



Accessibility and Design Features

The Access E-Learning (AEL) tutorial is a service of the Georgia Tech Research on Accessible Distance Education project ([GRADE](#)) in partnership with IDET Communication Inc. ([IDET](#)). Access E-Learning is designed to be aesthetically pleasing, useful, and most of all accessible to the widest audience possible. To achieve these goals, the Access E-Learning tutorial was developed to follow the [Web Content Accessibility Guidelines 1.0](#) (WCAG) and the [Electronic and Information Technology Accessibility Standards](#) (Section 508). Both sets of guidelines explain how to make web content accessible to people with disabilities as well as beneficial to all users.

Methods Used in Access E-Learning to Achieve Web Accessibility

To satisfy the [WCAG](#) and [Section 508](#) web accessibility requirements, the Access E-Learning tutorial uses a variety of the following methods:

- a. [Keyboard Shortcuts](#)
- b. [Logical and consistent navigation](#)
 - o [Buttons](#)
 - o [Navigation between pages \(horizontal navigation\)](#)
 - o [Navigation within a page \(vertical navigation\)](#)
- c. [Alternative text and descriptions for images](#)
- d. [Cascading Style Sheet \(CSS\)](#)
- e. [Usability with alternative computer technology](#)
- f. [Clear and simple language](#)

Web Content Accessibility Guidelines (WCAG)

The WCAG was established by the Web Accessibility Initiative (WAI) of the World Wide Web Consortium ([W3C](#)). Within the WCAG, there are three priority checkpoints:

- [Priority 1](#) (must satisfy for basic accessibility)
- [Priority 2](#) (should satisfy to remove significant accessibility barriers)
- [Priority 3](#) (may satisfy to improve accessibility).



The Access E-Learning tutorial has [Level "Triple-A" Conformance to the WCAG 1.0](#). This means all WCAG 1.0 Priority 1, 2, and 3 checkpoints are satisfied.

The WCAG 1.0 guidelines also define two major [themes of accessible web design](#):

1. Ensuring web content gracefully transforms regardless of constraints, such as work environment, technological barriers, and sensory, physical, or cognitive disability.
2. Making web content understandable and navigable.

Section 508 Standards for Electronic and Information Technology

Section 508 was established through [Section 508 of the Rehabilitation Act](#) by the Architectural and Transportation Barriers Compliance Board ([Access Board](#)) of the U.S. Federal Government. The scope of Section 508 is limited to the Federal sector. It does not apply to the private sector, nor does it generally impose requirements on the recipients of Federal funds. However, States receiving assistance under the Assistive Technology Act (AT Act) State Grant program are required to comply with Section 508 according to the Department of Education, which administers the AT Act.

The Section 508 Standards define the types of technology provided and set forth provisions that establish a minimum level of accessibility within four subparts:

- A: General (defines terms, exemptions)
- B: Technical Standards (application criteria specific to various types of technology)
- C: Functional Performance Criteria (overall product evaluation and for technology not specifically covered in Subpart B)
- D: Information, Documentation, and Support (addresses access of materials provided to end users)

Within Section 508 Subpart B (Technical Standards), the provisions for [Web-based Intranet and Internet Information and Applications \(1194.22\)](#) are specifically addressed in paragraphs (a) through (p). These sixteen provisions, which were based on the WCAG, must all be followed for a website to be in compliance with the Section 508 Standards.



The Access E-Learning tutorial is [508 Approved](#). This means all sixteen provisions are satisfied.

Keyboard Shortcuts

The Access E-Learning tutorial has been programmed to offer keyboard shortcuts for navigation (Previous page, Next page, Go to Navigation) and some frequently used links (Skip to Page Content, Feedback Form). In describing the "shortcut keys" below, the letter key and the corresponding letter within the link name have been listed in **bold**. For example: **I** to go to the User **L**ogin.

Please note there is variable support among browsers and systems for using these shortcuts. Currently, Internet Explorer 4.0 or above but **NOT Netscape Navigator** allows the user to select the appropriate "attention" key (this also varies but usually "Cmd" for Macintosh and "Alt" for Windows), then select the following letter:

- **I** to go to the User **L**ogin form **Only available on the Access E-Learning Home Page**
- **j** to Skip to Page Content or Top of Page
- **b** to go **B**ack to the Previous page
- **n** to go to the **N**ext page
- **m** to go to the Site **M**ap
- **g** to go to the Module **N**avigation
- **k** to go to the **F**eedback form
- **e** to **E**xit Course. *Please note:* Selecting this link stores your page location so the next time you login into Access E-Learning you can start from where you left off.

However, since technology changes so rapidly, also realize that besides the above technique, there may be other systems which could use different

shortcut methods, or perhaps even allow the "shortcut key" to be used by itself (without the need for the "attention" key).

An example of the HTML coding for a shortcut key using `ACCESSKEY` attribute of the link to the Access E-Learning Site Map using the letter "m" is as follows:

```
<a href="http://www.accesslearning.net/" title="Access E-Learning Site Map(m)" target="_self" ACCESSKEY="m" >Site Map</a>
```



Logical and consistent navigation

The Access E-Learning tutorial provides logical and consistent navigation. We have identified the target of all links, and ensured that linked text is brief and meaningful when read out of context. For example, to inform a user viewing a Resources page of more information, instead of "Click here", the linked text would say "View more Resources". Linked text like the "View" example, if read by itself, informs the user of what to expect and is helpful when scanning information. It also assists users whose technology can list all of a webpage's links and takes into consideration people who may be using alternative computer access technology ("click" is specific to a mouse).


We have made **all navigation links location sensitive**; that is, the current page is displayed as text to provide the user with an indication as to their current location within the structure of the Access E-Learning tutorial. However, please note some links such as "Skip to Page Content" and "End of Page" are invisible to some users of graphical browsers. These "hidden" links are programmed into the page as they are particularly helpful for people using non-graphical or text browsers and people using alternative computer access technology like screen readers and refreshable Braille displays.

We have provided a "Site Map" link, available from every page, to give users information about the general layout, modules and topics of the Access E-Learning tutorial. Additionally, we have also described in detail Access E-Learning and its accessibility features, on this page ("Accessibility of Access E-Learning"), which is available through the "Accessibility" link in the footer of every page. Furthermore, we have consistently provided users with navigation mechanisms and ways to bypass them, including [Keyboard Shortcuts](#) and consistently located: [Buttons](#), [Navigation between pages \(horizontal navigation\)](#), and [Navigation within a page \(vertical navigation\)](#).

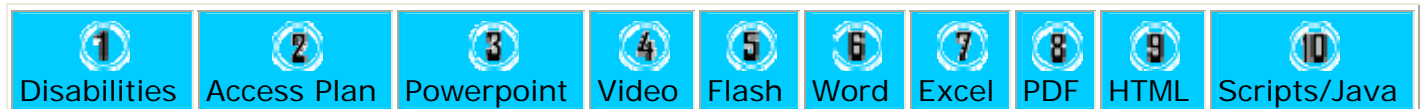
Buttons

GRADE Project  GRADE Project Feedback  Feedback Site Map

 Site Map , Exit Course  Exit Site , and Printer-Friendly

 Printer Friendly are the five buttons located in the upper right of each page below the tutorial title ("Access E-Learning").




In the top of each page, there is a drop-down menu to provide handy access to each module in the tutorial.



In general, selecting a linked button such as "Site Map", takes you to the respective page. However, if you select the "Exit Course" linked button, you will be returned to the login page of the Access E-Learning tutorial and your location within the tutorial when you selected "Exit Course" will be recorded so next login you can return to the point where you left off. Also, if have selected the "Printer-Friendly" link the page is delivered in a format that can more readily be printed; to return to a web version that has left navigation and more visual effects, select the "Web Version".

Horizontal Navigation

There are several navigation features in the Access E-Learning tutorial to indicate your current position and provide "directional links" to the previous page or the next page in the tutorial. These horizontal navigation features are located in the right navigation menu below the module name or at the end of a page's content just above the page feedback link at the bottom. These horizontal navigation features include:

- Display of the module name and number just above a counter stating page number of total pages within that module. For example:  Disabilities, Page 1 of 20.
-  A left-pointing arrow or "Previous Page" link takes you to the previous page in the tutorial.
-  A right-pointing arrow or "Next Page" link takes you to the next page in the tutorial.

However, please note some supplemental pages in the Access E-Learning tutorial, such as "Copyright Notice" require you to use the "Back", "Go Back", or "Previous" function of your browser to return to the previous page

from which you followed the link.

Vertical Navigation

Several navigational features are provided within a page to help the user more directly access desired information. These vertical navigation features include:

- Providing a "Skip to Page Content" link as the first line in every page to take the user over the navigation and directly to the title/text or where content of the page starts

Note: This is a specific requirement of [Section 508 - 1194.22 \(o\)](#), "A method shall be provided that permits users to skip repetitive navigation."

- Front-loading / chunking subheadings of information as anchors, which are direct links within the page.
- Dividing large blocks of information into more manageable groups using such elements as paragraphs, lists, and headings.
- Facilitating scanning of information by bolding or occasionally italicizing paragraph text.
- Providing "Top of Page" link, which take the user back to the top of the page where the content starts, for multi-part or long pages as well as at the end of each page's content and as the very last line ("End of Page") of each page.

Lastly, most navigation links (whether linked button, horizontal or vertical) are location sensitive; that is, the current page is displayed as text or the associated button is absent to provide the user with an indication of the current location within the structure of the Access E-Learning tutorial.

Alternative text and descriptions for graphics (non-text)

The Access E-Learning tutorial, aside from the text-based navigational structures, has been designed to be all content and has avoided gratuitous use of graphic elements to assist in faster downloading of the tutorial. When a graphic is used, we have provided alternative text (ALT), which is a short, literal description of what the image represents. This alternative text is

displayed in the browser of people using non-graphical or text browsers, users who may have images "turned off", and other users who may have difficulty viewing the graphics. Otherwise, for people using graphical browsers, such as Internet Explorer, the alternative text appears when the pointer hovers over the graphic.

Additionally, for complex graphics, more detailed information is offered through a long description (`LONGDESC`). However, as there is minimal support for `LONGDESC`, a description link or d-link is used in conjunction with the `LONGDESC`. In the Access E-Learning tutorial, besides the `LONGDESC`, we have provided a caption of the image below its thumbnail-size image as a link to the full-size image and its long description. Another way to do a d-link is to display a [d] next to the graphic. This d-link can be programmed to be "hidden" using cascading style sheets; this way it is invisible to users of graphical browsers (usually for aesthetics) but will still be available to people using non-graphical or text browsers and users who have images "turned off" in their browser.

An example of the HTML coding for the alternative text and descriptions for an image is as follows:

```
<IMG src="logo.gif" ALT="Logo for 'At Your Service' Course"
LONGDESC="logodescription.htm" >
  <a href="logodescription.htm" title="Image Description of At Your Service
Course Logo" >[d] </a>
```

To continue with this example and view text for a descriptive link, visit [Image Description of 'At Your Service' Course Logo](#).

Cascading style sheet (CSS)

The Access E-Learning tutorial uses templates and a cascading style sheet (CSS) to achieve a consistent style of presentation across all pages and to facilitate separating the content from the layout or format. The CSS itself applies to each page and is used to specify such characteristics as color, font type, font size, and spacing for a particular feature, such as a page title. Thus, if a change of color is desired for the page title, altering the CSS for that change becomes reflected in all the pages with that feature. However, users can choose to use the Access E-Learning CSS, their own customized CSS, or "turn off" CSS altogether. Accordingly, we have ensured that the Access E-Learning tutorial is usable with the style sheets "turned off".



In addition, we have used the [W3C CSS Validator](#) to verify our CSS meets established specifications.



Furthermore, we have verified the coding integrity of the Access E-Learning tutorial has been maintained. Besides the web guidelines, the World Wide Web Consortium (W3C) defines specifications for using HyperText Markup Language (HTML), the general publishing language of the World Wide Web. We used the [W3C HTML Validation Service](#) to verify our webpages meet the established [W3C HTML 4.01 Specification](#).

Usability with alternative computer technology

The Access E-Learning tutorial has been created and tested to be usable with alternative computer technology. We have tested the Access E-Learning tutorial on workstations utilizing popular screen reader technologies such as Jaws. Furthermore, we have tested the Access E-Learning tutorial in numerous operating systems (Windows, Macintosh, Linux) running different browsers under various combinations of conditions, such as sounds and/or images "turned on" or "turned off". The tested browsers include text-only browsers, such as Lynx, and various popular graphic browsers such as Internet Explorer, Netscape Navigator, Opera, and Mozilla. Additionally, the Access E-Learning tutorial has been designed and tested to be usable without a mouse, on small or low-resolution screens, with only voice or text output, and with alternative keyboards. We have also had people with color-blindness check the Access E-Learning tutorial to ensure important information is not conveyed with color, and that foreground and background colors provide sufficient contrast.

Clear and simple language

The Access E-Learning tutorial has tried to utilize clear and simple language appropriate to its content. We have divided large blocks of information into more manageable groups using such elements as paragraphs, lists, and headings. We have facilitated scanning of information by front-loading headings and paragraph text. In addition, on all of our forms, we have associated labels with their controls. Furthermore, where necessary, we have supplemented text with graphic elements to facilitate comprehension.

< < **Please use the "Back" button of your browser to return to the previous page**

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[Accessibility](#) • [User Agreement](#)

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