



# Accessibility Guide for UMass Instructors

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[help.madcapsoftware.com](http://help.madcapsoftware.com)

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# Introduction to Accessibility

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## Why is accessibility important in academia?

Before many of the disability and rehabilitation acts were passed, access to welcoming and inclusive academic education remained a very exclusive privilege. Access to buildings, student resources, and even education eligibility could be hindered based on one's disability. Thankfully, after years of



protests from disability activists, the Rehabilitation Act of 1973 was passed, becoming one of the first and most influential laws for disability rights. Section 504 of the Rehabilitation Act of 1973 requires that all educators must accommodate all students with disabilities for the right to equal academic opportunities. You can learn more

about this act by accessing the [ADA website for the Rehabilitation Act of 1973](#).

However, you should not just follow the Section 504 guidelines simply because it's the law. It's really important that you make sure to design your courses, documents, and materials inclusively and with everyone in mind. For a very long time, and even still today, many students have had to 'self-adapt' to their work and school lives in order to succeed. Being a professor is

difficult, and being a professor that accommodates many different backgrounds and experiences is even more challenging. Accessibility might at first seem tedious or counter-intuitive once you start to design accessible documents, but in the long run, you'll be helping both you and your students by creating the best, most inclusive documents out there.

For more information on why accessibility is important, go to the Resources page of this guide to see the compiled list of links pertaining to good accessibility practices.

## Different approaches to accessible design

People usually approach accessibility through something called the medical model, which tries to indicate thresholds and spectrums of “normal” human functions to diagnose disability. While this approach is helpful for a doctor who is tasked with diagnosing disabilities, society does not need to look at other human beings through a lens of who has “normal” functionality. Instead, you should try to approach disability through the Social model.

### **Adopting the social model with disability awareness**

The social model puts the focus on society’s shortcomings with inclusivity for disabled peoples. Instead of viewing disability as something that needs to be remedied due to an individual person’s abilities, remedies and ramifications on the people’s environment is needed instead. This allows society to anticipate the needs of all users so equitable involvement can be done for the entire population, regardless of one’s disability. This is crucial for an academic setting! No student should feel disadvantaged because of their disability, and it’s important to not diagnose students’ abilities yourself; it's best to leave that job to medical professionals.

## **Resources for learning about disability awareness and inclusive design**

Microsoft has a great resource for using inclusive design when creating your projects and documents. Use their [Inclusive Design website](#) to learn more about what makes approaching accessibility through a social and inclusive lens important.

A helpful practice for approaching accessibility through the social model is to use user profiles when designing your documents. User profiles help designers create their projects with specific people in mind, all of which have their own accommodations and needs that must be met. [UX Magazine's article on a Web for Everyone](#) is a great link and resource to use for designing your documents with user profiles in mind.

## Consistency in document design

Everyone likes consistency in their work and school environments. When it comes to designing your documents for class or for your colleagues, it's important to make sure you organize and create your information in an easy to understand and navigable manner. It can be very unfortunate when a student has trouble navigating an inconsistent document, and we want to make sure that no student ever feels left out or confused when it comes to understanding the courses you create. Having inconsistency in document design causes errors in accessibility programs and tools that students use, and it's important that we create our documents for students' needs. Clear and consistent navigation in your courses will allow students to focus on your content rather than on how to find it.

Adhering to web accessibility guidelines while developing your online course will benefit all students, including those with visual, hearing, mobile, and learning disabilities. At first, it might feel tricky to adopt this new habit of styling your documents in clear, defined layouts with organizational tools. However, it's truly easier for everyone; for both you and your students!

"Requiring use of an emerging technology in a classroom environment when the technology is inaccessible to an entire population of individuals with disabilities... is discrimination prohibited by the Americans with Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973 (Section 504) unless those individuals are provided accommodations or modifications that permit them to receive all the educational benefits provided by the technology in an equally effective and equally integrated manner."

Make sure you understand the laws behind creating accessible documents by reading the currently established accessibility laws. The ones most important for your purposes are the [Americans with Disabilities Act](#), the [Rehabilitation Act](#), and the [Individuals with Disabilities Education Act](#).

## The Anatomy of an Accessible Page

**Heading 1** → Syllabus

**Heading 2** → DL 101 - Introduction to Online Learning

**Heading 3** → Course Information:

- Course Title: Introduction to Online Learning
- CRN: 12345
- Credits: 3
- Term: Winter 2014

**Format lists as proper lists**

**Heading 3** → Instructor Information:

Hello! My name is John Doe, and I'll be your instructor for this course. I've taught this course online for the past two years. Each time I teach it, I learn something new.

**Add Alternative (Alt) text to images**



John Doe  
Instructor

**Heading 3** → Assignments/Assessments:

**Heading 4** → Grading Scale

Grade	Grading Scale by Points	Grading Scale by Percentages
A	202 - 225 +	90 - 100%
B	180 - 201	80 - 89%
C (or P)	157 - 179	70 - 79%
D	135 - 156	60 - 69%
F (or NP)	< 134	< 59%

**Table Column Header**

**Table Row Header**

**Heading 4** → Late Work & Make-up Policy

Assignments must be completed on time in order to earn full credit.  
(Late assignments will earn 50% credit.)

**Sufficient Color Contrast**

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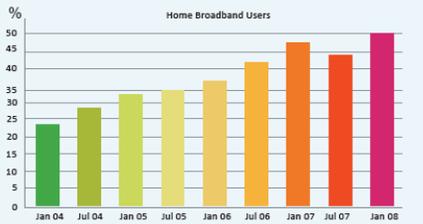
**Write meaningful link texts**

**Heading 3** → Special Accommodations:

Students who experience disability-related barriers should contact [Disabilities and Deaf Services \(osd@hcc.edu\)](#). If students elect to use approved academic accommodations, they must provide in advance formal notification from Disability Services to the instructor.

**Heading 2** → DL 101 - Online Learning Best Practices

**Heading 3** → Best Practices when using complex graphics:



**This graph summarizes the growth using home broadband during the period of January 2004 to 2008. The percentage increased from 22% in 2004 to 48% in 2008.**

**When using complex images, include Alt text as you would for any other image but also include additional description as a caption. If more description is needed, include it in the content of the page.**

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## Visuals and color

Visuals are incredibly essential when focusing on document design. How you format your visuals affects how assistive technologies and mobile devices present information to the user, and you always want your information to be displayed as it's meant to be presented. Properly formatted documents are more understandable and accessible, and properly formatting your images and visuals is extremely crucial.

### **Alt-text**

One of the most important parts of images in document design is alt-text. Alt-text is written to explain and capture the essence of an image for screen readers or for students who access documents and websites solely through text. It's important to use alt text that accurately describes the image that you are using. Without alt-text, a user might completely miss a very crucial piece of information that is only made available via an image.

### **Visuals and color contrast**

In addition to using proper image formatting, a good rule of thumb for your document design is to avoid distracting blinking content such as gifs, as it can cause seizures to occur in people with photosensitive disorders.

Lastly, use enough color contrast between your font colors and background colors. Without sufficient color contrast, people who have low-vision or are color blind will have a hard time reading your content. Go to [WebAIM's color contrast checker](#) to test the colors you want to use for your document. You can also use the [Web Accessibility Guidelines color contrast page from STVDIO](#) to find good color contrast examples for text and backgrounds. For regular Word documents and academic papers, generally sticking to one or two colors is best. Using too many colors can be distracting for your students. When in doubt, simple black text on a white background always works wonders.



# Word

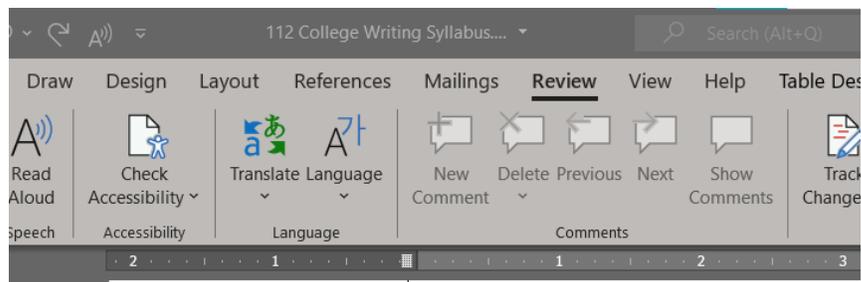
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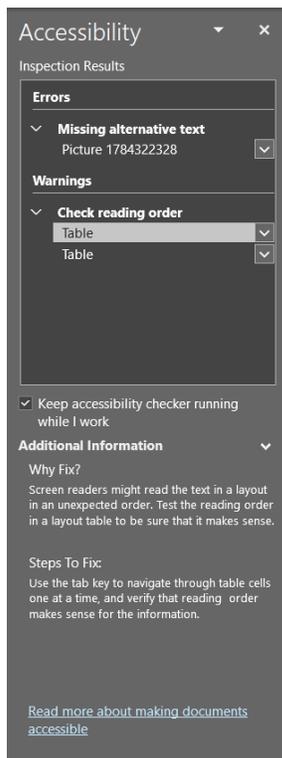
## Checking for proper accessibility in Word

When designing your documents, you might miss an accessibility feature here and there. Always use Word's accessibility checker after you've finished working on a document.

1. Go to the Review tab.
2. Select the Check Accessibility section.



3. Click on the Check Accessibility button.

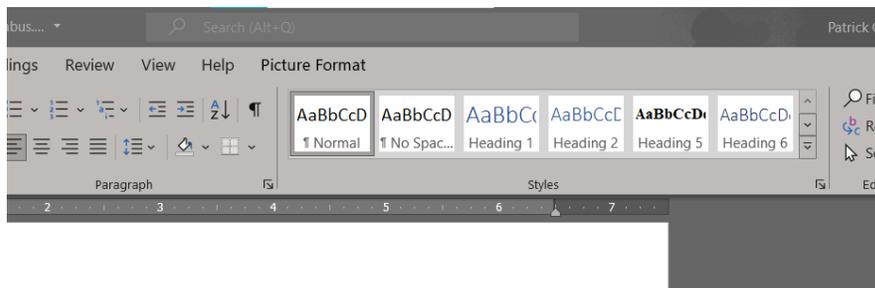


4. Fix any errors in the Accessibility panel. The accessibility checker provides you with a list of errors, warnings, and tips. When you click on an error or warning, instructions on how to fix it appear below in "Additional Information".

# How to create Headings with Styles

Headings are very important for organizing an informational hierarchy in your documents. Headings also help screen readers properly organize and read aloud titles on the page. In order to properly use headings in Word, you must use Styles.

1. Select the text that you want to make into a heading.
2. Go to the Home tab.
3. Choose the appropriate heading level from the Styles group.



## Additional Headings and Styles tips

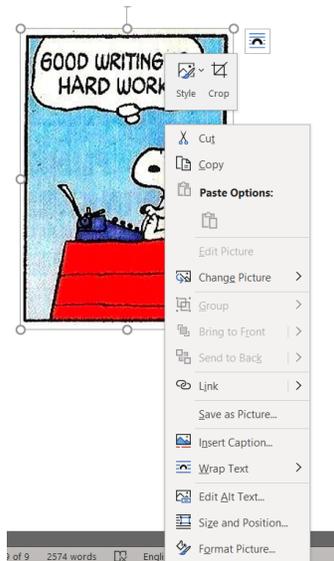
Heading 1 should only be used ONCE per page. Heading 2, 3, etc. can be used multiple times. (DO NOT skip heading levels!)



## Adding alt-text to images

Alt-text is used if the image is corrupt and does not show up on a document, and it used for screen readers and text based operating systems. Without alt-text, a student may be missing crucial information on a document. If your image only reinforces what is already said in your written text, you can omit alt-text by marking an image as decorative.

1. Right click on the image and select Edit Alt Text. If you want to change the format and position of an image, select Format Picture.

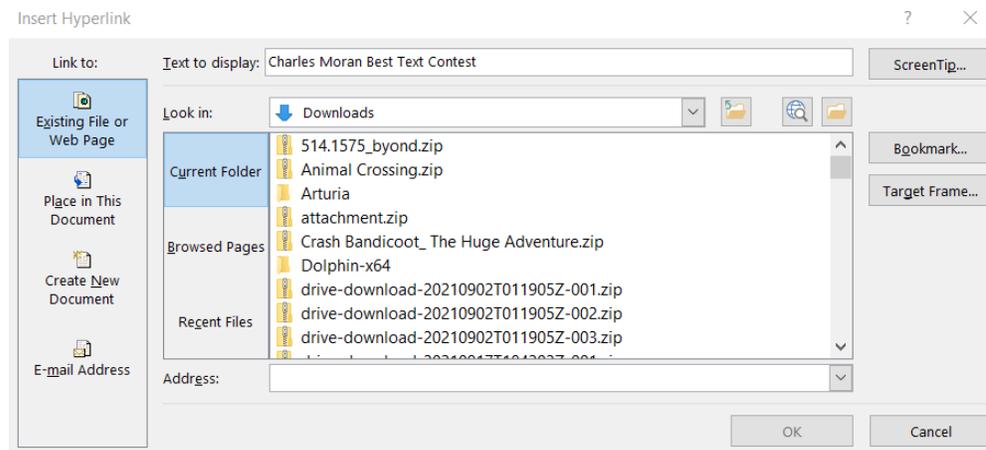


2. Write a detailed description of the image in the Alt Text Window. If the picture is fully decorative, mark the 'Mark as decorative' box so screen readers read the picture appropriately.

## How to add and edit hyperlinks

If you reference a separate website Word, you should create a hyperlink for that site. This allows students to easily click on your link and access the site you're referencing directly from your document.

1. Type out text that describes the destination of the link. Do not type 'click here' for a hyperlink, as that does not describe the link's destination and is inaccessible.
2. Select the text you want to create a hyperlink for, right click on the text, and choose the Hyperlink options from the menu.
3. Enter a URL address in the Address section of the Insert Hyperlink pop-up.



4. Click the OK button to save the link.

## Accessing the screen reader function in Word

Using Word's Read Aloud function allows you to hear how your document sounds with a screen reader, which is helpful for students who use text-to-speech programs or other types of screen readers. It can also be helpful for catching editing and syntax errors that are easier to notice when spoken aloud rather than read.

1. Go to the Review tab
2. Select the 'Read Aloud' Function to access Word's screen reader. There is a backwards and forwards button to move the location of where the screen reader reads, as well as a pause and play button.



3. Press the play/pause button to stop the reading. To adjust the screen reader's settings, click the speaker button with the cog. You can adjust the speed of the screen reader, it's volume, and the speaker's voice in the screen reader's settings.

# PDFs

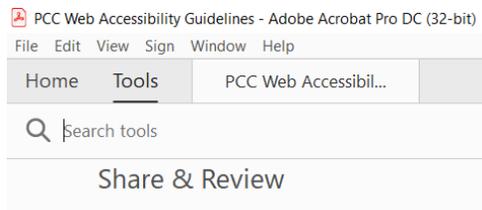
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## Accessibility checking PDFs

Before sending out your PDF documents to your students and colleagues, it's good practice to check if your PDF is fully and completely accessible. By using Adobe Acrobat DC's accessibility checker, you ensure that your PDF can be read by third party accessibility programs accurately and as intended.

1. Go to the Tools section.

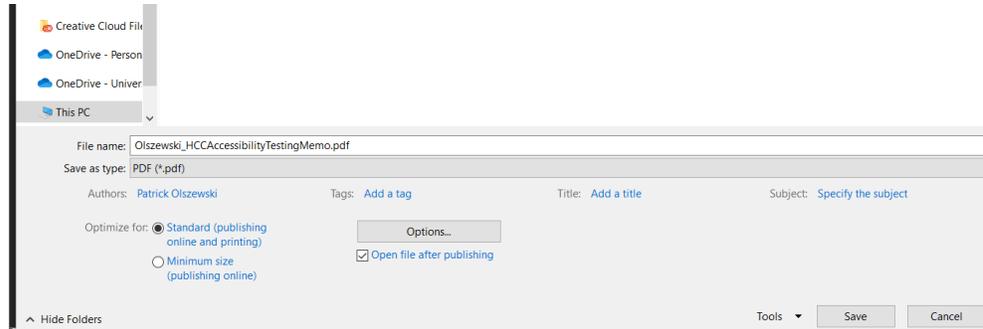


2. Open the Accessibility options.
3. Click the Accessibility Check option or the Accessibility Report, depending on the function needed.
  - Accessibility checking a document shows errors that come up in Adobe Acrobat DC and where to fix them. Usually this is the option frequently selected, as it displays all of the accessibility errors in your document and how to fix each individual error.
  - An accessibility report tests whether a PDF document passes many qualifications for proper PDF accessibility requirements.

## Converting a Word document to a PDF

Depending on what you need your document for, you can easily create a PDF of your finished Word document entirely in Microsoft Word.

1. Finish your document to be fully accessible in Word before converting it to a PDF.
2. Click the File tab and select Save as.
3. Select PDF in the Save as type field (\*.pdf.)
4. Fill out the File name field.
5. Click on the More Options button and then the ‘Options...’ button that appears. Make sure the boxes for ‘Document structure tags for accessibility’ and ‘Create bookmarks using Headings’ are checked.

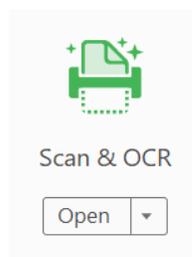


6. Click OK and Save. The new PDF is now tagged with all of the text formatting, meaning that your new PDF is fully accessible with page headings and lists to be correctly interpreted by a screen reader.

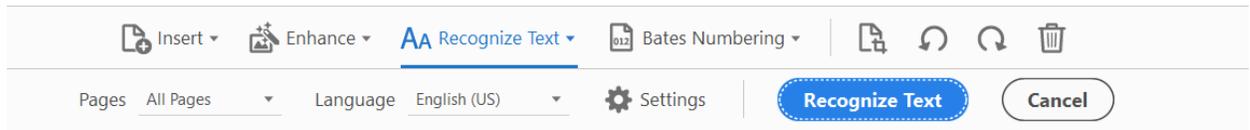
## Checking OCR support in Adobe Acrobat DC

OCR is an incredibly useful accessibility tool for scanned PDF documents, such as a chapter you've scanned in a book or a physically scanned article. OCR stands for Optical Character Recognition and is used to electronically convert images and text into a machine-encoded program, or in other words, text-based operating systems and screen readers. This means that text from a scanned PDF like a book chapter is recognized and able to be read aloud using OCR. Making sure your PDF documents are OCR approved is crucial for creating accessible documents.

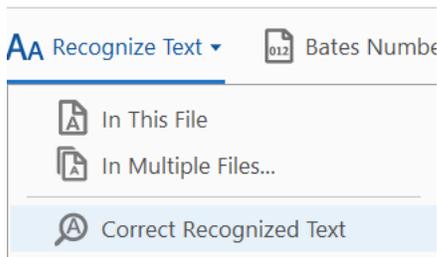
1. Open the scanned PDF file.
2. Open the Tools panel and click 'Scan & OCR.'



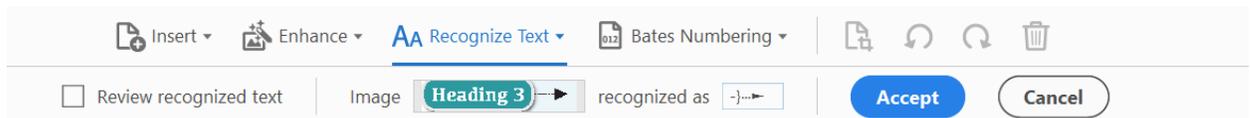
3. Click the Recognize Text button in the OCR window. Click 'In This File.'
4. Click the Recognize Text button in the new window and wait for the OCR to run through your entire document.



5. Go back to the first Recognize Text button and click 'Correct Recognized Text.'



6. Correct each problem in the new Correct Recognized Text window and select 'Accept' after each new error that pops up. This makes sure your document is absolutely accessible to all screen readers. You can also select text yourself to make sure it all reads correctly.



## Additional accessibility resources

- [Disability Services at UMass Amherst](#). Use this link to find more materials on how to create your courses and documents with accessibility in mind.
- [Disability Services Instructor Website for Courses and Accommodation letters](#). This link provides important online courses and documents for understanding campus's accessibility and disability services resources.
- [Instructional Design, Engagement and Support \(IDEAS\) Group](#). This link is useful for designing your courses with accessibility in an online setting.
- [UMass Amherst Faculty Handbook on Accessibility](#). Use this link to access UMass's full and comprehensive accessibility guide for faculty.
- [UMass Amherst Disability Resources for Students](#). Make sure to know what resources are available for your students with this link.
- [Web Content Accessibility Guidelines](#). For creating material for the internet and public access, use this link to view the proper accessibility guidelines for all web and public content.
- [Microsoft's Inclusive Design Website](#). This link is helpful for learning how to use inclusive design for online and print materials.
- [UX Magazine's article on a Web for Everyone](#) is a great resource to use for designing your documents with user profiles in mind.

- [WebAIM's color contrast checker](#). Use this link to test the colors you want to use for your document for proper color contrast.
- [Web Accessibility Guidelines color contrast page from STVDIO](#) is a great tool for finding good color contrast examples for text and backgrounds.
- [ADA website for the Rehabilitation Act of 1973](#).

## About the author



Hi! I'm a graduating senior at UMass Amherst studying English, technical writing, and creative writing. I first started my undergraduate education at Ithaca College, transferred to Holyoke Community College for my associate's degree in Liberal Arts, and then found my home at UMass Amherst. I grew up around Amherst myself, having gone to high school in South Hadley at the Pioneer Valley Performing Arts Charter Public School. If you ever want to know what's fun to do around the Pioneer Valley, I'm your guy.

When I'm not working on sound design or a technical writing project, you can find me writing fiction, poetry, and recording original music. I grew up playing jazz and R&B in high school and still pursue that passion today. You can learn more about me and my professional and creative work by going to my personal, [portfolio website](#).

Thank you for taking the time to read my manual! This project would not be possible without you.

# Colophon

This manual was written in English 381, a technical writing class at UMass Amherst during Patrick Olszewski's spring semester, 2022. It was written during Olszewski's final semester at UMass with the help of his wonderful team of fellow technical writing students. He has his peers to thank for their wonderful workshop suggestions and great collaborative skills. Teamwork makes the dream work.

This manual was written using MadCap Flare software. The manual is based on a current accessibility PDF document from Holyoke Community College. A lot of the topics on HCC's manual were tested and updated for this accessibility manual's construction. This manual uses Microsoft Word 365 and Adobe Acrobat DC as software examples for writing accessible documents.

All of the screenshots were taken by Olszewski using a Windows PC. All of the other photos are used fairly under the creative commons licensing for personal and commercial use. The color contrast image in the 'Visuals and color' topic page was used with CC licensing from Pixabay.

The manual's logo was designed using Adobe Illustrator. Times New Roman is the default font for all of the manual's font-family styling.



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