

Improving Access: Best Practices for Developing Course Materials with an Online Component

Office of Academic Innovation

Disability Support Services

Disability Advisory Committee

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Introduction

At Towson University, we are committed to making courses accessible to all students and have adapted this checklist of best practices to help faculty members think through and improve accessibility for courses. It is based on the fifth edition of the Quality Matters (QM) Rubric*, used in a collegial process for promoting quality in online/blended courses, which includes the following five key standards* in online course accessibility:

- Course instructions articulate or link to the institution’s accessibility policies and services (QM Standard 7.2).
- Course navigation facilitates ease of use (QM Standard 8.1).
- Information is provided about the accessibility of all technologies required in the course (QM Standard 8.2).
- The course provides alternative means of access to course materials in formats that meet the needs of diverse learners (QM Standard 8.3).
- The course design facilitates readability (QM Standard 8.4).

Online teaching allows students with disabilities to participate in a myriad of courses without limitations imposed by time and physical location. However, new technologies have brought with them modes of communication and media that are inaccessible to students with disabilities and can outstrip the abilities of various assistive technologies used by these students to make content accessible, such as screen readers, computer screen adaptations, and special keyboards.

These recommendations are based on the principles of Universal Design for Learning, which promote student success by making learning more accessible for everyone, including students with diverse abilities, backgrounds, and learning styles. Designing courses from the start with accessibility in mind will enhance the learning experience of all students, not just students with disabilities.

This document was adapted from The George Washington University’s *Accessibility Best Practices for eTeaching*. Towson is grateful to the Teaching and Learning Collaborative at The George Washington University and author Patricia Low Dinneen for permitting the use of this resource. Many members of the Towson community contributed their time and expertise to develop this document.

This document includes information from several sources concerned with accessibility, including the following:

- [Quality Matters](#)TM Rubric Standards*
- [CANnect](#)
- [National Center on Accessible Instructional Material](#)
- [National Center for Accessible Media](#)
- [CAST](#)

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We hope you find these best practices helpful. Additional materials will be added to [Towson’s Accessibility website](#) as they become available. We invite you to send additional resources and suggestions to the Disability Advisory Committee via [Disability Support Services](#) (DSS). DSS is also available to answer questions about accessibility and accommodations for students.

Communicating with Students about Accessibility

QM Standards Addressed:

- **7.2: Course instructions articulate or link to the institution’s accessibility policies and services.**
- **8.2: Information is provided about the accessibility of all technologies required in the course.**

As courses with an online component continue to evolve, instructors will face many choices as they select the electronic tools and media to best support their learning objectives. The intent of these QM standards is to ensure that the learning management system and the tools and media selected are accessible to students with disabilities.

Before classes begin

Students with disabilities should have course information early in order to anticipate and plan for any special needs, particularly the need for accommodations. Students need to be able to determine in advance if the technology/media used in the course will be accessible to them (e.g., captioned videos for a deaf student) and if the technology used in the course is compatible with any assistive technology they use (e.g., a screen reader for a blind student or student with a learning disability).

- List all of the technology/media tools required in your course and provide information about their accessibility. A list of TU supported online course technologies will reside on [Towson’s Accessibility website](#). If you plan to use other technologies than those supported by TU, include a link to accessibility information or accommodation features (usually listed on their websites).
- When developing your course, be aware that significant lead time may be needed by DSS to plan and implement accommodations, such as a modification or adjustment to enable a student to access online synchronous technologies (see page 6). Generally, more lead time is needed to implement accommodations in an online course than in a traditional face-to-face classroom setting.

Syllabus

- Since your syllabus is a prime communication vehicle for informing students about course expectations and where to find help during the course, make it available to students as early as possible, preferably at least two weeks before class begins.
- Ensure that you have a statement in the course syllabus that tells online students how to request an accommodation through TU’s Disability Support Services. A sample syllabus statement for an online course could read:

If you have a disability, please contact me to discuss your specific needs. A memo from Disability Support Services (DSS) authorizing your accommodations will be needed. Please note that accommodations needed for an online class may be different than those needed for a traditional classroom setting, so it is important that you work with DSS to determine appropriate accommodations for this course as early as possible.

For more information about services available to TU students with disabilities, contact:

[Disability Support Services](#)

Administration Building, Rooms 232-235

Phone: 410-704-2638; <http://www.towson.edu/dss>

Addressing and Accommodating Differences

QM Standard Addressed:

- **8.3: The course provides alternative means of access to course materials in formats that meet the needs of diverse learners.**

Although courses should be designed from the start with accessible technology/media, there will continue to be accessibility issues as the industry continues to catch up with federal standards. In addition to accessibility issues with commercial products and services, there may be accessibility issues with the assistive technology used by students with disabilities to access course content. Screen readers are used by many students with disabilities; unfortunately, it is common for technology/media to be inaccessible with them.

If a particular technology/media or other mode of presentation of course material is inaccessible or presents a barrier for a student with a disability, an alternative must be provided that will allow the student equal access to your course. Even if you have not received any disability-related requests, have alternatives ready. Better yet, universally design your course from the start with built-in alternatives, such as providing captions or a transcript for all videos.

The table below shows common course format barriers and accessible alternatives to remedy them.

Format	Barrier	Accessible Alternative
Printed text	Incompatible with screen readers used by blind/low vision students & students with learning disabilities (LD)	Supplement with audio
Audio	Hearing impaired students may not hear it; students with LD (auditory processing) may have difficulty understanding it	Supplement with printed text
Video	Blind/low vision students may not see it; hearing impaired students may not hear it; students with LD (auditory processing) may have difficulty understanding it	Provide description, captions or written transcript
Picture	Blind/low vision students may not see it	Add text that fully describes the image.
Synchronous discussion	Blind/low vision students, students with LD & ADHD, students with medical/physical & psychological disabilities may have difficulty following & keeping up	Use asynchronous format for all or some discussions to allow more time for processing & responding
Tests/Quizzes	Many students with disabilities have slower processing speed that impacts performance (e.g., LD and ADHD, medical/physical & psychological, blind/low vision, hearing impaired)	Provide extended time; Supplement with audio; Provide large text size option

General

- Solicit feedback from students to ensure the functionality of accommodations and to determine if any changes are needed.

Tests and quizzes

The most common accommodation for students with disabilities is extended time on tests.

- In Blackboard 9.1 or later, you can use the Test Availability Exception feature to provide select students with extended time on tests and quizzes.

Audio or video files

- Whenever possible, choose video and audio resources for students that are captioned. Captioning or written transcripts provide an alternative to non-text components of online pages. Captioning is the best option to ensure comprehension because words appear in the context of the original visual cues, as with subtitles. Be sure to check captions and transcripts for accuracy before using.
- If you choose to record audio or video, use tools that are compatible with captioning systems (e.g., Panopto and YouTube videos can be captioned). Again, check captions for accuracy before use.
- Captioning and transcription services are available on the TU campus. If you need captioning or a transcript as an accommodation for a student with a disability enrolled in your course, you can request them by contacting DSS. If you need captioning or a transcript that is not intended specifically for a student with a disability enrolled in your course, you can request funding for captioning and transcription services by contacting the TU Division of Marketing and Communications.

Synchronous classroom tools with audio and visuals (e.g. WebEx or Lync)

- Online synchronous technologies (e.g. web-conferencing tools, where groups can share documents and screens, and communicate via voice, video, text, polls, etc.) are rarely accessible and provide a number of challenges to students with disabilities. For example, hearing impaired students would require a real-time transcript of any communication, a sign-language interpreter via video, or access to the Maryland Relay service. Synchronous communication tools are often incompatible with screen-readers, which would exclude blind/low vision students and pose issues for students with LD who use screen readers to enhance comprehension. Therefore, it is recommended that synchronous communication tools be used to enhance online curriculum, rather than being a required part of the curriculum. If synchronous communication tools are used as a requirement, a way must be found to provide a student with a disability equal access to participate. DSS should be contacted as soon as a student's needs are known, preferably well in advance of the start of class, so an effective accommodation can be put into place.
- With the principles of Universal Design for Learning in mind, be aware that other students (e.g., students with English as their second language, nontraditional students) may have trouble accessing the content, and provide appropriate visual and audio content in an alternative form.
- When using audio, encourage students to identify themselves whenever they speak by microphone.

Flash-Based Content

Very few flash-based tools provide content that is fully accessible “out-of-the-box” to both the keyboard alone and to a screen reader.

- Since the majority of Flash content on the web has not been produced with accessibility in mind, it is recommended that Flash-based content be used to enhance course content rather than being a required part of the course. If you do decide to use this tool as a requirement, a way must be found to allow a student with a disability equal access to participate. Therefore, present content in alternative formats such as a transcript, or preferably captioning when available.
- If you are creating Flash elements from scratch, consult the [Adobe](#) website.

Making Content Compatible with Screen Reading Software

The following topics describe practices that are necessary to help screen readers interpret content.

Images

The guidelines below pertain to all non-text elements, including charts, graphs, mathematical/scientific notations, photos, and any other elements saved in a visual format.

- Assign alternative text (alt text) to all visual elements, whether in Microsoft Word, PowerPoint, in Blackboard, within a test or email, or elsewhere. The purpose of alternative text is to explain the meaning of an image when someone cannot view the image directly.
- Extended text descriptions may be needed for complex images.
- Visit the [alternative text section](#) of WebAIM’s website for a full set of guidelines.

Basics for all documents and Web tools (including Blackboard)

There are a few simple formatting techniques that highly impact students’ abilities to navigate documents with screen readers.

- Use preset “Styles” for marking headers and lists. Styles give documents a structure of headings that can be paged through by a screen reader. Style elements like ‘Heading 1’ or ‘Title,’ applied consistently and read by a screen reader, orient students to where they are in text-based materials.
- Instead of using the TAB key, the spacebar, or the Enter key to create desired formatting, use built-in tools. For example, in Word, center text using the Align Center tool. When creating lists, use the preset list and outline functions so that items are automatically numbered. Instead of adding space between pages by clicking the Enter key multiple times, add a page break.
- Wherever links are used for navigation or to direct students to a website, provide a meaningful name for the link. Either use the **Insert Hyperlink** function to replace the web site address (URL) with a textual name (e.g., [Towson University](#) in place of <http://www.towson.edu>) or provide both the title and the hyperlink. A meaningful link should clearly convey what students can expect to find at their destination page.
- If you link to external websites, consider whether those sites are designed with accessibility in mind.

Tables

For tables to be properly interpreted, the user needs to proceed logically through headings and corresponding data. Therefore, formatting tables requires these formatting steps for use with a screen reader:

- Instead of creating columns by using the TAB key or the spacebar, use built-in tools. For example, to create a table in Word, use Insert, Table.
- When data is displayed in a table format, include column and row titles, and specify the header row.
- For complex tables, provide a brief overview of how data has been organized as alternative text under Table Properties.

Microsoft Word/Excel/PowerPoint Documents

There are a few simple formatting steps that greatly impact students' ability to navigate documents with screen readers.

- Starting with the 2010 versions of Word, Excel, and PowerPoint, Microsoft provides both accessibility guides and [Accessibility Checkers](#) to help you detect and correct issues. For more information on creating accessible Microsoft files, refer to [Microsoft Help](#) and search using keywords, "creating accessible Word" (or PowerPoint or Excel). WebAIM also provides a helpful [guide](#) for Word documents.
- If you want to convert a Word document to an accessible PDF, ensure the Microsoft Word document is properly formatted using the guidelines above.

PDF (portable document files)

- Documents scanned to PDF can either be treated as images or deciphered with text-recognition software. When scanning a document, choose to use text-recognition options. Otherwise, scanned documents will be treated as images, which are NOT accessible.
- If you are converting a Microsoft Word document to a PDF format, ensure the document is accessible first using the guidelines above.

Blackboard

- When copying text from a program like Microsoft Word, it is best to remove formatting by first copying and pasting the text through a simple editor like Microsoft Notepad. You can also use the Remove Formatting tool in the WYSIWYG editor.
- Complete "Alt text" options for images and hyperlinks.
- Use "Style" settings for text in the Blackboard WYSIWYG editor.

Designing an Effective Course Layout and Visual Design

QM Standards Addressed:

- **8.1: Course navigation facilitates ease of use.**
- **8.4: The course design facilitates readability.**

The manner in which content is organized and displayed in a course can provide a helpful structure to assist students in locating materials. Consistent with the principles of Universal Design for Learning, a simple and intuitive design can facilitate learning for all students.

Course elements and navigation

- Ensure students can move through the course logically and efficiently. This can be done by organizing course content in a consistent manner.
- Keep font styles, sizes, and orientations consistent throughout your online course pages. This is best accomplished by using preset Styles in Blackboard and other page design tools.
- Minimize the number of clicks required to access materials, especially those that are frequently used (e.g. in Blackboard, add a link to grades to the course menu).

Color, visuals and animation

- Avoid having text or visuals flicker, as flickering animations can be a trigger for seizures.
- Use clean, readable fonts such as Arial and Helvetica, and avoid embellished fonts like Comic Sans and decorative serif fonts.
- Use color combinations that provide sufficient contrast between foreground and background.
- Use graphics and animations to demonstrate abstract concepts or illustrate ideas without causing distraction from the materials. Provide accompanying descriptions of the animation in text.
- Use formatting (how content is arranged on the page), graphics, and animation to serve specific instructional purposes, rather than as decorations.
- If color-coding is used, provide an additional means to communicate those distinctions, such as labeling or symbols.