# George Mason University
## College of Education and Human Development
## Learning Design and Technology (LDT)

EDIT 526-B01.41998 – Web Accessibility and Design,
EDIT 526-B02.44142 – Web Accessibility and Design
2 Credits, Summer 2022
Online

## Faculty

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## Prerequisites/Corequisites

None

## University Catalog Course Description

Develops understanding of principles of universal web design. Students apply this understanding by designing and developing accessible web site using web authoring tools. Offered by School of Education. May not be repeated for credit.

## Course Delivery Method

This course will be delivered online (76% or more) using an asynchronous format via Blackboard Learning Management system (LMS) housed in the MyMason portal.  You will log in to the Blackboard (Bb) course site using your Mason email name (everything before *@gmu.edu*) and email password.  The course site will be available on June 6, 2022.

**Under no circumstances, may candidates/students participate in online class sessions (either by phone or Internet) while operating motor vehicles.  Further, as expected in a face-to-face class meeting, such online participation requires undivided attention to course content and communication.**

*Technical Requirements*

To participate in this course, students will need to satisfy the following technical requirements:

- High-speed Internet access with standard up-to-date browsers. To get a list of Blackboard's supported browsers see:
  https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#supported-browsers

  To get a list of supported operation systems on different devices see:
  https://help.blackboard.com/Learn/Student/Getting_Started/Browser_Support#tested-devices-and-operating-systems

- Students must maintain consistent and reliable access to their GMU email and Blackboard, as these are the official methods of communication for this course.
- Students may be asked to create logins and passwords on supplemental websites and/or to download trial software to their computer or tablet as part of course requirements.

*Expectations*

- Course Week: Because asynchronous courses do not have a "fixed" meeting day, our week will **start** on Monday, and **finish** on Sunday.
- Log-in Frequency:
  Students must actively check the course Blackboard site and their GMU email for communications from the instructor, class discussions, and/or access to course materials at least 3-4 times per week.
- Participation:
  Students are expected to actively engage in all course activities throughout the semester, which includes viewing all course materials, completing course activities and assignments, and participating in course discussions and group interactions.
- Technical Competence:
  Students are expected to demonstrate competence in the use of all course technology. Students who are struggling with technical components of the course are expected to seek assistance from the instructor and/or College or University technical services.
- Technical Issues:
  Students should anticipate some technical difficulties during the semester and should, therefore, budget their time accordingly. Late work will not be accepted based on individual technical issues.
- Workload:
  This online course is equivalent to a traditional classroom full-semester course. Since it is offered in a **compressed time frame**, please plan to spend approximately **12 hours a week** completing course activities, assignments, and readings; and viewing mini-lectures and other videos. Please be aware that this course is **not** self-paced. Students are expected to meet *specific deadlines* and *due dates* listed in the **Class Schedule** section of this syllabus. It is the student's responsibility to keep track of the weekly course schedule of topics, readings, activities and assignments due.
- Instructor Support:

Students may schedule a one-on-one meeting to discuss course requirements, content or other course-related issues. Those unable to come to a Mason campus can meet with the instructor via telephone or web conference. Students should email the instructor to schedule a one-on-one session, including their preferred meeting method and suggested dates/times.

- Netiquette:
  The course environment is a collaborative space. Experience shows that even an innocent remark typed in the online environment can be misconstrued. Students must always re-read their responses carefully before posting them, so as others do not consider them as personal offenses. *Be positive in your approach with others and diplomatic in selecting your words.* Remember that you are not competing with classmates, but sharing information and learning from others. All faculty are similarly expected to be respectful in all communications.
- Accommodations:
  Online learners who require effective accommodations to insure accessibility must be registered with George Mason University Disability Services.

## Learner Outcomes or Objectives

This course is designed to enable students to do the following:

1. Name various types of disabilities and their potential functional limitations.
2. Define accessibility in the context of digital technologies.
3. List the various software tools available to determine the extent to which a digital content item is accessible.
4. Evaluate the accessibility of digital content.
5. Create accessible Word, PPT, and PDF documents.
6. Create accessible web content using HTML and CSS.

## Professional Standards

Upon completion of this course, students will have met the following professional standards:

- Web Design
  - HMTL
  - CSS
  - WAI-ARIA
- Media and document accessibility
  - Adobe PDF accessibility
  - MS Word accessibility
  - MS PowerPoint accessibility
- Accessibility laws and guidelines
  - Section 508 of the Rehabilitation of 1973
  - Americans with Disabilities Act (ADA)
  - Web Content Accessibility Guidelines (WCAG) 2.1
- International Board of Standards for Training, Performance and Instruction (IBSTPI):

- o Professional Foundations:
    1. Communicate effectively in visual, oral and written form.
    5. Identify and respond to ethical, legal, and political implications of design in the workplace.
- o Planning and Analysis:
    7. Identify and describe target population and environmental characteristics.
    9. Analyze the characteristics of existing and emerging technologies and their potential use.
- o Design and Development:
    14. Select or modify existing instructional materials.
    15. Develop instructional materials.

## Required Texts

Gilbert, R. M., & Rateau, R. (2019). *Inclusive design for a digital world: Designing with accessibility in mind*. Apress.  ISBN-13: 978-1484250150

*Available for purchase on Amazon:*

- **Cost:** Paperback (~$25), Kindle (~$19)
- **Link:** Purchase on Amazon

## Course Performance Evaluation

Students are expected to submit all assignments on time in the manner outlined by the instructor (e.g., Blackboard, VIA, hard copy).

- **Assignments and/or Examinations**

    Detailed assignment requirements are posted in Blackboard, along with the grading rubrics for each assignment.

| ASSESSMENTS | % |
|---|---|
| Assignments (6) | 30% |
| Group Reflections/Peer Evaluations (3) | 15% |
| Peer Feedback/Beta Testing (2) | 15% |
| Final Project | 40% |
| **Total** | **100%** |

- **Other Requirements**

  Every student registered for any course <u>with a required performance-based assessment</u> is required to submit this assessment to Blackboard (regardless of whether a course is an elective, a onetime course or part of an undergraduate minor). Evaluation of the performance-based assessment by the course instructor will also be completed in Blackboard.  Failure to submit the assessment to Blackboard will result in the course instructor reporting the course grade as Incomplete (IN).  Unless the IN grade is changed upon completion of the required Blackboard submission, the IN will convert to an F nine weeks into the following semester.

- **Grading**

  The grading scale used in this course is the official George Mason University scale for graduate-level courses. Decimal percentage values ≥.5 will be rounded up (e.g., 92.5% will be rounded up to 93%); decimal percentage values <.5 will be rounded down (e.g., 92.4% will be rounded down to 92%).

| Letter Grade | Total Points Earned |
|---|---|
| A | 94%-100% |
| A- | 90%-93% |
| B+ | 86%-89% |
| B | 83%-85% |
| B- | 80%-82% |
| C | 70%-79% |
| F | <70% |

**Professional Dispositions**

See https://cehd.gmu.edu/students/polices-procedures/.

**Class Schedule** (==**green highlights**== – *off-cycle due date*)

| Week/ Learning Outcomes | Topic | Readings/Mini-lectures | Assignments |
|---|---|---|---|
|  |  |  |  |

| Week 1 Mon, 6/6 – Sun, 6/12 *Learning Outcomes: 1, 2* | Overview of web accessibility, assistive technology, usability, and disability | Mini-lectures <br><br>• *Accessible Web Design* <br>• *Examples of how assistive technology applications interact with web content* <br><br>Readings <br><br>• *Intro to Web Accessibility* <br>• *How Individuals with Disabilities are impacted on the web* <br><br>**Opening Q&A (Thurs., 6/9)** <br>• ***Please note:*** *this synchronous session is not required* | **Assignment #1 (20 pts.):** *Simulation Lab Report (Due June 12$^{th}$ by midnight)* <br><br>**Group Reflection #1 (5 pts.):** *Accessibility Maze (Due June 12$^{th}$ by midnight)* |
|---|---|---|---|
| Week 2 Mon, 6/13 – Sun, 6/19 *Learning Outcomes: 3, 4, 6* | Learn basic HTML techniques that impact web accessibility | Mini-lectures <br><br>• *HTML Basics* <br>• *Common HTML Elements* | **Assignment #2 (35 pts.): Create a practice webpage** (*Due June 19$^{th}$ by midnight*) <br><br>**Final Project – STEP 1 (-2 pts off overall final project grade if not turned in on time):** *Topic Selection (Due June 19$^{th}$ by midnight)* |
| Week 3 Mon, 6/20 – Sun, 6/26 *Learning Outcomes: 3, 4, 6* | Learn complex HTML techniques that impact web accessibility | Mini-lectures <br><br>• *Accessible Rich Internet Applications (ARIA)* <br>• *Creating Accessible Tables* <br>• *Creating Accessible Images* <br>• *Creating Accessible Forms* <br><br>**Instructor Q&A (Thurs, 6/23)** <br>• ***Please note:*** *this synchronous session is not required* | **Assignment #3 (25 pts.):** *Add Complex HTML Elements & ARIA to your website* (*Due June 26$^{th}$ by midnight*) <br><br>**Group Reflection #2 (5 pts.):** *P.O.U.R. Matching Exercise* (*Due June 26$^{th}$ by midnight*) |

| Week 4<br>Mon, 6/27 – Sun, 7/3<br><br>*Learning Outcomes: 2, 3, 4, 5. 6* | Basic web accessibility evaluation techniques and tools | Mini-lectures<br><br>• *Basic Strategies for Assessing the Accessibility of a website*<br><br>==**Instructor Q&A (Thurs., 6/30)**==<br>• ==***Please note:** this synchronous session is not required*== | **Assignment #4 (25 pts.):** ***Evaluate the accessibility of a website*** *(Due July 3rd by midnight)*<br><br>**Peer Feedback #1 (5 pts):** *Beta Test/HTML Review (Due July 3rd by midnight)* |
|---|---|---|---|
| Week 5<br>Mon, 7/4 – Sun, 7/10<br><br>*Learning Outcomes: 2, 3, 4, 5* | Overview of relevant accessibility laws/guidelines<br><br>Create accessible Word and PDF documents | Readings<br><br>• *Converting MS Office documents into accessible PDFs*<br><br>Mini-lectures<br><br>• *Disability Laws and Guidelines*<br>• *Creating more accessible Word documents*<br>• *Creating more accessible PPT presentations*<br>• *Using the Accessibility Checker*<br><br>==**Instructor Q&A (Thurs., 7/7)**==<br>• ==***Please note:** this synchronous session is not required*== | **Assignment #5 (30 pts.):** ***Fix accessibility issues in MS Office documents*** *(Due July 10th by midnight)*<br><br>**Final Project – STEP 4 (15 pts.):** ***Final Project Design Document*** *(Due July 10th by midnight)* |
| Week 6<br>Mon, 7/11 – Sun, 7/17<br><br>*Learning Outcomes: 6* | Learn basic CSS techniques that impact web accessibility | Mini-lectures<br><br>• *CSS – Basics* | **Assignment #6 (25 pts.):** ***Create a Responsive Layout for your website using CSS*** *(Due July 17th by midnight)* |

| | | | |
|---|---|---|---|
| **Week 7**<br>Mon, 7/18 – Sun, 7/24<br><br>*Learning Outcomes: 4, 6* | Using CSS for styling and positioning | Mini-lectures<br><br>- *CSS – Basics*<br>- *CSS – Font color and formatting*<br>- *CSS – Designing Navigation*<br>- *CSS – The Box Model*<br>- *CSS – Positioning, Floats, and Layouts*<br><br>==**Instructor Q&A – *Creating accessible audio and video** (Thurs., 7/21)*==<br>==- ***Please note:** this synchronous session is not required*== | **Peer Feedback #2 (10 pts):**<br>***Beta Test/Final Project Review***<br>*(Due July 24th by midnight)* |
| Week 8<br>==**Mon, 7/25 – Wed, 7/27**==<br><br>*Learning Outcomes: 4, 6* | Finish Final Project Design | Readings<br><br>- *Creating accessible audio and/or video* | **Group Peer Evaluation (20 pts.):** ==*(**Due July 27th by midnight**)*==<br><br>**Final Project Due (45 pts.):**<br>***Create a P.O.U.R instructional resource using HTML and CSS*** ==*(**Due July 27th by midnight**)*== |

Note: Faculty reserves the right to alter the schedule as necessary, with notification to students.

## Core Values Commitment

The College of Education and Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice.  Students are expected to adhere to these principles:  http://cehd.gmu.edu/values/.

## GMU Policies and Resources for Students

*Policies*

- Students must adhere to the guidelines of the Mason Honor Code (see https://catalog.gmu.edu/policies/honor-code-system/ ).

- Students must follow the university policy for Responsible Use of Computing (see https://universitypolicy.gmu.edu/policies/responsible-use-of-computing/).

- Students are responsible for the content of university communications sent to their Mason email account and are required to activate their account and check it regularly.  All communication from the university, college, school, and program will be sent to students **solely** through their Mason email account.

- Students with disabilities who seek accommodations in a course must be registered with George Mason University Disability Services.  Approved accommodations will begin at the time the written letter from Disability Services is received by the instructor (see https://ds.gmu.edu/).

- Students must silence all sound emitting devices during class unless otherwise authorized by the instructor.

*Campus Resources*

- Support for submission of assignments to VIA should be directed to viahelp@gmu.edu or https://cehd.gmu.edu/aero/assessments.  Questions or concerns regarding use of Blackboard should be directed to https://its.gmu.edu/knowledge-base/blackboard-instructional-technology-support-for-students/.

- For information on student support resources on campus, see https://ctfe.gmu.edu/teaching/student-support-resources-on-campus

**Notice of mandatory reporting of sexual assault, sexual harassment, interpersonal violence, and stalking:**

As a faculty member, I am designated as a "Non-Confidential Employee," and must report all disclosures of sexual assault, sexual harassment, interpersonal violence, and stalking to Mason's Title IX Coordinator per University Policy 1202. If you wish to speak with someone confidentially, please contact one of Mason's confidential resources, such as Student Support and Advocacy Center (SSAC) at 703-380-1434 or Counseling and Psychological Services (CAPS) at 703-993-2380. You may also seek assistance or support measures from Mason's Title IX Coordinator by calling 703-993-8730, or emailing titleix@gmu.edu.

**For additional information on the College of Education and Human Development, please visit our website https://cehd.gmu.edu/students/ .**

**FINAL PROJECT ASSESSMENT RUBRIC:**

| IBSTPI Competency | Criteria | Does Not Meet Standards | Meets Standards | Exceeds Standards |
|---|---|---|---|---|
| 7: Identify & describe target population & environmental characteristics | **Executive Summary** | Summary misses most components of the evaluation or is unclear; exceeds word limit | Provides a summary of most components of the evaluation; exceeds word limit | Provides a clear, concise summary of ID project, problem statement, and all evaluation components in 300 words or less |
| 5: Identify ethical, legal & political implications of design in the workplace | **Accessibility Testing summary** | Little to no evidence of accessibility and/or usability considerations in the overall product design (i.e., alt text for images, properly formatted tables, captions/transcripts for videos, etc.). | Accessibility and/or usability considerations in most elements of the overall product design (i.e., alt text for images, properly formatted tables, captions/transcripts for videos, etc.). | Accessibility and/or usability considerations clearly addressed in all elements of the product design (i.e., alt text for images, properly formatted tables, captions/transcripts for videos, etc.). |
| 15: Develop Instructional Materials | **Website Template** | The template is missing most or all of the required elements and there is little consistency between pages. | The template is missing some of the required elements or there are some variations in the template sections between pages. | The template includes all of the required elements and the template section is exactly the same on every page. |
| 15: Develop Instructional Materials | **Cascading Style Sheet** | Most of required elements are missing. | Parts of the required elements are missing. | The CSS contains all required elements and the style sheet is well-organized, well-written, and easy to understand. |

| 15: Develop Instructional Materials | **Page-specific Styles** | The styles fail to achieve the goal of highlighting the active/selected tab. | The styles achieve most of the goal of highlighting the active/selected tab, but there are deficiencies. | The page-specific styles highlight the active/selected tab and are written concisely. |
|---|---|---|---|---|
| 15: Develop Instructional Materials | **Content Elements** | Most of the content requirements are not met. | Parts of the content requirements are not met. | The content meets all the requirements and is well written. |
| 1: Communicate effectively in visual, oral and written form | **Language** | Rules of English grammar, usage, spelling and punctuation are not followed; multiple language errors throughout the document | Rules of English grammar, usage, spelling and punctuation are generally followed throughout the document; one or two minor language errors | Rules of English grammar, usage, spelling and punctuation are followed consistently throughout the document; no language errors |
| 14: Select or modify existing instructional Materials | **Pass HTML Validator at http://validator.w3.org** | Report poorly organized. There is no clear organization between simulation experiences, similarities/differences, and design considerations. | Limited organization. Clear organization between simulation experiences, but similarities/differences and design considerations not clearly defined. | All sections of report clearly organized and defined. |
| 14: Select or modify existing instructional Materials | **Pass Accessibility Checks using WAVE (http://wave.webaim.org) and Basic Checks** | Accessibility check revealed 3 or more errors. | Accessibility check revealed 1 to 2 errors. | Accessibility check revealed no errors. |

| 15: Develop Instructional Materials | **Uploading to Web Server** | The web page is not uploaded or the web page is uploaded, but there are problems viewing the file. | The web page is uploaded to the web, on the student's mason.gmu.edu account, and is viewable by anyone with a web connection and a browser. | |
|---|---|---|---|---|