

# Creating Accessible Course Content

**Authors:** Ganna (Anna) Pletnyova and Lin Yu

## Table of Contents

The Purpose and Scope of the Resource.....	1
Enhancing accessibility in content creation .....	2
Adding Content to D2L .....	3
Creating slides.....	6
Creating videos .....	8
Creating interactive content.....	10
Top Hat.....	10
H5P – Third-Party Tools.....	11
More on creating accessible Word and PDF documents .....	11
References .....	11

## The Purpose and Scope of the Resource

**Purpose:** Assist in developing accessible content

**Audience:** Instructors and those responsible for creating course content

**Scope:** Increase accessible practices when adding content to D2L/Brightspace, creating slides, videos, etc.

This resource is designed to help instructors and those responsible for creating course content to develop a deeper understanding of accessibility and create educational materials accessible to all learners. This document discusses strategies for enhancing accessibility when adding content to D2L, creating slides, making videos and developing interactive activities in order to foster equitable and inclusive learning experiences for all students.

## Definitions

There is a variety of definitions of accessibility in the higher education context. We recognize that there are no absolute definitions of concepts such as “accessibility” and that individual institutions might have different policy definitions. We provide definitions of key terms to situate

complex concepts in our context of creating course materials to strive for clarity and common understanding.

**Disability:** “any impairment, including a physical, mental, intellectual, cognitive, learning, communication or sensory impairment — or a functional limitation — whether permanent, temporary or episodic in nature, or evident or not, that, in interaction with a barrier, hinders a person’s full and equal participation in society” (Accessible Canada Act, 2019).

**Accessibility:** “is about creating communities, workplaces and services that enable everyone to participate fully in society without barriers” (Government of Canada, 2023).

**Accessibility in higher education:** “is about removing barriers from learning and provide equity and equality for all learners, regardless of ability or experience” (eCampusOntario, 2023).

**Accessible content:** educational materials developed with the quality of enabling all learners to obtain, use, understand, and appreciate information, despite different skills and abilities.

**Assistive or adaptive technologies:** any piece of equipment used to improve functional capabilities of individuals with disabilities, such as screen readers, Braille displays, etc.

## Enhancing accessibility in content creation

The sections below provide strategies and tips on how to make course content more accessible using digital platforms supported at the University of Calgary as well as several third-party tools.

For general information on accessibility features of UCalgary campus platforms, please see [Accessibility Features of Campus Platforms](#).

### **Note: Consider the trade-off!**

It is important to note that it is often difficult to satisfy all groups of neurodiverse learners at once. For example, images, tables, and graphs are not always accessible to visually impaired learners but are a helpful way to succinctly present information for learners with alternative processing capabilities. Therefore, it is always a good idea to offer learners multiple options for comprehending content and showing their understanding.

## Adding Content to D2L

- 1) **Do not make images the only way of understanding content.** Make sure to include the same information in text format in D2L Content so that it can be read by screen-readers.
- 2) **Add alternative text** (Alt text) to your images, charts and graphs. Alternative text is a short description of the image content. This means that users who cannot see the visuals will be able to have their description read to them by assistive software. Sighted users who get a broken image will also be able to read the description.

When inserting an image in D2L Content, you will see the following menu. Make sure to add alternative text if your image has a function. Put a checkmark next to “This image is decorative” if your image is used purely to add visual appeal to your page, such as background.



The image shows a dialog box titled "Provide Alternative Text". Inside the dialog, there is a section labeled "Alternative Text" with the instruction: "Provide alternative text for the image. This text should convey the same information as the image. If this image does not convey any information, select 'this image is decorative'." Below this text is a text input field labeled "Alternative Text:". Underneath the input field is a checkbox labeled "This image is decorative". At the bottom left of the dialog is a blue button labeled "OK". At the bottom right is a small icon consisting of three diagonal lines.

Alt text should be succinct, no more than 125 words, in full sentences with appropriate syntax and punctuation. It should not contain “This is an image/photo of” because it is obvious that it is an image. Example: “A boy is playing soccer”, not “This is an image of a boy playing soccer”.

For more information on how to write alternative text, please see [Alternative Text | Accessible U](#)

- 3) **Enable students to download** or view images outside the embedded pages. This can be helpful for enlargement.
- 4) **Organize your D2L content** in a simple, clear and consistent way (e.g. create modules by week or by topic). Remember that your D2L site is a learning space in which learners should feel comfortable, just like in a physical space. Organizing your course content in

a consistent structure that makes sense for your discipline and for your students will reduce the difficulty experienced when looking for items in the course.

- Use logical heading hierarchy so that headings can be read by assistive technologies.
- Consider creating a course map that would provide a visual overview of the course structure and materials, allowing students to engage with them in more than one way.

For best practices of how to build your D2L site, please see our resources:

[Learning Module: Developing Online Courses - Introduction](#)

[Adding Content to D2L](#)

[Workshop: D2L Essentials](#)

- 5) **Use HTML templates** to post instructor-created content within D2L content pages ([D2L HTML templates](#)). HTML templates can provide clear and visually attractive layouts that ensure accessibility. These templates use format styles and paragraphs, which are necessary for assistive technology screen readers to distinguish between title and paragraph content. This also minimizes the creation of additional pages and documents that students need to open and/or download.

To learn how to use HTML templates in D2L, please see

[How to use design templates to create content pages in D2L.](#)

Daylight HTML Template

## Module Introduction

This Module Introduction page features a prominent banner image across the top and a numbered list below.

This page can easily accommodate more content than the Course Introduction page. And, as illustrated below, the numbered list can be used to list a module's learning objectives. This makes it ideal as the first page of a module in a course.

Recommended banner image size: at least 1200 pixels wide and 400 pixels high.

## Learning Objectives

When writing learning objectives for a course or module, remember:

- 01 Each objective should use a verb that describes a measurable action or behavior
- 02 Include the specific circumstances under which the learner is to perform the targeted action or behavior
- 03 Keep your learning objectives focused and concise

6) **Use descriptive wording for hyperlinks** rather than “click here”. Don't display the actual URL, as adaptive technologies will read every single character of it. Do not create duplicate links to avoid confusion.

7) **Make your D2L quizzes accessible.**

- Extend quiz times for students in line with their needs as described in their accommodation letters sent to you through [Student Accessibility Services](#).

- Please do not use the *Prevent from Going Back to Previous Pages* feature under *Timing & Display* as it restricts students' ability to review a test or a quiz in its entirety or revise an answer on a question once it has passed. More on [best practices for online quizzes](#).

- Allow multiple questions per page as this will allow students to review the whole test before planning their time. If you would like to use other alternatives to prevent cheating, please consider [shuffling the questions and using question pools](#).

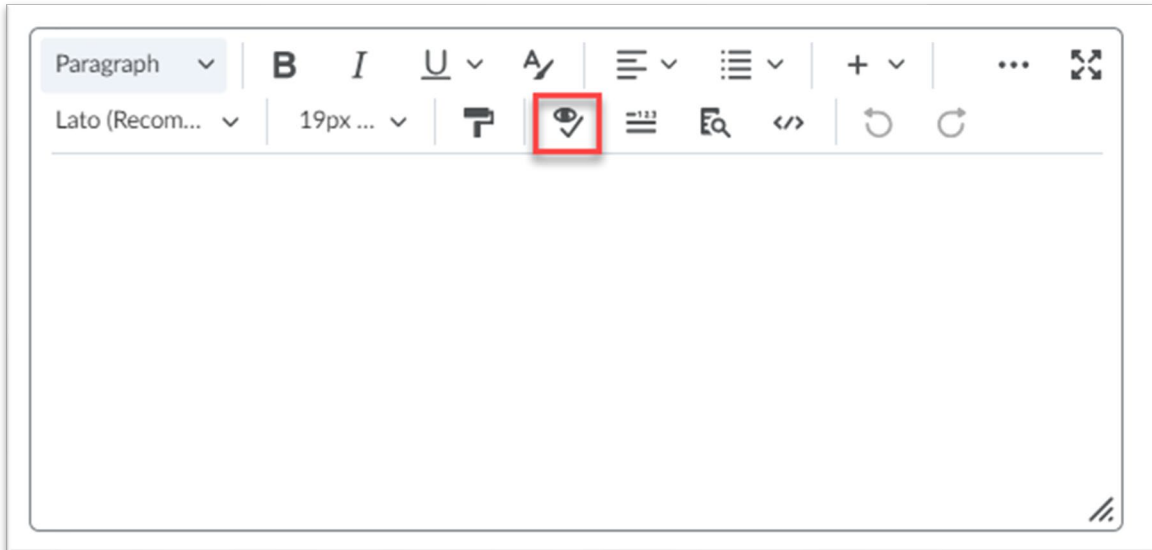
For more information, please see:

[Accessible D2L Settings](#)

[Accessibility Tips – Quizzes - D2L Help Pages \(arizona.edu\)](#)

8) **Make your feedback to student assignments accessible.** Please note that the *Annotations* tool in Dropbox (Assignments) is not accessible to screen readers, so D2L recommends using Audio or Video feedback as an alternative. You can also just leave written feedback in a Word file, which is accessible to assistive technologies, and upload it to Dropbox. More on [Accessibility in the Annotations Tool](#).

9) **Use D2L/Brightspace Accessibility Checker.** D2L/Brightspace Editor now has an [Accessibility Checker](#). The editor is available everywhere across D2L where you can create content, for example under Create a File in Content, in Discussions, and under Overall Feedback in Dropbox. By clicking on the Accessibility Checker icon (see below), you can view information about accessibility issues.



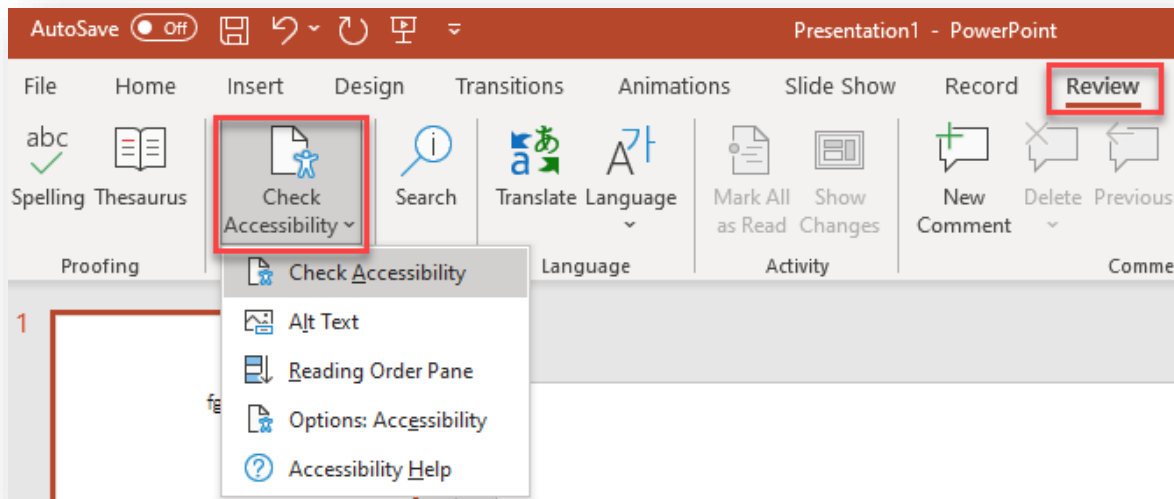
[More about Web Accessibility at D2L](#)

## Creating slides

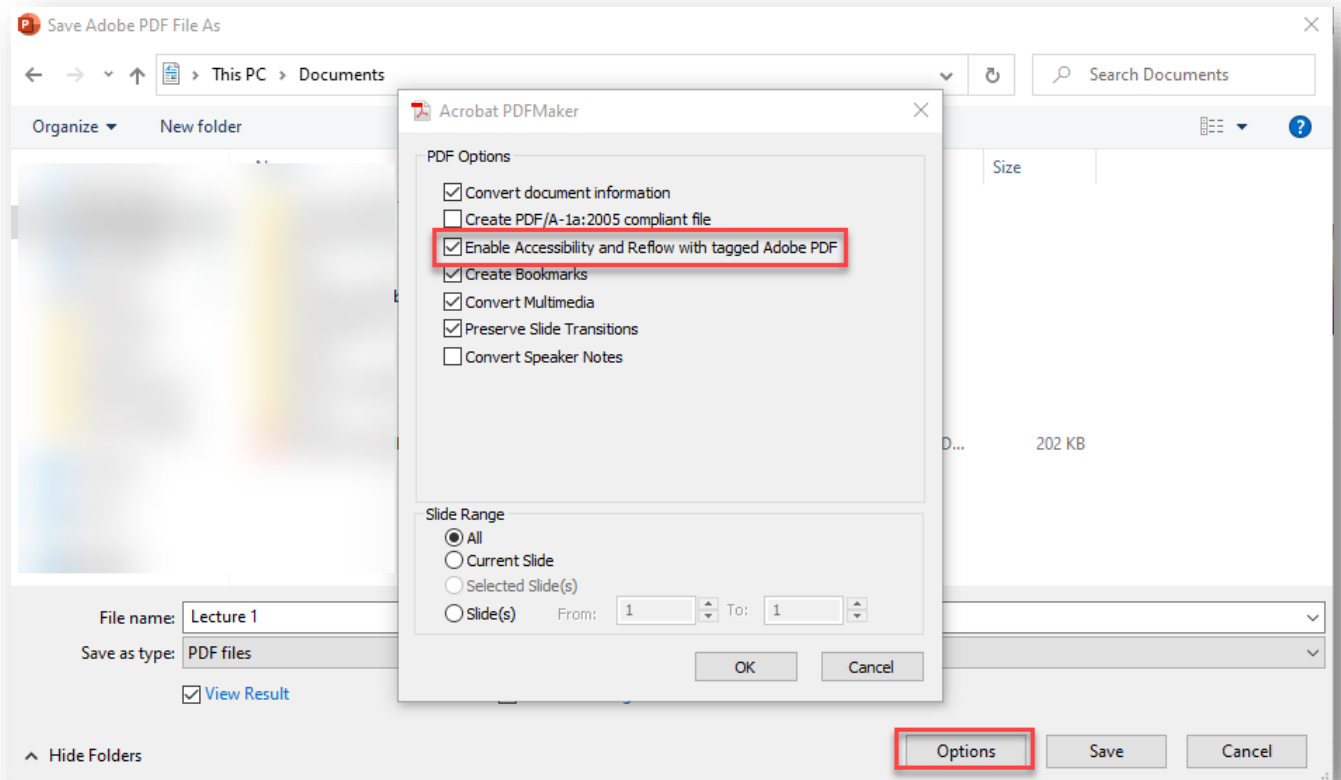
- 1) **Give each slide a unique name.** Students with visual and reading disabilities rely on slide titles to navigate.
- 2) **Use large (18pt or larger), bold, sans serif fonts.** The most accessible fonts are Tahoma, Calibri, Helvetica, Arial, Verdana, and Times New Roman. Slab serif fonts including Arvo, Museo Slab, and Rockwell are also considered to be accessible. These font types are mostly used in headings rather than the body text. [More on accessible fonts](#)
- 3) **Use high contrast for text and background** colours so that they can be distinguished by the colour blind (e.g. black and white; bright font colours against a pale background). Use this free [Colour contrast analyzer](#) to optimize your content for individuals with colour-blindness or low vision impairments.
- 4) **Do not rely on colour only** to convey meaning because low vision and colour blind students may miss out on the content.
- 5) **Use built-in slide designs** for inclusive reading order, colors, and more. [Video: Use accessible colors and styles in slides](#)
- 6) **Keep your paragraphs short.** Do not clutter your slides with too many elements.
- 7) **Provide alternatives to tables.** [Microsoft recommends avoiding tables](#) to make Powerpoint presentations more accessible for screen readers. However, while tables are harder for a screen reader, they can be a great way to convey complex information and

are a recommended strategy for learners understanding information in a less narrative way. If you choose to use tables, please provide the same information in written format as well to give students options.

- 8) **Check Accessibility** while you work using the Accessibility checker in Powerpoint. The Accessibility Checker runs automatically in the background, giving you reminders. To run it manually, please go to **Review - Check Accessibility**.



- 9) **Include accessibility tags in PDF files** that you create from your presentation. When saving the presentation as a pdf, make sure that under Options, the box “Enable Accessibility” is checked (please see the screenshot on the next page). The tags make it possible for screen readers and other assistive technologies to read and navigate a document.



You can also save the presentation in a format that can be exported to a Braille reader. For more detailed instructions, see [Video: Save a presentation in a different format](#) or [Create accessible PDFs](#).

More information:

[Make your PowerPoint presentations accessible to people with disabilities - Microsoft Support](#)

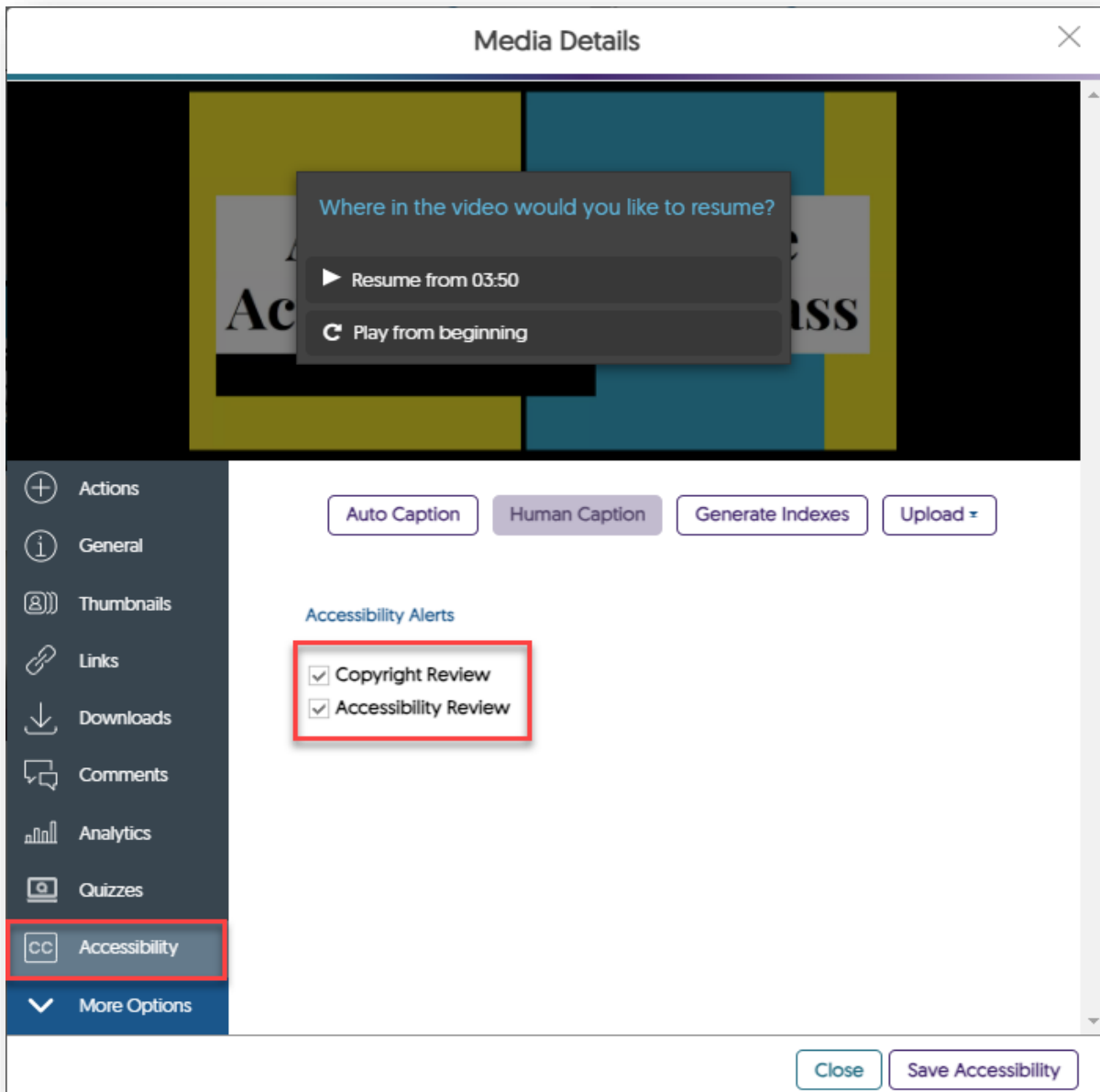
Google Workspace: [Accessibility for Google Docs, Sheets, Slides, & Drawings - Computer - Google Docs Editors Help](#)

- 10) **Share slides early.** Consider sharing the slides ahead of the lecture so that students have time to go over them before class starts. This will make it easier for them to process new information, take notes and make their learning more effective.

## Creating videos

- 1) **Caption videos and transcribe audio content.** This is possible both in YuJa, our video creation and hosting platform, and videos created from PowerPoint. Hover over the video you wish to make accessible and click More. Next, select Accessibility in the window that will appear. This is where you can add captions, generate indexes and set accessibility alerts.





MS PowerPoint: [Use captions, subtitles, and alternative audio tracks in videos](#)

YuJa captioning: [Requesting Auto-Captions – YuJa Help Center](#)

- 2) **Create captions in different languages.** YuJa supports multiple caption files in different languages.
- 3) **Use the [Copyright and Accessibility Review](#) in YuJa** to set up accessibility alerts for video content.

- 4) **Show your students how to use [Accessibility features in YuJa Media Player](#)** such as caption bar settings (Font Colour, Scaling, Opacity, etc.), ability to move the caption bar and keyboard shortcuts.

## Creating interactive content

Instructors use interactive activities to create a more engaging learning experience and encourage active student participation. Yet, not all interactive activities are accessible to all learners. **Consequently, our general recommendation would be to provide accessible alternatives for your interactive activities in such formats as Word or pdf with adequate structure accessible to assistive technologies.**

If you decide to assess activities created with the tools described below, only use them for low-stakes assignments and again give students non-interactive accessible options.

### Top Hat

- 1) **Use fully accessible question types when creating quizzes in Top Hat** such as:
  - Multiple Choice
  - Word Answer
  - Numeric Answer
  - Fill in the Blanks
  - Sorting
  - Long Answer
  - File Submission
- 2) **Do not set a timer on Top Hat questions** as you cannot provide additional time to students who require accommodations.
- 3) **Include headers in Top Hat Pages activities and Tests.** Visually impaired students can then use the rotor functionality on their screen readers to quickly inspect all of the headers on the Page or Test, to get an accurate sense of the length of the document they are about to engage with and how they should go about navigating it.
- 4) **Add alt text for images and closed captions for media.** See Adding Content to D2L sections 1 and 2.
- 5) **Slides presented in Top Hat** are currently NOT accessible to students using screen readers. Make your slides available to students outside of Top Hat prior to lecture. Students using screen readers will be able to have your slides open in an accessible format alongside Top Hat when the answering questions live in-class.
- 6) Math questions written using LaTeX are not accessible to students using screen readers. However, math written directly into Pages and Tests is accessible to screen

readers. **Write your math questions in Top Hat Page or Test** itself prior to the question and then make reference to the math in the question stem.

More: [Access-and-Equity-with-Top-Hat.pdf](#); [Platform Accessibility & Inclusion \(tophat.com\)](#)

## H5P – Third-Party Tools

Interactive content can be created using third-party tools such as [H5P.org](#) or [Lumi Education](#). These H5P authoring tools allow you to create a wide variety of interactive content for the web, including crossword puzzles, flashcards, matching games, branching scenarios, and hotspot selection challenges. However, not all of the activities are accessible.

A list of content types recommended by the H5P team for their accessibility can be found here: [Content types recommendations – H5P](#)

## More on creating accessible Word and PDF documents

[Accessibility in Microsoft Word](#)

[Accessible PDFs](#)

## References

*Accessible Canada Act*. (2019, June 21). Justice Laws Website, Government of Canada. <https://laws-lois.justice.gc.ca/eng/acts/a-0.6/page-1.html?wbdisable=true>

Bearman, A. (2023, Feb 3). *Promoting access to diverse learning opportunities through open resources, equity, and accessibility*. Faculty Focus. <https://www.facultyfocus.com/articles/educational-assessment/promoting-access-to-diverse-learning-opportunities-through-open-resources-equity-and-accessibility/>

Curry, C. (2023, n.d.). *Understanding the definition of accessibility*. American Consortium for Equity in Education. <https://www.ace-ed.org/understanding-the-definition-of-accessibility/>

ECampusOntario. (2023, n.d.). *Designing and developing high quality student-centred online/hybrid learning experiences*. <https://opentextbooks.uregina.ca/qualitycourses/chapter/aoda-standards-and-how-to-apply-them-to-your-course-design/>

Government of Canada. (2023, Sept 1). *Towards an accessible Canada*. <https://www.canada.ca/en/employment-social-development/programs/accessible-canada.html>

Pagaling, R., Eaton, S.E., & McDermott, B. (2022, April 4). *Academic Integrity: Considerations for Accessibility, Equity, and Inclusion*. University of Calgary. Calgary, Canada. <http://hdl.handle.net/1880/114519>

University of Minnesota. (2023, n.d.). *Accessibility vs. Accommodation*.

<https://accessibility.umn.edu/importance-accessibility/accessibility-vs-accommodation>