Word 2016 Essentials

Accessibility

Mac
Building Accessible Documents

• Headings Structure and Hierarchy
• Columns and Lists
• Repeated Blank Characters
• Descriptive Hyperlinks
• Images & Multimedia
• Tables

• Reading Order
• Headers and Footers
• Table of Contents
• Color Contrast
• Accessibility Checker
Readability

- Divide large blocks of text into smaller sections
- Avoid overly complex sentences
- Provide adequate whitespace
- Use line or paragraph spacing (avoid Enter/Return for “blank” space)
- San-serif font (Arial, Calibri, Tahoma, Verdana, etc.)
- Font size between 12 – 18 point

Serif Sans-Serif

Abc Abc
Headings Structure

• Use proper Headings Structure and Hierarchy

• Heading Styles (Heading 1 through Heading 6)
  • Heading 1 for Document Title
  • Heading 2 for all Section Titles
  • Heading 3 for all Sub-section Titles
  • etc

• Modify ALL Heading Styles before first use

Headings are styles to give a document structure by category or topic. Headings are used to build sections within a document to create a visual hierarchy structure to show topics and sub-topics. A screen reader or viewer can easily find information based on headings.
What are Screen Readers

Screen readers are a form of assistive technology (AT) software that *enables access* to a computer, and all the things a computer does, by attempting to identify and interpret what is being displayed on the computer screen using *text-to-speech*. Screen readers can only access and process *live text*.

Normally used by someone who is visually impaired.
Types of screen readers

Screen reader program for Microsoft Windows that allows blind and visually impaired users to read the screen either with a text-to-speech output or by a refreshable Braille display.

Provides auditory descriptions of each onscreen element using gestures, a keyboard, or a braille display.

Adds spoken, audible, and vibration feedback to your device.

Screen magnifier for Microsoft Windows that allows you to see and hear everything on the computer.

Want to learn about Screen Readers?
UDC and DRES offer Screen Readers training and demo.
Benefits of using a screen reader

• provides access to someone who does not have useful vision, mobility or has a learning disability to access text on the screen

• offers same level of independence and privacy as anyone else
Digital Accessibility Content Analogy

Organize content with headings, subheadings, images, videos, and footer are important for usability and accessibility.
Headings Structure Example

**Example 1:** Reading long, dense text documents can be a daunting task for learners

As part of our commitment to excellence through diversity and inclusion, California State University, Northridge (CSUN) strives to ensure that campus communication and information technology is accessible to everyone. The California State University system statement on accessibility is articulated in California State University - Executive Order 1111, in accordance with both federal and state laws including the Americans with Disabilities Act of 1990 (ADA) and Section 508 of the U.S. Rehabilitation Act.

Need assistance or have a question not answered here? Please contact the Universal Design Center (UDC) at UDC@csun.edu or, during business hours (Monday through Friday, 8am to 5pm Pacific time), at (818) 677-5898.

In this context, “accessibility” means that people with disabilities have access – to facilities, to information and to technology.

“Universal design” takes this concept one step further, to ensure that everyone can perceive, understand, engage, navigate and interact regardless of ability or preference.

The UDC supports the campus community in their efforts to make it possible for individuals to learn, communicate, and share via information and communication technology. One way we do this is by assisting the campus community to ensure their information and communication technology is interoperable, usable and accessible, so that individual learning and processing styles and/or physical characteristics are not barriers to access.

The role of the UDC is to help CSUN implement business practices which enable the campus to meet policy standards under the Accessible Technology Initiative Coded Memoranda. What does this mean to me?

Everyone has a part in creating accessible and usable information. The responsibility of creating and maintaining accessible content falls to the entire campus community.

**Example 2:** Well-structured documents help students organize and process texts

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Heading 1 – Modify Style

Repeat for Heading 2 to 6

Modify Style
Apply Heading 1 to Document Title
Apply Heading 2 to *all* Section Title

Repeat for Heading 3 Sub-section Titles, etc.
View – Navigation Pane
Styles – Normal, Modify Style

Normal style for paragraph
Styles for formatting

- **Strong** (instead of Bold)
- **Emphasis** (instead of Italics)
- Avoid underlining text unless it’s a link
True Columns and True Lists

• Use Word’s built-in functionality to create:
  • True Columns
  • True Lists
    • Bulleted List (order of list items does not matter)
    • Numbers List (order of list items does matter)

• Avoid
  • Spacebar, tab, enter
  • Only create “visual appearance” of columns and lists, but not accessible structure
Page Layout - Columns

- Columns help visually organize and condense information on a page.

- Screen readers can read the content organized in columns.
Home – Bulleted and Numbered Lists
Screen readers will read blank spaces, tabs, empty paragraphs or carriage returns as “Blank”. This can be very irritating, especially if there are multiple blank characters.
Avoid Using Repeated Blank Characters (2 of 3)

Use formatting, alignment, or column size to create whitespace instead of repeating blank characters. To use formatting to add whitespace around a paragraph:

1. Remove any blank characters around the paragraph
2. Select the paragraph
3. Right-click to choose Paragraph
4. Select values for Indentation and Space to create whitespace

Example: to create three columns in 1 line, set Tab stops:

1. Click View
2. Select Ruler to set indents
3. Set Tab Stops
Avoid Using Repeated Blank Characters (3 of 3)

If you want to make columns, format them as columns. Do not put text on one line and use the tab key to move it over (a screen reader will read it one line a time, not as columns).
Hyperlinks

• Link text should
  • Make sense when read out of context
  • Describe the destination (document name, website)
  • Be unique for unique destinations

• Avoid vague terms
  • Click here
  • Email me
  • URL text https://www.csun.edu/universal-design-center
    (raw URL may not make sense to screen reader users or others, so make the link text descriptive)
Assistive Technologies and Tools – Aggregate Hyperlinks

• **Not** Accessible – vague and redundant
  • Click here
  • Assignment
  • Assignment

• **Accessible** – descriptive and unique
  • Universal Design Center
  • Assignment 1 – Microsoft Office Training
  • Assignment 2 – Accessible Word
Descriptive Hyperlinks

• Link text should clearly identify the target of each link. Good link text should not be overly general.
  • Do not use different link text to refer to the same resource.
  • Do not use the same link text to refer to different resources.

• Avoid generic phrases like “Read more”, “Click here”, “Click next page” are very vague.

When the same link is repeated (imagine hearing "click here, click here, click here" repeated multiple times) it creates chaos and confusion for users. They need to understand where the link goes and why they should click here? Descriptive links provide this context.
Descriptive Hyperlinks...

A presentation that is intended to be displayed electronically and in a printout, include the URL and a description in the link text. For example, “Universal Design Center (www.csun.edu/universal-design-center).”
How might this image appear to a person who has a visual challenge?

Normal vision

Low vision

Color blindness

Blind or deaf-blind

Solution?

Children leaving school before completing their Primary Education

In the Sub-Saharan, 11.07 million children leave school before completing their primary education. In South and West Asia, that number reaches 13.54 million.
Alternative or Alt Text

• A written description of images and/or objects that can be read by a blind or low vision using screen reader technology.

• Screen readers and other assistive technologies can't convert images into words/texts.

• Captions are universal and accessible for everyone.

• “Image of...”, “photo of...” is not needed.

• Be brief and descriptive text within 8 to 80 characters long

• Best practices for accessible images

Tiny turtle eating a ripe strawberry.
Alternative Text or Alt Text, continued

• Text Alternative for Non-text Elements
  • Pictures, illustrations, images of text, shapes, charts, graphs, SmartArt, embedded objects

• Alt Text
  • 8 to 80 characters long
  • Conveys function, meaning or purpose of image

• Long Description (in add to Alt Text)
  • Alt text alone insufficient to describe non-text element
  • Provide in surrounding text or link to separate accessible document
Mouse right-click to select Format Picture
Format Picture – Layout & Properties

Alt Text (Description)

Leave blank

Enter Alt Text here
• Captions are universal and accessible for everyone.

• A written description, captions, or alternative (alt) text provides a written description of the image to screen readers. Consider the best description option for the image and document.

• Decorative images, such as line dividers, do not require a written description or alt text.

• Complex (Math and Science) graphs and charts may require a caption.

• Insert a caption by right-clicking the image and select Insert Caption or References tab, Insert Caption.
Images

• At times alternative text and caption are not the most appropriate method to describe an image. As such, the description of the image can be conveyed within the surrounding body of the text.

• If you do this, include the words “In the image above”, “..below”, etc. that way the user knows you are describing the image that did not have alt text and caption within the paragraph.

One of Australia’s most remarkable natural gifts, the Great Barrier Reef (shown in the image above) is blessed with the breathtaking beauty of the world’s largest coral reef. The Reef contains an abundance of marine life and comprises of over 3000 individual reef systems and coral cays and literally hundreds of picturesque tropical islands with some of the worlds most beautiful sun-soaked, golden beaches.
Art or SmartArt Shapes

Often shapes are used behind text to create emphasis. Most screen readers will not identify shapes, and you will often split up your text in awkward ways to make it fit within the shape.

The example below exemplifies what not to do (notice how the reading order is impacted when a shape is moved to the background in order for the text to show on top)
Art or SmartArt Shapes Workaround

**Step 1:** Create stand-alone PowerPoint file for all Art Shapes (editable).

**Step 2:** Use SnagIt to capture Art Shapes (step 1) then copy an image into final slides (step 3)

**Step 3:** Create another PowerPoint file for final slides.

**Step 4:** Add Alt Text for an image (step 3)
Multimedia Captioning (1 of 2)
Multimedia Captioning (2 of 2)

• CSUN is committed to ensuring that all content utilized by the campus is accessible to all users. This means that all videos, audio, captured lectures, recorded presentations— instructional media—must have closed captions. (This is a federal law, state law, and CSU policy.)

• All students who are enrolled in a course must be able to access the content in the course.

• Visit the Request Services National Center on Deafness (NCOD) webpage to request media captioning.

www.csun.edu/captioning
Q: Can I add accessible videos into word documents?

A: Embedded videos are not accessible to screen reader users or users navigating with a keyboard or some other navigation device other than a mouse. To make it accessible, put the link of the video underneath the video itself. Also add Alt text to the video.

Apple-Accessibility-Sady video
Tables

• Use Word’s built-in functionality to create true Tables
  • Design table to read properly: top to bottom and left to right
  • Simple Data Tables only

• General Formatting
  • Provide Title (i.e. Caption) and Summary before the Table
  • Specify Header Row
  • Avoid merged, split, or blank cells
Insert - Table

- Use tables to organize data not formatted information
- Create table headings
- Include table captions or brief description
  - Select **Insert** tab, then select **Table**
  - Select the number of rows and columns by highlighting the boxes on the grid.
  - Type in the table data
Why use table headers?

Easier formatting
• When a table has a header assigned, it makes it easier to format the table afterward.

Essential for students with visual impairments
• Students with visual impairments need table headers to be able to interpret the table properly. Without table headers, each cell is read out without referring to the column or row that the cell belongs to.
If ‘Repeat as header row at the top of each page’ isn’t selected, table headers will be ignored when exporting as a PDF and won’t be read by screen reader.

- Right-click the first row of the table and select **Table Properties**.
- On the **Row** tab, make sure the checked **Repeat as header row at the top of each page** and unchecked **Allow row to break across pages**. Click **OK**.
- Repeat these steps for all tables in the document. Save the document.
Title your table using the Caption tool

- Go to References tab, then select Insert Caption
- In the popup window, type the title of the table in the Caption textbox
- In the Label textbox, select Table
- Position textbox, select Above selected item then select OK
Table – Alt Text

Add Alt text description to Table

• Right click on the Table and select Table Properties
• In the popup window, select Alt Text tab
• Type in a description of your table
Tables - Not Accessible

- Do not create table using the Draw Table Tool
- Do not create page layouts with tables
- Do not merge or split cells
- Do not control spacing in your table with blink rows or columns. Adjust line spacing instead.
Tables Accessibility

• To ensure accessibility, format tables with headers and avoid merged, split, or blank cells.

• The complex a table (merging cells, nesting multiple headings under one, adding blank lines, etc.) the worse it will be for accessibility.

• Sample of Simple Tables vs. Complex Tables by Penn State.
Reading Order

The logical reading order read information from left to right and from top to bottom same as the visual order for English language.
Q: Should I include headers and footers in my document?

A: Headers and Footers are not always read immediately to screen reader users. However, if a screen reader user wants to look at the header there are methods for them to do that.

Headers and Footers can be used to hold document information but should never hold important document content such as filename, document owner etc.
Headers and Footers...

- Insert tab
- Select Header or Footer
- Insert text or other document information
- Always include page numbers in the footer with the “Normal” style
Table of Contents

Headings structure will automatically populate a table of contents and provide accessible for screen readers rely on headings structure to navigate a page quickly.

• Or Custom Table of Contents
• Ensure the ‘Tab leader’ option is ‘…….’
• To change which styles appear, select ‘Options’
• Number each style in the order in the Table of Contents
• Select ‘Ok’ twice
Color and Contrast

• Color is **not** the sole means of conveying important information (i.e. avoid color-coding)

• Sufficient contrast between foreground (text) color and background color

• Background color or design does not overpower text for documents, charts, graphs, tables, etc.

• Select colors with deep contrast

• Use the Colour Contrast Analyser to ensure accessible contrast

• [Coblis Color Blindness Simulator](https://www.coblis.com/color-blindness-simulator)
Do not use **color** alone to convey information

**Example 1:** Inaccessible table

<table>
<thead>
<tr>
<th>Assignments (overdue in red)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
</tr>
<tr>
<td>Chapter 1</td>
</tr>
</tbody>
</table>

**Example 2:** Inaccessible color shape

- Color identical may not be recognized by colorblind users

**Example 1:** Accessible table

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Overdue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>Yes</td>
</tr>
<tr>
<td>Chapter 1</td>
<td>No</td>
</tr>
</tbody>
</table>

**Example 2:** Accessible color and number
Color Contrast Examples

<table>
<thead>
<tr>
<th>Bad Examples</th>
<th>Good Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red on black is bad</td>
<td>Yellow on black is good</td>
</tr>
<tr>
<td>Blue on orange is bad</td>
<td>Black on orange is ok</td>
</tr>
<tr>
<td>Red on green is bad</td>
<td>White on green is good</td>
</tr>
<tr>
<td>Grey on purple is bad</td>
<td>Aqua on purple is ok</td>
</tr>
</tbody>
</table>

Use the [Colour Contrast Analyser](csun.edu/udc) to ensure accessible contrast
Use the Colour Contrast Analyser to ensure accessible contrast.

- Contrast ratio should be at least **4.5:1** between the foreground and background content.
- Coblis Color Blindness Simulator
File – Properties - Title
Microsoft Office Accessibility Checker
Check for Issues, Check Accessibility

Always use Word’s built-in Accessibility Checker

Repair Errors, Warnings and Tips
Converting Word to PDF

What options should I be familiar with to convert to PDF?
You CAN make a big difference

Best education and resources available to EVERYONE providing ACCESSIBLE

Make one design that fits everyone

Documents

Website

Media with captioning
Creating accessible digital content can’t happen tomorrow.

Accessibility is for everyone.

How can we help you make a big difference