

Creating Accessible Web Pages in the CMS

Adapted from WebAIM.org

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What is Web Accessibility?

In order for web content to be considered accessible, all web users, regardless of physical or developmental abilities or impairments must be able to access the information presented. At Brandeis, we serve a diverse audience and our web visitors use a variety of technologies to navigate our online content. The following best practices are provided to help you maximize the accessibility of your Web pages in the CMS.

***Please note:** Accessibility best practices apply to all web content you create in the CMS, as well as any documents you upload or link to on your site (MSWord, PDF, etc.). For more information check out our online [how-to guides](#) or request further [training](#).

Page Structure

Headings and Subheadings

Headings and subheadings organize your content and are important for usability and accessibility. People with limited or no vision depend on screen reading software to read aloud the text that appears on the screen. Using headings properly provides a hierarchy of content which allows all users to navigate more efficiently. Proper heading structure provides screen reader and other assistive technology users an organized framework.

Adding headings in the CMS

Pre-formatted headings are available in the CMS in the Format dropdown of the WYSIWYG editor.

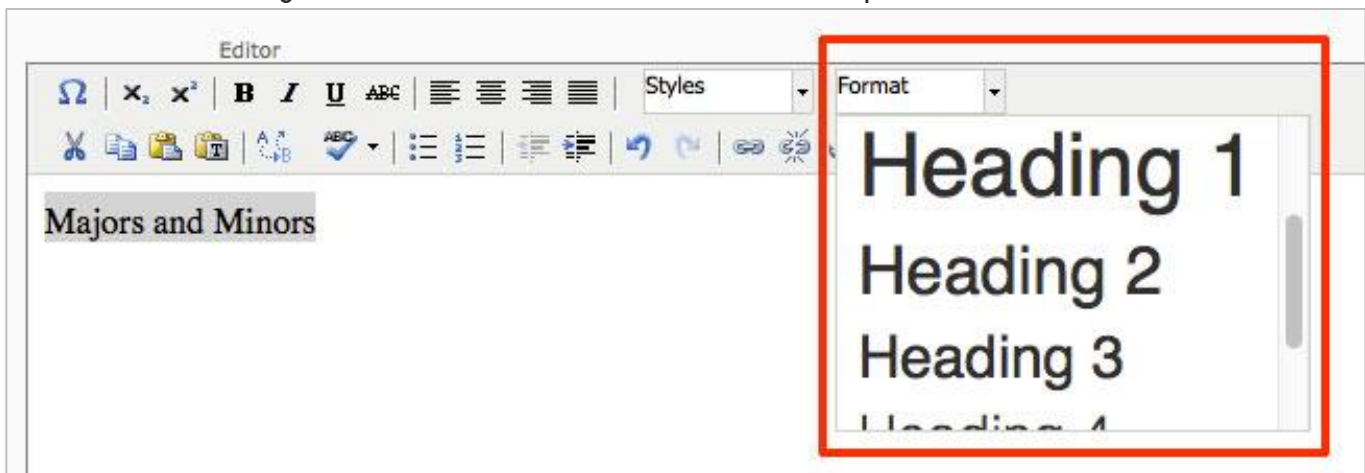


Figure 1: The CMS WYSIWYG editor

Using headings correctly

Bold formatting vs. Pre-formatted Headings

Changes made with **Font** styling will provide **visual** structure for some of your users, however, the document structure needed for navigation by assistive technology users will be missing. If you **bold** paragraph text to create the look of a heading, a screen reader will still read it as paragraph text. This is not helpful for someone using a screen reader. Instead, use a heading style from the **Format dropdown** in the CMS.

Conversely, do not use a heading style to make text big and bold if it isn't really a heading. The screen reader will read it as a heading and not properly communicate the emphasis you intended.

Nesting and Order

Pages should be structured in a hierarchical manner:

- Lower-degree headings should be contained within headings of the next highest degree. One should not skip heading levels, such as using a **Heading 4** directly below a **Heading 2**.
- Have one and only one H1 heading. It should encompass the topic of the entire page. On a Brandeis page, this is your **site name**.

Nest all subsequent headings numerically: H2 follows H1, H3 follows H2 and so forth. You can use a level more than once, but do not skip a level.

Heading 1

Heading 1 is your **Site Name** on Brandeis pages. **Do not use Heading 1 style in your main content area in the CMS.**

Heading 2

Heading 2 is the title of your page. **Do not use Heading 2 style in your main content area in the CMS.**

Heading 3

Heading 3 style can be used in your main content area. It should be the **first heading style you use on any CMS page.**

Heading 4

Heading 4 style can be used in your main content area. It should be nested below Heading 3.

Heading 5

Heading 5 style can be used in your main content area. It should be nested below Heading 4.

Heading 6

Heading 6 can be used in your main content area. It should be nested below Heading 5.

Data Tables

The associations of information within data tables can be difficult to convey with a screen reader. You can help by:

- Always using a header row at the top of your table.
- Making sure the header cells are accurately explaining the data directly below (columns) or to the right (rows).
- Not using the table for notes or extra information that is not directly related to all data in the associated row or column. Notes may be provided above or below the table.

Links

Hyperlinks can bring users to new pages, other sections of the same page, play videos, download files, or launch other software on the user's computer. It's important that a user knows what is going to happen when a hyperlink is activated (via a click or a keystroke).

You may be tempted to use the pervasive “click here” hyperlink. When you fill your page with “click here,” a sighted user has to reread the surrounding text to remember which link is which. In the same scenario for a user of a screen reader, she can use a Hotkey to read out a list of all links on the page. This list would sound like this: “click here, click here, click here, click here....”

It is more helpful to:

- Explain where the link will take you, or
- Describe what action will occur when the link is activated in unique, descriptive language

For example:

“Learn more about Brandeis’ advising structure by visiting the [first-year advising page](#).”
“To register, print out the [Enrollment Form](#) and send it to MS 122.”

Figure 2: Examples of helpful hyperlinks

Quick Tips for Linking

- Are your hyperlinks **unique** and **descriptive**?
- Do your link descriptions make sense to the reader out of context? (Imagine all of your links read out loud as a list. Can you tell which is which?)

The Hyperlink Editing Tool in the CMS

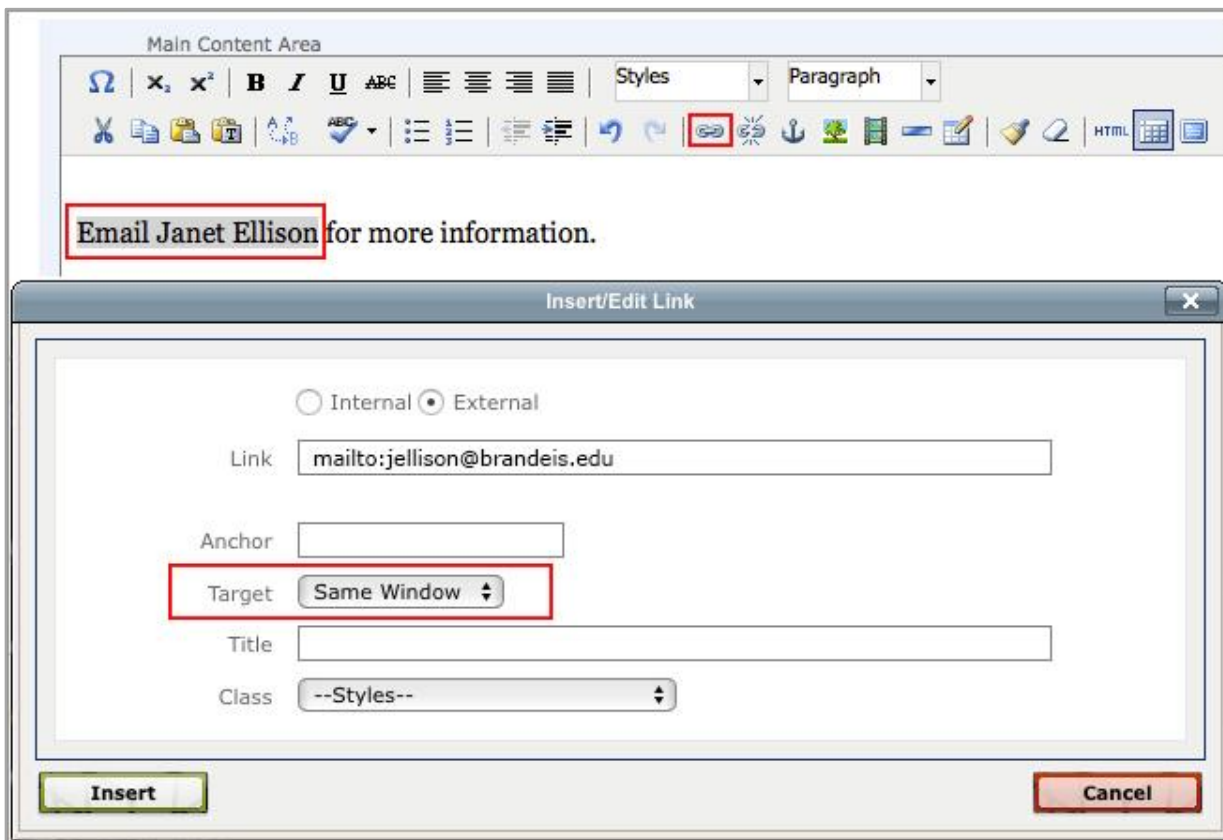


Figure 3: Pop-up window for inserting and editing hyperlinks in the CMS

Importance of Color Contrast

People with color blindness often have difficulty distinguishing certain colors, such as red and green or blue and yellow. Almost 5% of the population and 8% of men have some form of colorblindness. When color combinations (such as red text on a green background) are of insufficient contrast, the words can actually disappear to a person with colorblindness. You can help prevent this by selecting strong, contrasting color combinations and by labeling things that are otherwise distinguished only by color on a page (think charts and graphs).

- Provide sufficient contrast for all text and for informational graphics such as charts. A good rule of thumb – if you print it in gray scale, can you read it with ease? Can you distinguish any parts that are not labeled?
- Don't use color as the **only** way to convey content. **Label parts directly** and consider using texture instead of color, to distinguish elements.

Test your content with the gray scale test. For a more precise test, check your contrast levels with a [color contrast checker](#) (you are aiming to pass "WCAG AA").

Alternative Text for Images

Screen readers require descriptions of all graphics (photographs, charts, or other images) to be added by the author of the website. This description is called alternative (alt) text. When a screen reader reaches an image on your page, it will read out loud the description you have added. If no description has been provided, the image will either be ignored or the screen reader will simply read the word "image".

Image types that can be given alternative text include:

- photographs
- illustrations
- images of text

When alt text is added correctly to an image, it allows a user of a screen reader to get a sense of what that image is and its purpose in context.

Best Practices for Alternative Text

Alternative text should be:

- Accurate and equivalent—present the same content or function as the image.
- Succinct—no more than a few words are necessary; rarely a short sentence or two may be appropriate.
- NOT be redundant—do not provide information that is in the surrounding text.
- NOT use descriptive phrases—screen reading software identifies images, so do not use phrases such as "image of..." or "graphic of..."

How to Add Alt Text to Your Images:

The new templates provide many content types or modules and each has a slightly different location for entering alt text. There should be a field labeled "alt text" or "alternate text" in any module that allows for an image. Please reach out if you can't figure out where your alt text should go.

Inline images

1. Navigate to the page where your image is located.
2. Click on the Edit tab. Scroll to the WYSIWYG area and select your image.

3. Right click and choose Edit Image. A pop up window will appear showing the Alternative Text field.
4. Enter your alt text and submit.

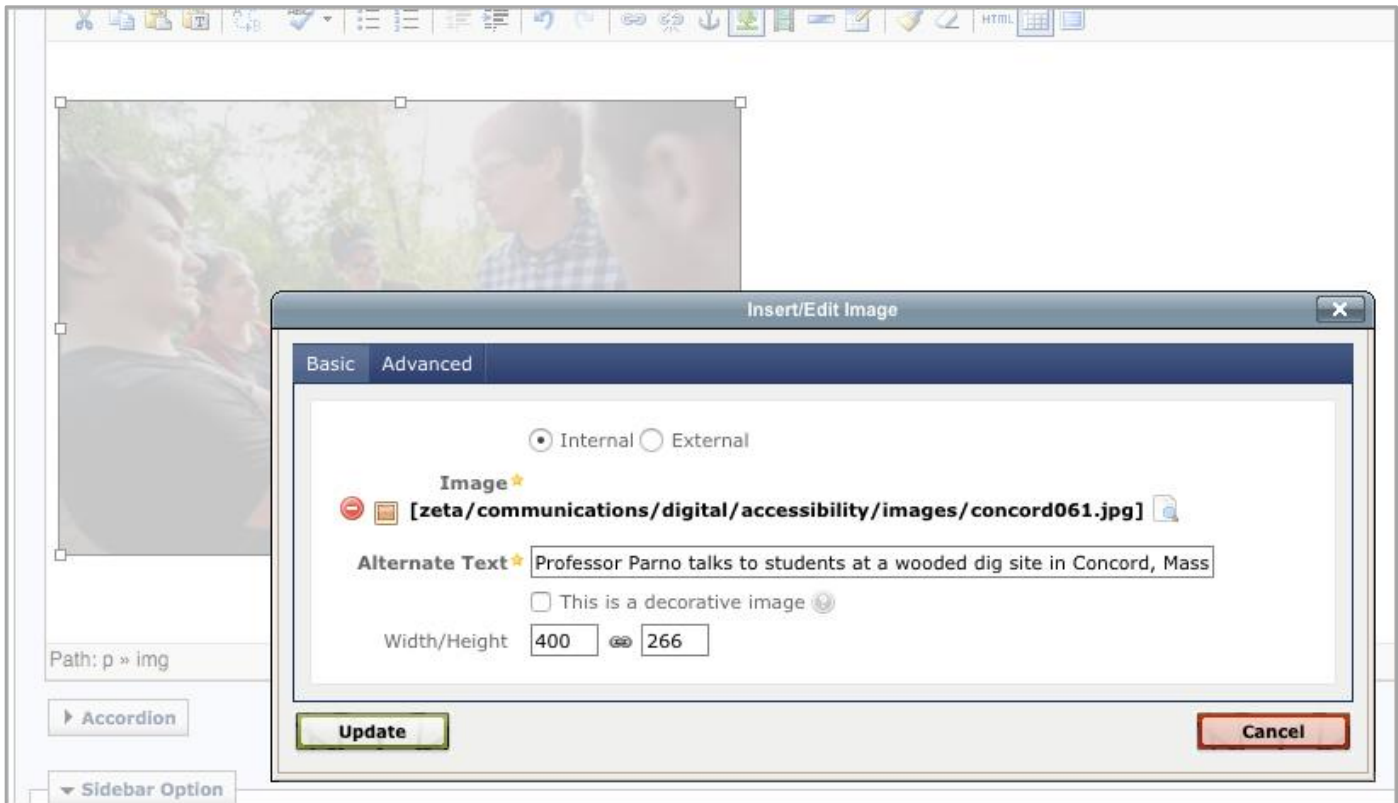


Figure 4: Pop-up window for editing inline image information on the CMS

Images in other content types

People Block

People Module

Type ☒ Faculty ☐ Staff

Add Image ☒ Yes

Image **[building-editing/advanced/images/people-7.jpg]**

Alt Text

Name

Link Type ☒ Internal ☐ External




Internal Link

Feature

Content » Feature








Title























Link Type ☒ Internal ☐ External

Internal Link   [Search] 

Subheading





Text


   | **B** *I* U ABC |     | Styles Format

      |     |           HTML  

Path:

Add Image? ☒ Yes

Image    [Search] 

Alt Text 






Caption



Photo Credit


Media




▼ Content » Media

Size ☒ Small ☐ Large

Image     [Search] 

Alt Text  

Video URL 

Video Transcript   [Search] 

Title

Caption

The screenshot shows a CMS interface for adding media to a gallery. It features a tabbed interface with 'Information' and 'Image or Video for Gallery' tabs. Under 'Image or Video for Gallery', there are fields for 'Media Type' (Image selected), 'Full Size Image', 'Thumbnail Image', 'Alt Text', 'Caption', and 'Photo Credit'. The 'Alt Text' field is highlighted with a red rectangle. The 'Data Definition' at the top is '[_Brandeis Main:Image or Video for Gallery]'.

Figures 5-8: Alt text locations for different content types on the CMS

For more information on using alt text, visit the [Accessible Images](#) page of our site.

Audio & Video

Closed Captions and Transcripts

If you decide to include audio or video on your site, you will need closed captions, descriptive transcripts, or both. You should contact [Media & Technology Services \(MTS\)](#) for assistance adding captions to your media. For information on how to write and add a transcript, visit our [how-to guides for transcripts](#).

Audio only

Audio only files (sound, but no video) should have descriptive transcripts available.

Video

Pre-Recorded video

Pre-Recorded video files should have captions, preferably closed (includes a button to turn captions on and off) as well as a descriptive transcript.

- **New Video/Video you own:** [MTS](#) can work with you to set up closed captions for your video. See our [how-to guides for transcripts](#) for advice on writing your captions or contact [MTS](#) about having captions and transcripts written for your video.
- Videos from **external sources** (YouTube, etc.): you should not embed or link to videos that do not contain captions. If you are the creator of a YouTube video, you may add captions yourself. If the video does not belong to you and is not accessible, you should avoid linking to it directly from the Brandeis website.

***Please note:** some services, for example YouTube, offer autocaptions (the computer will write the captions for you). This is a good start, but they are neither dependable nor accurate much of the time. If you decide to use autocaptions, please review the captions the computer provided, **edit them for accuracy and add punctuation** before releasing or linking to your video.

Live streaming video

Live streaming video should have captions, preferably closed, (includes options to turn captions on and off). It is generally understood that transcripts are unavailable for live video, but when possible (streaming a speech or a reading/performance of pre-written material), transcripts should be provided.

MTS can help you set up streaming and live captioning service for live events.

Other tips

Sometimes users create "lists" by manually numbering or creating fake bullets with asterisks, etc. While this provides visual structure for sighted users, it does not provide the document structure needed for assistive technology users. Use the tools provided in the CMS editor for creating bullets and numbered lists.



Figure 6: WYSIWYG editor toolbar

Principles into Practice

For more details on [Web accessibility at Brandeis](#), please visit our site. There you will find [how-to guides](#), a [glossary](#), [frequently asked questions](#) and access to further [training](#).

For more help or to report a broken link in this document, please contact the **Brandeis accessibility team** (webaccessibility@brandeis.edu).

Note: If you received this document as a paper copy, a version with active hyper-links is available at www.brandeis.edu/web-accessibility/how-to-guides.html