-native English speakers. Over 100 studies have also shown captioning improves comprehension and memory of information presented in videos.

Subtitles provide a text alternative for dialogue, but captions describe all sounds in the audio track. Open captions are burned into a video. Closed captions can be turned off and on in the video player.

Several options exist for close-captioning videos:

- YouTube automatically captions your videos to around 70% accuracy (30 errors in every 100 words). Captions can also be enabled for live-stream videos. Corrections to both text and timing can be made by logging into the YouTube channel as an administrator.

- Microsoft Stream, part of the Office 365 suite, can be configured to auto-generate a caption file. Again, corrections may be needed.

- Amara.org has a good caption editor that you can use to create captions for an existing YouTube video. The Amara editor is also available in Vimeo.

- Some video editing tools, such as Premiere Pro, offer a full set of features for creating captions.

- Instructors with large student cohorts have had success crowd-sourcing video captioning. YouTube has a crowd-sourcing feature that can be turned on in the video settings. Amara can also be used to crowd-source captions. A good quality assurance process is recommended.

- Third-party captioning and transcription services offering up to 99% accuracy typically charge around AUD $3.00 per minute of video. Some services also offer audio description (click for examples).

Reference

Gernsbacher, Morton Ann. "Video Captions Benefit Everyone." *Policy Insights Behav Brain Sci,* 2015 Oct; 2(1): 195–202.

4. Design for the various ways learners access and engage with online content.

Consider the diverse ways students will perceive, operate, understand and interpret your content. Design your online course materials and environment to ensure all students can participate in the learning.

Factors to consider include use of colour, motor load, timing of activities, flash rate, and flexibility for users to control how content is displayed.

To meet this guideline:

- Check that text has a contrast ratio of at least 4.5:1.

- Use visual cues other than colour. For example, dotted and solid lines can be used to indicate differences in graphs, and bold text can be used to highlight key terms.

- Ensure instructions to learners do not rely solely on sensory characteristics such as size, location, orientation, and sound.

- Ensure all users have enough time to read and use the content.

- Remove time limits on activities, unless this would invalidate the activity.

- Allow users to save their activity progress and return at a later time, unless this would invalidate the activity.

- Enable printer-friendly versions of content.

- Enlarge target areas. For example, hyperlink a longer string of text, as opposed to a single character.

- Ensure text can be resized up to 200% without loss of content.

- Ensure content that moves, blinks, or auto-updates has a mechanism for the user to pause, stop or hide it.

- Ensure content does not contain anything that flashes more than 3 times per second.

See also:

- [Introduction to cognitive disabilities (WebAIM)](#)

- [Introduction to motor disabilities (WebAIM)](#)

- [Introduction to seizure disorders (WebAIM)](#)

- [Introduction to colour-blindness (WebAIM)](#)

- [Color contrast checker (WebAIM](#))

This guideline encompasses the following WCAG 2.0 checkpoints:

- [1.3.3 (A) Sensory Characteristics](#)

- [1.4.1 (A) Use of Color](#)

- [1.4.2 (A) Audio Control](#)

- [1.4.3 (AA) Contrast (Minimum)](#)

- [1.4.4 (AA) Resize Text](#)

- [2.2.1 (A) Timing Adjustable](#)

- [2.2.2 (A) Pause, Stop, Hide](#)

- [2.3.1 (A) Three Flashes or Below Threshold](#)

5. Make iterative improvements.

Accessibility is an iterative process. Consider what improvements you can make each semester to move your course closer to the WCAG 2.0 AA standard. It may take some time before you have reached your goals.

It is important to undertake regular quality assurance of your course against these guidelines.

If possible, you should consider accessibility from the early design phases. It is much easier to design with accessibility in mind from the start than it is to "retrofit" course materials after the fact.

Finally, it is important to gather feedback from your diverse learners. Consider creating feedback mechanisms, such as a survey, poll, or focus group, to gauge the effectiveness of your course improvements. Aim to gather feedback from a wide range of learners.

When accessibility is done well, it blends into the background, allowing learners to focus on what matters most: their learning.

Did you know?

Following these accessibility guidelines supports the university's commitment to an equitable and inclusive campus, as it helps to ensure that everyone can access online course materials and participate in learning. **Inclusive learning goes beyond the creation of access**. In addition to creating access, you should actively work to make learning inclusive.

Here are some useful resources to get you started:

- [Universal Design for Learning (UDL)](#)
- [Microsoft Inclusive Design Toolkit](#)