

ACCESSIBLE

INFORMATIONAL MATERIALS & TECHNOLOGIES (AIMT)

GUIDELINES

2021

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The Anatomy of an Accessible Page

Heading 1 → Syllabus

Heading 2 DL 101 - INTRODUCTION TO ONLINE LEARNING

Heading 3 Course Information:

Format lists as lists

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

Add Alternative (Alt) text to images

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.



Heading 3 Assignments/Assessments:

Heading 4 Grading Scale

Table Column Header

Table Row Header

Grade Scale	By Points	By Percentage
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%

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.)

Enough Color contrast

Writing meaningful link texts

Special Accommodations:

Heading 3

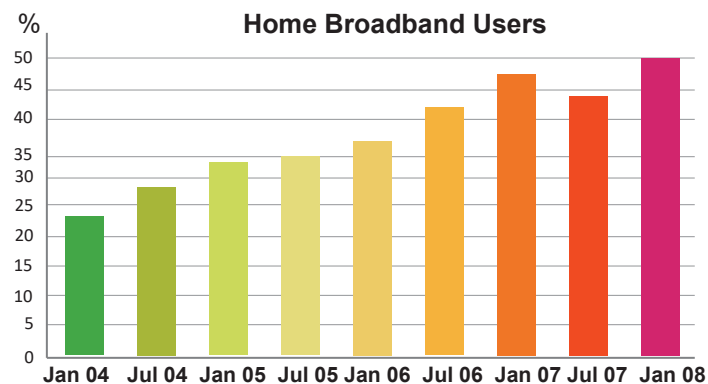
Students who experience disability-related barriers should contact [Disability Services](https://www.roanestate.edu/?5488-Disability-Services) (https://www.roanestate.edu/?5488-Disability-Services). If students elect to use approved academic adjustments, they must provide in advance formal notification from Disability Services to the instructor.

DL 101 - ONLINE LEARNING BEST PRACTICES

Best Practices when using complex graphics:

Heading 2

Heading 3



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.



Web Accessibility at Roane State Community College

Web Accessibility

Adhering to web accessibility guidelines while developing your online course will benefit all students, including those with visual, hearing, mobility and learning disabilities.

RSCC Web Accessibility Guidelines

The RSCC Accessibility Guidelines for Online Course Content, are based on the internationally accepted Web Content

Accessibility Guidelines AA standards (WCAG 2.0).
This handbook is a reference guide. For more information, visit <http://ctat.roanestate.edu/accessibility-in-online-courses-new/>

Required by Federal Law

“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.”

Source: 6/29/2010








Dear Colleague letter sent to every college and university president

<http://www2.ed.gov/about/offices/list/ocr/letters/colleague-20100629.html>












WEB Accessibility Guideline

Component	Guideline	Why is this Important?
 HEADINGS	Use properly formatted headings to structure a page.	Headings help to organize content, making it easier for everyone to read. Headings are also a primary way for people using screen reading software to navigate a page of text.
 LISTS	Format lists as proper lists.	Formatting is conveyed to assistive technologies and mobile devices so they can present information as it's meant to be presented. Properly formatted documents are more understandable and accessible.
 LINKS	Write meaningful link text.	Links embedded in text should describe the link's destination. This helps all users navigate more efficiently, especially screen reader users.
 TABLES	Create tables with column and/or row headers, and ensure a proper reading order.	<ul style="list-style-type: none">• Why Column Headers in a Data Table are Important Using table headers is important to conveying tabular data accurately.• Why the Reading Order in a Table is Important Screen readers read tables from left to right, top to bottom, one cell at a time (& only once). If cells are split or merged, it could throw the reading order off which may make the table difficult to comprehend by users who are blind & using a screen reader to navigate.
 COLORS	Use sufficient color contrast. Don't use color alone to convey meaning.	Without sufficient color contrast between font and background, people who are color blind and low vision will not benefit from the information. And using color alone to convey meaning will leave those who are color blind or blind unable to interpret the meaning.
 KEYBOARD	Ensure that any action that uses a mouse can also be completed using only the keyboard.	Mobility and visual disabilities often make using a mouse impossible or ineffective. If content is not keyboard accessible, it will limit who can learn from the content.
 IMAGES	Provide alternative (Alt) text descriptions for images.	Alt text is read by a screen reader. It should adequately describe what is being displayed and why it's important. This allows screen reader users to benefit from the information being conveyed by the image, even if they cannot see it.





WEB Accessibility Guideline

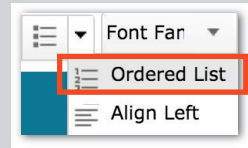

Component	Guideline	Why is this Important?
 NAVIGATION	Design clear and consistent	Clear and consistent navigation will allow students to focus on your content rather than on how to find it.
 BLINKINGS	Eliminate or limit blinking / flashing content to 3 seconds.	Blinking content is distracting, and it can cause seizures to occur in people with a photosensitive disorder.
 FORMS	<ul style="list-style-type: none">Label form fields and buttons clearly.Ensure a proper logical reading order in a form.	<ul style="list-style-type: none">Why the reading order of a form is important Using the tab key, your cursor should follow through the form in the same order it is intended to be completed. This benefits users who cannot use a mouse.Why labeling buttons and form fields is important A screen reader will identify the button or form field by reading the label. The label should adequately describe the button's action, and the form field label should indicate what information should be filled in to the form field.
 VIDEO	All video should be captioned/ subtitled.	Video captions benefit many viewers. Captions are essential for those who are deaf and hard of hearing, but they also aid in comprehension for non-native English speakers, those who are unfamiliar with vocabulary, and viewers with some learning disabilities or in a noisy environment.
 AUDIO	All audio should be transcribed.	Audio transcripts benefit many students. They are essential for those who are deaf or hard of hearing, but they also assist anyone who would like to read or search the transcript.
 SOFTWARE	Require only accessible software & applications.	Inaccessible software and applications will shut students with disabilities out.
 MATH & SCIENCE	Write math and science equations accessibly.	For web pages, use an equation editor that outputs MathML. For MS Word and PPT documents, use the MathType plugin.





HOW TO MAKE

Accessible D2L Web Pages

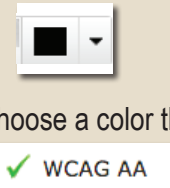
Component	Guideline	How to make it Accessible
Page Templates	<ul style="list-style-type: none">Use the Simple Bootstrap page template.	<ul style="list-style-type: none">When creating a File, Select a Document Template of Simple Bootstrap, then edit the content. (Recommendation: Type your content out accessibly in a Word doc and paste it in the Simple Bootstrap templated D2L page.)
Headings	<ul style="list-style-type: none">Properly format headings.Use headings in the correct order.	<ul style="list-style-type: none">Highlight the text and select the Heading # from the Format drop-down menu on the tool bar.There should be only one Heading 1 (h1) per page. But there can be multiple h2, h3, h4, h5, h6. DO NOT skip heading levels.
Images	<ul style="list-style-type: none">Add alternative (Alt) text to images.	<ol style="list-style-type: none">Place the cursor where you want to insert an image, and click the Insert image icon from the toolbar. The Add a File window will open.Browse to the image location and select the image file. Click Add button.The Provide Alternative Text window will open. Describe the purpose of the image in the Alternative Text field, or check the box if the image is just decorative.Click OK.
Lists	<ul style="list-style-type: none">Format a list as a list using Ordered or Unordered lists.	<ol style="list-style-type: none">Select the content you want to make into a list.From the toolbar, click the Unordered/Bulleted list icon if the order doesn't matter. Select Ordered List from the drop-down menu (next to the bulleted list icon) if the order does matter. 
Links	<ul style="list-style-type: none">Write meaningful link text that indicates the link's destination	<ol style="list-style-type: none">Highlight meaningful text for the link (ex. Pellissippi State)From the toolbar, click on the Insert Quicklink icon .Select URL in the Insert Quicklink window<ul style="list-style-type: none">Type in the URL (http://www.roanestate.edu).Click the Insert button. 





HOW TO MAKE

Accessible D2L Web Pages

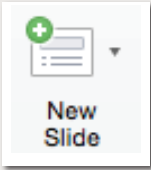

Component	Guideline	How to make it Accessible
Tables	<ul style="list-style-type: none"> Indicate column (or row) headers. 	<ol style="list-style-type: none"> Select each cell to be marked up as a row or column header Click on the drop-down menu next to the Table icon in the toolbar. Choose Cell Properties. The Table cell properties window will open. In the Cell Type field, click on the drop-down list and select Row Header or Column Header. Click Update when done.
	<ul style="list-style-type: none"> Add table caption. 	<ol style="list-style-type: none"> Select the table and click on the drop down menu next to the Table icon. Select Table Properties, and check Include Caption. Click Update when done and type your caption in the table cell created.
	<ul style="list-style-type: none"> Check the reading order. 	<ul style="list-style-type: none"> A screen reader reads tables from left to right, and top to bottom, never repeating a cell. Merged, nested, and split cells may alter the reading order of a table. Make sure you construct your tables in a way that accommodates a good reading order.
Color	<ul style="list-style-type: none"> Use sufficient color contrast. 	<ol style="list-style-type: none"> Select the text that you want to change to another color. Click drop-down menu next to the Apply Color icon in the toolbar. Select the color. <p>Note: When picking a color for your text in D2L, make sure you choose a color that registers with a green checkmark for WCAG AA in the Select a Color palette</p> 
	<ul style="list-style-type: none"> Don't use color alone to convey meaning. 	<ul style="list-style-type: none"> Don't use color alone to make a distinction, a comparison or to set something apart from the rest of the web page. If you categorize something by color alone, those who are color blind or blind will not benefit from the color distinction.
Math& Science	<ul style="list-style-type: none"> Write math and science equations using MathML. 	<p>Use the D2L equation editor.</p> <p>For more information, go to the Math & Science page in this handbook.</p>
Multimedia	<ul style="list-style-type: none"> Eliminate or limit blinking/flashing content to 3 seconds. Make sure all mouse actions can also be completed with a keyboard alone (without a mouse.) Use an accessible media player like YouTube. 	





HOW TO MAKE

Accessible PowerPoints

Component	PowerPoint
Outline View <ul style="list-style-type: none">• Check the outline view.	<ol style="list-style-type: none">1. Click View tab.2. In the Presentation Views group, click Outline View.3. In the Outline panel, make sure all text from the slides appears in the Outline View.
Slide Layout <ul style="list-style-type: none">• Use the PPT provided slide layouts when building slides to help your slide's reading order remain intact.	<ul style="list-style-type: none">• From Home tab, choose the New Slide drop down menu and select a slide template. (Don't use the Blank slide template.) 
Reading Order <ul style="list-style-type: none">• Ensure the tab order = the reading order	<ol style="list-style-type: none">1. On the Home tab, click on Arrange and choose Selection Pane.2. To see the reading order of the slide, tab through the slide and the corresponding element will highlight.3. To re-arrange the reading order, click arrow up/down button on the Selection Pane (Mac: drag layers.) Bottom layer is read first.4. Test reading order with the Tab key again.
Images <ul style="list-style-type: none">• Add alternative (Alt) text to images and shapes.	<ol style="list-style-type: none">1. Right click on the image and select Edit Alt Text (Mac: Right click on the image and select Format Picture. Under the Layout and Properties tab, select Alt Text.) 2. Enter appropriate alt text or mark as decorative. (Mac: Write a description for the image in the Description field. Don't use the Title field.)
Lists <ul style="list-style-type: none">• Format a list as a list.	<ol style="list-style-type: none">1. Select the text to make into a list and click on the Home tab.2. In the Paragraph group, select the Numbering or Bullets icon. Use Numbering lists if a sequential order is important. Use Bullets lists if all items are of equal value.







Accessible PowerPoints

Component	PowerPoint
Links <ul style="list-style-type: none">• Check the outline view.	<ol style="list-style-type: none">1. Type out text that describes the destination of the link (e.g., PSCC Homepage).2. Select the text, right click & choose Link (Mac: Hyperlink) from the menu.3. The Insert Hyperlink window will open. Enter a URL address in the Address field (e.g., http://www.pstcc.edu)4. Click the OK button to save the link.
Tables <ul style="list-style-type: none">• Check the reading order• Indicate column headers for data tables. <p>Note: A table in Slide Show view is not accessible. Use Alt text.</p>	<ul style="list-style-type: none">• A screen reader reads a table from left to right, & top to bottom (never repeating a cell.)• Merged, nested, and split cells may change the reading order of a table.• Construct your table in a way that accommodates a good reading order. <ol style="list-style-type: none">1. Place the cursor in the top row of your data table.2. Click the Table Design tab.3. In the Table Style Options group, select the Header Row check box.4. The cells in the top row of your table make up the column headers.
Color <ul style="list-style-type: none">• Use sufficient color contrast.• Don't use color alone to convey meaning.	<ul style="list-style-type: none">• Use enough color contrast between the text (i.e. black color) and the background color (i.e. white color).• Without sufficient color contrast, people who are low-vision and color blind will not benefit from the information. <p>Don't use color alone to make a distinction. If you categorize something by color alone, those who are color blind or blind won't benefit from the information.</p>
Math & Science <ul style="list-style-type: none">• Use MathType to write Math equations.	Use the MathType plugin http://www.dessci.com/en/ for MS Word to create math and science equations, formulas and notations. (DO NOT use MS equation editor.)
Video & Audio	Don't embed the video, instead, link out to videos.
Live Presentations	Use PowerPoint's auto captioning feature. <ol style="list-style-type: none">1. Select the Slide Show tab and check the Always Use Subtitles checkbox.2. Review the Subtitle Settings.





Check	Word Document
Headings <ul style="list-style-type: none"> Properly format headings. Use headings in the correct order 	<ol style="list-style-type: none"> Select the text that you want to make into a heading. Go to the Home tab. Choose the appropriate heading level from the Styles group. <p>Heading 1 should only be used ONCE per page. Heading 2, 3, etc. can be used multiple times. (DO NOT skip heading levels!.)</p>
Images <ul style="list-style-type: none"> Add alternative (Alt) text to images 	<ol style="list-style-type: none"> Right click on the image and select Edit Alt Text (Mac: Right click on the image and select Format Picture. Under the Layout and Properties tab, select Alt Text. ) Enter appropriate Alt text or mark as decorative. (Mac: Write a description for the image in the Description field. Don't use the Title field.)
Lists <ul style="list-style-type: none"> Format a list as a list 	<ol style="list-style-type: none"> Select the text that you want to make into a list. On the Home tab, in the Paragraph group, select the Bullets or Numbering list. 
Links <ul style="list-style-type: none"> Create a link that describes its destination 	<ol style="list-style-type: none"> Type out text that describes the destination of the link (e.g., RSCC Homepage). Select the text, right click & choose Link (Mac: Hyperlink) from the menu. The Insert Hyperlink window will open. Enter a URL address in the Address field (e.g., http://www.roanestate.edu) Click the OK button to save the link.
Math & Science	<ul style="list-style-type: none"> Use the MathType plugin http://www.dessci.com/en/ for MS Word to create math and science equations, formulas and notations. DO NOT use Microsoft's equation editor.





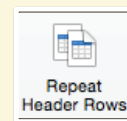
Check

Word Document

Tables

- Indicate column headers for data tables.

- Place the cursor in the top row of your data table.
- Click on the **Table Design** tab.
- In the **Table Style Options** group, select the **Header Row** check box.
- Under **Table Tools**, click the **Layout** tab.
- In the **Data** group, click the **Repeat Header Row** button. This will indicate the top row as the table's header.



- Check the reading order

- Screen reader reads a table from **left to right/top to bottom** (never repeating a cell.)
- Merged, nested, and split cells** may change the reading order of a table.
- Construct your table** in a way that accommodates a good reading order.
- To test the reading order, place your cursor in the first cell of the table. On the keyboard, press the **Tab** key repeatedly to navigate through the table. This will be the reading order that technologies will use.

Color

- Use sufficient color contrast.

- Use enough color contrast between the font and its background colors.
- Without sufficient color contrast, people who have low-vision or are color blind will not benefit from the information.

- Don't use color alone to convey meaning.

- Don't use color alone to make a distinction. If you categorize something by color alone, those who are color blind or blind will not be able to benefit from the information.

Forms

- Label form fields & buttons.

- Use a form template to create a form.
- Use real text labels for form fields and alternative text for buttons.

- Check the reading order of forms.

- Press the tab key repeatedly to check the order a screen reader would navigate through the form. If it doesn't land on the form fields in the correct order, you will need to edit the form.
- The tab order (or reading order) is important to those who are blind or physically disabled and rely on keyboard access.





HOW TO MAKE

Accessible PDFs

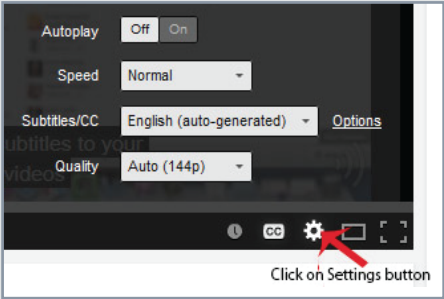
Method	Software/Hardware	How to Make it Accessible
Convert MS Office to an Accessible PDF document	<ul style="list-style-type: none"> Microsoft Office 	<ol style="list-style-type: none"> 1. Start with an accessible word document or presentation. 2. Click the Acrobat tab (if you have one) and select Create PDF. Or choose Save As a PDF format before clicking Save, click on the More options link. 3. Enter a file name in the File name (Mac: Save As) field. (For Mac: This is the last step.) 4. Click on Options button. (This step & the following steps are not available on Mac version) 5. If you saved using an Acrobat tab, make sure Enable Accessibility and Reflow with tagged Adobe PDF is checked. If you saved using Save As, make sure Document structure tags for accessibility is checked AND Bitmap text when fonts may not be embedded is UNCHECKED.. 6. Click OK and Save. This will tag all of the text formatting, so page headings and lists are correctly interpreted by a screen reader.
Run Optical Character Recognition (OCR) on scanned document	<ul style="list-style-type: none"> Adobe Acrobat Professional (Version Pro DC) 	<ol style="list-style-type: none"> 1. Open the scanned PDF file. 2. In Tools, open Scan and OCR. 3. Click Scanned Document under the Enhanced menu. 4. Check the box for Recognize Text. 5. Click the Enhance button.
Run Adobe Acrobat Built-in Accessibility Checker	<ul style="list-style-type: none"> Adobe Acrobat Professional (Version Pro DC) All versions. No matter what you are converting to PDF, it's important to save your original files in case a student needs an alternate format. 	<ol style="list-style-type: none"> 1. Open the Accessibility tool under the Tools tab. 2. Select the Full Check button. 3. The Accessibility Checker window will open. <ul style="list-style-type: none"> • Under the Report Options, check on the Create Accessibility Report. • Under the Checking Options section: <ul style="list-style-type: none"> • Category: Document and check all the items. 4. Click the Start Checking button. 5. The Accessibility Checker Report will display on the left pane. 6. Right click on the bolded issues and choose Fix, if available, or Explain."





HOW TO MAKE

Accessible Video & Audio

Component	Best Practices	How to Check Accessibility
Media Player The buttons need to be properly labeled so a screen reader user can operate the player.	Keyboard Navigation It is important to accessibility that students can access and operate a media player with the keyboard alone (not using a mouse).	To test for keyboard accessibility, press the Tab key to navigate to the player, and use the Tab, Arrow keys, Enter, and Spacebar to interact with the media player buttons.
Captioned Media Use captioned/subtitled media for videos shared on campus websites, in open forums and in course content.	The PSCC ERC/Library has a wide selection of captioned media. Check with your Subject Librarian. Search for captioned media on YouTube.	How do I find human transcribed captioned videos on YouTube? (Search from YouTube site) <ol style="list-style-type: none">1. Enter your search keyword in the YouTube Search field.2. Add a: , CC (a comma, CC)3. Press Enter or click the magnifying glass icon.
	Make sure the YouTube video you use does NOT have Auto-generated captions.	How do I know? <ul style="list-style-type: none">• Click the Settings button and check the Subtitles field. Avoid auto-generated subtitles and the Translate feature which are not usually accurate.  <p>Click on Settings button</p>

7

Save your original files. You may need them if you have a student who needs alternative formats.





HOW TO MAKE

Accessible Complex Images

Complex Images include graphs, charts, diagrams, maps, and illustrations. Below are 3 ways to provide alternative (alt) text-based description for complex images, when a simple alt text attribute is insufficient. Choose the best Alt text method for your image types.



Use a Caption

For Web Pages: Your caption must be associated with the image, so make sure to properly add a caption using the 'figcaption' html tag. (Requires HTML editing).

Note: For MS Word and PowerPoint: Right click on the image and select **Add Caption**.

Example Code:

```
<figure>
<figcaption><em>Caption goes here,
Fig.9-Graph..</em></figcaption></figure>
```

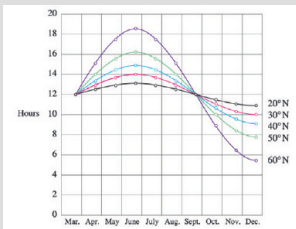


Fig.9 - Graph of the length of daylight from March through December at various latitudes. For example, at 40 degree latitude there are 12 hours of daylight in March. In October, there are 10.8 hours of daylight at 40 degrees.



Describe in Surrounding text

If the image is adequately described in surrounding text (including text-based data tables), so that the image is just reinforcing the text, no further description is needed.

Example:

Modeling amount of daylight as a function of time of year, Figure 9 and the table beside it, show the number of hours of daylight as functions of the time of the year at several latitudes, from March through December.

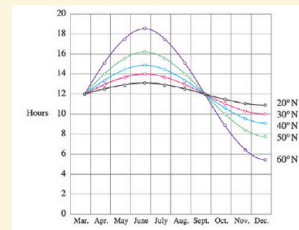


Figure 9

Month	Hours in varied latitudes				
	20°	30°	40°	50°	60°
Mar	12	12	12	12	12
Apr	12.3	13.2	13.5	14	17.5
May	12.9	13.7	14.3	15.5	17.7
Jun	13	14	14.9	16.1	18.2
Jul	12.8	13.8	14.2	15.7	17.8
Aug	12.5	12.8	13.2	14	15
Sep	12	12	12	12	12
Oct	11.6	11.2	10.8	10	9
Nov	11	10.2	9.7	8.3	6.5
Dec	10.9	10	9.1	7.9	5.7

Example of Data Table for Figure 9



Link out to a web page with a longer description

If the image cannot be described using methods A or B, use the 'longdesc' attribute (Requires HTML editing).

Example code:

```

```

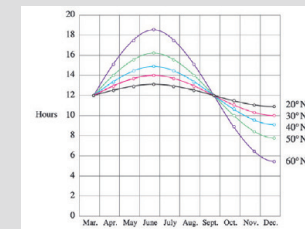


Figure 9

```
<html>
<p>Modeling
amount of daylight
as a function of time
of year Figure 9
shows graphs of the
number of hours of
daylight...</p>
</html>
```

fig9-longdesc.html





HOW TO MAKE

Accessible Complex Images

Resources for Image Description

- NCAM: Guidelines for Describing STEM (Science Technology Engineering and Math) images (<https://tinyurl.com/alt-stem>)
- Art Beyond Sight: How Do We Access Meaning in Art? (Describing art images in alt text) - (<http://goo.gl/dAXZOx>)
- Video: How to Describe Complex Images for Accessibility (From Diagram Center's Webinars) <https://www.youtube.com/watch?v=oSdz6KZpLjs>
- Diagram Center: Accessible Image Sample Book <http://goo.gl/N0arvW>

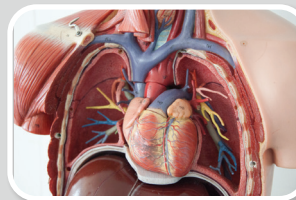
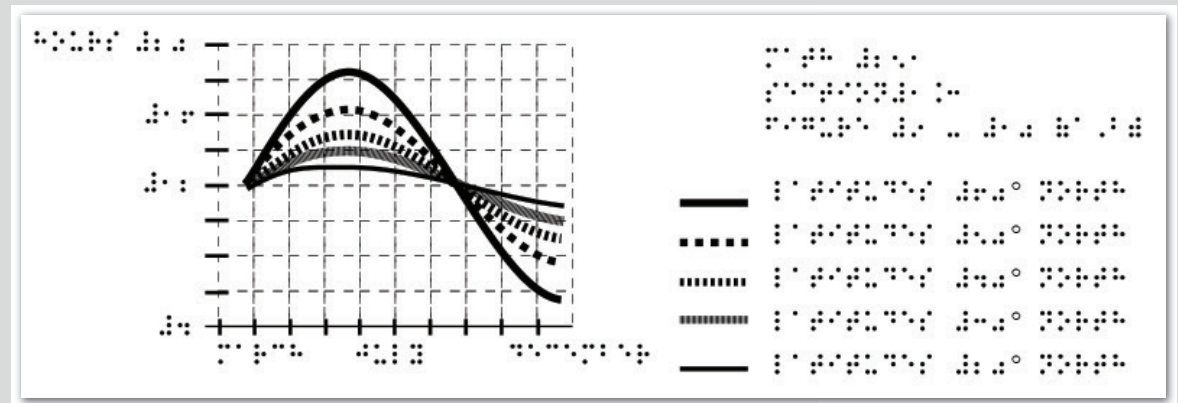
Tactile Representations

Sometimes touching a model or a tactile graphic is the best way to describe something.

Tactile graphics

Tactile graphics have different sized raised dots to show variation in graphs, charts and maps.

Example:



A 3D model of chest anatomy

Indicate if a model is available

If you know where a 3D model of the image is available, indicate that in your image caption or on the same page as the image.





HOW TO MAKE

Accessible Math & Science

Component	MathTools	Best Practice
Math & Science equations, formulas and notation	• MathML	MathML stands for 'Math Markup Language' which is the web standard for accessible online math and science notation/equations/formulas. Typically, a user does not create MathML, but instead uses a conversion process to output MathML.
	• D2L	We recommend that as much of the online class as possible be conducted within D2L. All output from D2L's equation editor is stored as MathML, which is screen reader-accessible.
	• Word documents	MathType is an equation editor created by Design Science that is compatible with MS Word for Windows and Mac. Together, MS Word with MathType can be exported as MathML or it can be converted to braille. DO NOT use Microsoft's equation editor.
	• PDFs	Math IS NOT accessible in PDF. Save the original file with the original MathType or LaTeX equations in case of an accommodation request.
	• PowerPoints	For MS PowerPoint, use the MathType plugin to create math and science equations, formulas and notations. DO NOT use Microsoft's equation editor. If you convert to a PDF or export to a webpage, save your original MS PowerPoint files in case of an accommodation request.
	• Graphs	To make graphs accessible, do your best to describe them using alternative text, long descriptions, or captions.
	• LaTeX	LaTeX is a mark-up language. Converting LaTeX documents into an accessible format is usually straightforward. Keep LaTeX original files if you convert to other formats.





LINKING TO

Third Party Online Materials

Component	Best Practice
How accessible are their digital materials?	<ul style="list-style-type: none">• Are the videos captioned and audio recordings transcribed? There should be transcripts for audio recordings and captions or subtitles for video. If they aren't available, ask the publishing representative when they plan to have them. If they have no plans, ask them to give RSCC written permission to transcribe or caption the media when there's an accommodation need.• Are images described in alternative text? PowerPoint slides from publishers often have images without any alt text. Ask your publishers if their images have alt text.• Can all of the text that is displayed on the screen be read aloud by text-to-speech software? Screen readers (assistive technology used by people who are blind) read real text. They cannot read images of text or text embedded in Flash animations/movies/simulations.• How accessible are the E-books? Are the images described? Are embedded objects like videos keyboard accessible and captioned? Is the E-reader keyboard and screen reader accessible?• Can all interactivity (media players, quizzes, flashcards, etc.) function using only the keyboard (no mouse)? People who are blind or have upper mobility disabilities cannot use a mouse. They use the keyboard to navigate and interact on the Web. It is required that any interactive elements on a publisher's website be operable by keyboard alone if they are used in your course.• Is there any documentation available (VPAT or White Paper for example) that confirms accessibility or usability testing results? A VPAT (Voluntary Product Accessibility Template) is used by many organizations to report the level of accessibility of software products.• Is your multimedia (Adobe) Flash or (Oracle) Java-based? Can your materials be watched on mobile devices? Content created in Flash or Java can be inaccessible and may not run on mobile devices and tablets.
Open Educational Resources (OER)	<ul style="list-style-type: none">• OERs have the same accessibility requirements as all other digital materials. However if they are not accessible, they can usually be made accessible, unlike materials that reside on a publisher's server. Plus OERs are usually free to students! Check out: http://ctat.roanestate.edu/open-educational-resources-oer/

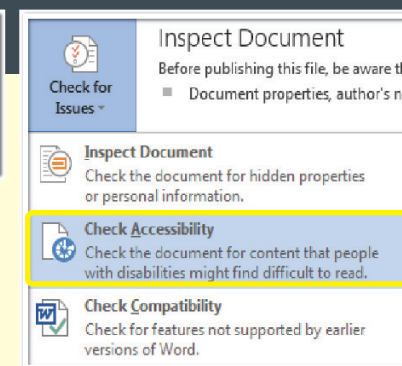
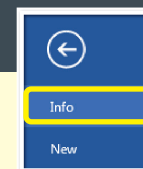




AUTOMATED

Accessibility Checkers

Software	Tools	How to Check
MS Office (Word, PowerPoint, Excel)	<ul style="list-style-type: none"> A built-in accessibility checker <p>(Note: The accessibility checker only checks .docx, .pptx and .xlsx files)</p>	<ol style="list-style-type: none"> Go to the File tab. Select Info from the sidebar menu. Click on the Check for Issues button. Select Check Accessibility from the drop-down list. <p>The Accessibility Checker panel will open to the right of the document. The accessibility checker provides you with a list of errors, warnings & tips. When you click on an error or warning, instructions on how to fix it appear below in “Additional Information”.</p>
PDF (Adobe Acrobat Professional)	<ul style="list-style-type: none"> A built-in accessibility checker (Tools>Accessibility) 	<ol style="list-style-type: none"> Select the Tools tab to Add the Accessibility Tool to the panel on the right. Select the Full Check button & the Accessibility Checker Options will open. <ul style="list-style-type: none"> On the Report Options section, check on Create Accessibility Report. On the Checking Options section: select Document under Category field, and check all items. Click on the Start Checking button and the Accessibility Report will display. Right click on the bolded issues and choose Fix, if available, or Explain.
D2L Brightspace	<ul style="list-style-type: none"> Brightspace is an accessible LMS platform. It also has a tool to check the accessibility of the content. 	<ol style="list-style-type: none"> In a Content page, add your text and images. While still in edit mode, click the Check Accessibility link at the bottom right corner of the Content editing window. The Accessibility Checker will open with the results of the accessibility check of your content.



WHO's Responsible for Accessibility of Online Courses?

Instructors, Distance Education and Disability Services

- ▶ Test the accessibility of software and web apps used in online courses.
- ▶ Develop Accessibility Plans proactively when barriers are found.
- ▶ Work together to identify and implement appropriate accommodations when barriers are encountered.

Instructors

RESPONSIBILITIES

As the subject matter expert and the course developer, an instructor:

- **Designs** clear and consistent navigation.
Writes alternative text descriptions for images.
- **Creates** documents using accessibility guidelines (<http://ctat.roanestate.edu/accessibility/>).
- **Retains** original files (PowerPoint, Word, etc.)
- **Uses** captioned media whenever possible.
- **Writes** math and science with MathML (D2L equation editor), LaTeX, MathType or Libre Office.
- **Checks** accessibility of required software & web applications used in course at <http://ctat.roanestate.edu/accessibility/>.
- **Supplies** DL and DS with course materials upon request for an accommodation.
- **Prepares** Accessibility plans for inaccessible content.

Distance Education (DE)

RESPONSIBILITIES

As the online course development facilitator and faculty resource, Distance Education (DL):

- **Provides** media captioning for DL course accommodations.
- **Assists** DS with retrofitting course material for timely accommodation.
- **Offers** training sessions (F2F & Online) & over-the-shoulder assistance.
- **Develops** training materials (Accessibility Guidelines Handbook & Quick Guide).
- **Reviews** courses for accessibility & provides feedback & support to instructors.
- **Supports** Accessibility Plan development to proactively address course barriers.
- **Facilitates** subject area accessibility studies.
- **Maintains** pcc.edu/access website with how-to video tutorials and step-by-step instructions.

Disability Services (DS)

RESPONSIBILITIES

As a student & faculty resource, with expertise in alt formats and assistive technologies, DS:

- **Increases** awareness of the disability experience & works with staff & faculty to proactively reduce barriers by
 - ▶ **Hosting** open events,
 - ▶ **Offering** drop-in hours, & individual consultations.
- **Reviews** documentation of disability & determines student eligibility for accommodation.
- **Leads** efforts to ensure students are appropriately accommodated.
 - ▶ **Notifies** faculty & DL when an accommodation is required.
 - ▶ **Supplies** students with an accessible format of the textbook.
 - ▶ **Provides** alternative format of PDFs, math/science and publisher PPTs
 - ▶ **Administers** other reasonable auxiliary aids & services.



ACCESSIBLE

INFORMATIONAL MATERIALS & TECHNOLOGIES (AIMT)

Training & Support

Accessibility Training

Check the Accessibility Website for how-to instructions and video tutorials.
<http://ctat.roanestate.edu/accessibility/>

Faculty Help Desk

Email: help@roanestate.edu (865) 354-3000 ext. 4357
Phone: (865) 354-3000 ext. 4357

Instructional Support

<https://ctat.roanestate.edu>
Email: ctatmailbox@roanestate.edu
Phone: (865) 882-4556

Questions about accessibility?

Susan Sutton(865) 882-4658suttonsr@roanestate.edu
Misty Anderson(865) 354-3000 ext. 4717andersonme1@roanestate.edu
Zach Corder(865) 354-3000 ext. 4915corderz@roanestate.edu

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GUIDELINES

2021

Testing Tools

- WEB PAGES: WAVE TOOLBAR
<https://wave.webaim.org/>
- D2L BRIGHTSPACE: Built-in
- MS WORD: Built-in
- MS PPT: Built-in
- PDF: Built-in Adobe Acrobat Pro
- COLOUR CONTRAST ANALYSER
<https://www.paciellogroup.com/color-contrast-checker/>



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