

**GEORGE MASON UNIVERSITY  
COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT  
GRADUATE SCHOOL OF EDUCATION  
Instructional Design and Technology (IDT)**

EDIT 526-B02  
Web Accessibility and Design  
2 Credits, Summer 2016

**PROFESSOR(S):**

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**COURSE DESCRIPTION:**

**A. Prerequisites/Corequisites**

None

**B. 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.

**DELIVERY METHOD:**

This course will be delivered online using an asynchronous (not “real time”) format via the Blackboard learning management system (LMS) housed in the MyMason portal. You will log in to the Blackboard course site using your Mason email name (everything before “@masonlive.gmu.edu) and email password. The course site will be available on June 6, 2016.

**TECHNICAL REQUIREMENTS:**

To participate in this course, students will need the following resources:

- High-speed Internet access with a standard up-to-date browser, either Internet Explorer or Mozilla Firefox. Opera and Safari are not compatible with Blackboard;
- 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 the course requirements.

## REQUIRED HARDWARE:

You will need access to:

- A **Windows or Macintosh computer** with:
  - A fast and reliable **broadband internet connection** (e.g., cable, DSL)
  - **Speakers or headphones**
  - A **microphone**

## REQUIRED SOFTWARE:

**NOTE: You do not necessarily need to buy any of the software listed below, but you will need access to it.** Please plan accordingly if you are going to use the 30-day demo.

- **Readers and media players:**
  - **Adobe Reader** (free) (or other PDF reader, such as Preview on a Mac) <http://get.adobe.com/reader/>
- **QuickTime** (free) <http://www.apple.com/quicktime/download/>
- **Adobe Flash player** (free) <http://get.adobe.com/flashplayer/>
- **Word processing:**
  - **Microsoft Office** <http://office.microsoft.com>  
NOTE: If you don't have a license, Office is available in nearly all computer labs on all campuses. You can also access it from home using the Virtual Computing Lab (VCL) <https://www.vcl.gmu.edu>.
- **HTML/text editor** (You may use of one of the following applications. There are, however, other similar programs. **DO NOT** use *Notepad on Windows or TextEdit on a Mac*):
  - Mac:
    - **TextWrangler** (free), <http://www.barebones.com/products/textwrangler/download.html>
  - Windows:
    - **Notepad++** (free), <http://notepad-plus-plus.org/>
- **PDF Editor:**
  - **Acrobat Pro DC** (commercial; not just Adobe Reader DC). Trial version available: <https://acrobat.adobe.com/us/en/free-trial-download.html>
    - **Note:** You only have 30 days with the trial version; so do not install it too soon. It is also available in some computer labs on campus.
- **Screen reader** (choose at least one):
  - **Windows**
    - **JAWS** (commercial product; most popular screen reader; trial version available for 40 minutes at a time before you have to reboot the computer to keep using it, with essentially no expiration date) <http://www.freedomscientific.com/products/fs/jaws-product-page.asp>
    - **WindowEyes for Office** (free, as long as you have MS Office)

- installed on your computer) <http://www.windoweyesforoffice.com>
    - **NVDA** (free) <http://www.nvda-project.org/>
  - **Mac**
    - **VoiceOver** (free, already installed on Macs)

## OPTIONAL HARDWARE

- A **video recording device** (can be a phone, computer, webcam, video camera, or anything that can record videos)

## OPTIONAL SOFTWARE

- **Antivirus software**, free for students at <http://antivirus.gmu.edu>
- **Read and Write Gold** (free) by TextHelp. For an explanation of the software, see [http://www.texthelp.com/videotours/rw10marketing/intro/intro\\_stream\\_us.html](http://www.texthelp.com/videotours/rw10marketing/intro/intro_stream_us.html). This software can improve reading comprehension and learning for people with learning disabilities or those whose native language is not English. Mason is offering this free to all students, please visit Mason's Assistive Technology Initiative <http://ati.gmu.edu/> for a copy of the software.
- **Multimedia content development**
  - **PC & Mac – Camtasia** (commercial product; Camtasia has captioning capability that is set to Section 508 compliance standards; there is a trial version you can use for 30 days - <http://www.techsmith.com/download/camtasia/>)

## 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, at a minimum this should be **3-4 times per week**.
- **Participation:** Students are expected to actively engage in all course activities throughout the semester, which include viewing of 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 are expected to seek assistance if they are struggling with technical components of the course.
- **Technical Issues:** Students should expect that they could experience some technical difficulties at some point in the semester and should, therefore, budget their time accordingly. Late work will not be accepted based on individual technical issues.

- **Workload:** Expect to log in to this course **at least 3-4 times a week** to read announcements, participate in the discussions, and work on course materials. Remember, this course is **not** self-paced. There are **specific deadlines** and **due dates** listed in the **CLASS SCHEDULE** section of this syllabus to which you are expected to adhere. It is the student's responsibility to keep track of the weekly course schedule of topics, readings, activities and assignments due.
- **Advising:** If you would like to schedule a one-on-one meeting to discuss course requirements, content or other course-related issues, and you are unable to come to the Mason campus, we can meet via telephone or web conference. Send me an email to schedule your one-on-one session and include your preferred meeting method and suggested dates/times.
- **Netiquette:** Our goal is to be **collaborative**, not combative. Experience shows that even an innocent remark in the online environment can be misconstrued. I suggest that you always re-read your responses carefully before you post them to encourage others from taking them as personal attacks. **Be positive in your approach to others and diplomatic with your words.** I will do the same. Remember, you are not competing with each other but sharing information and learning from one another as well as from the instructor.

## **LEARNER OUTCOMES:**

At the end of this course, students will be able to:

- Name the various types of disabilities
- Define accessibility in the context of digital technologies
- List the various software tools available to determine the extent to which a digital content item is accessible
- Evaluate the accessibility of digital content
- Create accessible Word and PDF documents
- Explain the concept and principles of Universal Design
- Apply the principles of Universal Design to the design of an instructional product

## **PROFESSIONAL/TECHNICAL STANDARDS**

- Web Design
  - HTML
  - CSS
  - WAI-ARIA (Basic)
- Media and document accessibility
  - Video captioning and audio descriptions
  - Adobe PDF accessibility
  - MS Word accessibility

- Accessibility laws and guidelines
  - Section 508 of the Rehabilitation of 1973
  - Americans with Disabilities Act (ADA)
  - Web Content Accessibility Guidelines (WCAG) 2.0
- International Board of Standards for Training, Performance and Instruction ([IBSTPI](#)):
  - Professional Foundations:
    1. Communicate effectively in visual, oral and written form
    2. Identify and respond to ethical, legal, and political implications of design in the workplace
  - 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
  - Design and Development:
    14. Select or modify existing instructional materials
    15. Develop instructional materials

### **REQUIRED TEXTS:**

None. All required reading materials will be posted in Blackboard.

### **COURSE ASSIGNMENTS AND EXAMINATIONS:**

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

• Discussion/Blog postings (4)	11 points
• Create a practice webpage	10 points
• Create a basic 3-page website using CSS styling	10 points
• Fix the accessibility issues in a Word/PDF document	10 points
• Evaluate the accessibility of an existing web site	18 points
• Peer reviews for instructional product design (3)	6 points
• Create an instructional resource applying the principles of Universal Design	35 points
<b>Total</b>	<b>100 points</b>

## GRADING POLICIES

- **General information:** The evaluation of student performance is related to the student's demonstration of the course outcomes. All work is evaluated on its relevance to the specific assignment, comprehensiveness of information presented, specificity of application, clarity of communication, and the analytical skills utilized, as documented in the respective grading rubrics at the end of this syllabus and on the Bb course site.
- **Grading scale:** The grading scale used in this course is the official George Mason University scale for graduate-level courses. Decimal percentage values  $\geq .5$  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	93%-100%
A-	90%-92%
B+	88%-89%
B	83%-87%
B-	80%-82%
C	70%-79%
F	<70%

## TK20 PERFORMANCE-BASED ASSESSMENT SUBMISSION REQUIREMENT

Every student registered for any course with a required performance-based assessment 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.

## GMU POLICIES AND RESOURCES FOR STUDENTS

- a. Students must adhere to the guidelines of the George Mason University Honor Code (See <http://oai.gmu.edu/the-mason-honor-code-2/>).
- b. Students must follow the university policy for Responsible Use of Computing (See <http://universitypolicy.gmu.edu/policies/responsible-use-of-computing/>).
- c. Students are responsible for the content of university communications sent to their George Mason University 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.

- d. The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance (See <http://caps.gmu.edu/>).
- e. Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester (See <http://ods.gmu.edu/>).
- f. Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.
- g. The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing (See <http://writingcenter.gmu.edu/>).

## **PROFESSIONAL DISPOSITIONS**

Students are expected to exhibit professional behaviors and dispositions at all times.

## **CORE VALUES COMMITMENT**

The College of Education & 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/>.

**For additional information on the College of Education and Human Development, Graduate School of Education, please visit our website <http://gse.gmu.edu/>.**

## **CORE VALUES COMMITMENT**

Date	Topic/Learning Experiences	Assignments
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<p>Week 1 6/6 – 6/12</p>	<p>Introductions, Overview of Disabilities, Accessibility laws and guidelines</p> <p>Understanding Electronic and Information Technology (EIT) Accessibility – Part I</p> <ul style="list-style-type: none"> <li>• Basic web design using HTML</li> </ul>	<p><b>Assignment #1 (10 pts.):</b> <b>Create a practice webpage</b> <i>(Due June 12<sup>th</sup> by midnight)</i></p> <p><b>Discussion Post (2 pts.):</b> <b>Tell us about yourself</b> <i>(Due June 12<sup>th</sup> by midnight)</i></p> <p><b>Blog Posting #1 (3 pts.):</b> <b>Simulation Lab Experience</b> <i>(Due June 12<sup>th</sup> by midnight)</i></p>
<p>Week 2 6/13 – 6/19</p>	<p>Understanding Electronic and Information Technology (EIT) Accessibility – Part I cont.</p> <ul style="list-style-type: none"> <li>• Cascading style sheets</li> <li>• Accessible design</li> </ul>	<p><b>Assignment #2 (10 pts.):</b> <b>Create a simple 3-page website using CSS styling</b> <i>(Due June 19<sup>th</sup> by midnight)</i></p> <p><b>Blog Posting #2 (3 pts.):</b> <b>Web Design Experience</b> <i>(Due June 19<sup>th</sup> by midnight)</i></p>
<p>Week 3 6/20 – 6/26</p>	<p>Evaluating websites and web-based applications for accessibility</p>	<p><b>Assignment #3 (18 pts.):</b> <b>Evaluate the accessibility of an existing website or web-based application</b> <i>(Due June 26<sup>th</sup> by midnight)</i></p>
<p>Week 4 6/27 – 7/3</p>	<p>Understanding Electronic and Information Technology (EIT) Accessibility – Part II</p> <ul style="list-style-type: none"> <li>• Document Accessibility (Word, PDF)</li> <li>• Evaluating document accessibility</li> <li>• Video accessibility</li> </ul>	<p><b>Assignment #4 (10 pts.):</b> <b>Fix the accessibility issues in a Word/PDF document</b> <i>(Due July 3<sup>rd</sup> by midnight)</i></p>



<p>Week 5 7/4 – 7/10</p>	<p>Introduction to Universal Design for Learning (UDL)</p> <ul style="list-style-type: none"> <li>• Overview of UDL, ADDIE ID model</li> <li>• Overview of Final Project</li> <li>• Implications of UDL for the <i>analysis</i> components of instructional design</li> </ul>	<p><b>Assignment #5:</b> <b>Create a detailed profile of the <i>Analysis</i> phase of your instructional product</b> (Due July 10<sup>th</sup> by midnight)</p> <p><b>Blog Posting #3 (3 pts.):</b> <b>UDL and ADDIE</b> (Due July 3<sup>rd</sup> by midnight)</p>
<p>Week 6 7/11 – 7/16</p>	<p>Knowledge sharing week – <i>Analysis Profiles</i></p> <ul style="list-style-type: none"> <li>• Implications of UDL for the <i>design</i> and <i>development</i> components of instructional design</li> <li>• <i>Continue work on instructional project</i></li> </ul>	<p><b>Assignment #6:</b> <b>Create a detailed profile of the <i>Design</i> and <i>Development</i> phases of your instructional product</b> (Due July 17<sup>th</sup> by midnight)</p> <p><b>Peer Review #1 – <i>Analysis Profiles</i> (2 pts.)</b> (Due <u>July 13<sup>th</sup></u> by midnight)</p>
<p>Week 7 7/17 – 7/23</p>	<p>Knowledge sharing week – <i>Design and Development Profiles</i></p> <ul style="list-style-type: none"> <li>• Implications of UDL for the <i>implementation</i> and <i>evaluation</i> components of instructional design</li> <li>• Instructional flexibility and systems barriers</li> <li>• <i>Continue work on instructional project!</i></li> </ul>	<p><b>Assignment #7:</b> <b>Create a detailed profile of the <i>Implementation</i> and <i>Evaluation</i> phases of your instructional project</b> (Due July 23<sup>rd</sup> by midnight)</p> <p><b>Peer Review #2 – <i>Design and Development Profiles</i> (2 pts.)</b> (Due <u>July 20<sup>th</sup></u> by midnight)</p>
<p>Week 8 7/24 – 7/30</p>	<p>Knowledge sharing week – <i>Implementation and Evaluation Profiles</i></p> <ul style="list-style-type: none"> <li>• Peer review of draft of final project</li> <li>• Complete Final Projects!</li> </ul>	<p><b>Final Project (35 pts.)</b> (Due July 30<sup>th</sup> by midnight)</p> <p><b>Peer Review #3 (2 pts.) – <i>Implementation and Evaluation Profiles</i></b> (Due <u>July 27<sup>th</sup></u> by midnight)</p>

**ASSESSMENT RUBRIC:**

**Final Project Grading Rubric**

<b>IBSTPI Competency</b>	<b>Criteria</b>	<b>Does Not Meet Standards</b>	<b>Meets Standards</b>	<b>Exceeds Standards</b>
7: Identify & describe target population & environmental characteristics	<b>Executive Summary</b>	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
2: Apply current research & theory to the discipline of instructional design	<b>Implications of UDL on Analysis phase of Instructional Design process</b>	The <i>analysis</i> portion of the project does not demonstrate evidence of the integration of UDL practices. Many aspects of the analysis phase of ID process are incomplete or missing.	The <i>analysis</i> portion of the project demonstrates evidence of the integration of UDL practices in most areas of ID. Some, but not all, aspects of the analysis phase of ID process are addressed.	The <i>analysis</i> portion of the project demonstrates clear evidence of the integration of UDL practices in all areas (i.e., instructional goals and analyses, problem identification, learner analysis and objectives).
2: Apply current research & theory to the discipline of instructional design	<b>Implications of UDL on Design and Development phases of Instructional Design process</b>	The <i>design</i> and <i>development</i> portion of the project does not demonstrate evidence of the integration of UDL practices. Many aspects of the analysis phase of ID process are incomplete or missing.	The <i>design</i> and <i>development</i> portion of the project demonstrates evidence of the integration of UDL practices in most areas of ID. Some, but not all, aspects of the analysis phase of ID process are addressed.	The <i>design</i> and <i>development</i> portion of the project demonstrates clear evidence of the integration of UDL practices in all areas (i.e., assessments, instructional format, instructional strategy, prototype, etc.).

<p>2: Apply current research &amp; theory to the discipline of instructional design</p>	<p><b>Implications of UDL on <i>Implementation</i> and <i>Evaluation</i> phases of Instructional Design process</b></p>	<p>The <i>implementation</i> and <i>evaluation</i> portion of the project does not demonstrate evidence of the integration of UDL practices. Many aspects of the analysis phase of ID process are incomplete or missing.</p>	<p>The <i>implementation</i> and <i>evaluation</i> portion of the project demonstrates evidence of the integration of UDL practices in most areas of ID. Some, but not all, aspects of the analysis phase of ID process are addressed.</p>	<p>The <i>implementation</i> and <i>evaluation</i> portion of the project demonstrates clear evidence of the integration of UDL practices in all areas (i.e., training preparation/planning, formative evaluation, summative evaluation).</p>
<p>5: Identify ethical, legal &amp; political implications of design in the workplace</p>	<p><b>Issue impact summary</b></p>	<p>Impact on users with disabilities is unclear OR no reference to how various types of disabilities (vision, hearing, motor, cognitive) are supported</p>	<p>Some phases of ID process demonstrate how UDL integration impacts users with various disability types (vision, hearing, motor, cognitive)</p>	<p>Each phase of ID process clearly demonstrates how UDL integration impacts users with various disability types (vision, hearing, motor, cognitive)</p>
<p>1: Communicate effectively in written &amp; oral form</p>	<p><b>Language</b></p>	<p>Rules of English grammar, usage, spelling and punctuation are not followed; multiple language errors throughout the document</p>	<p>Rules of English grammar, usage, spelling and punctuation are generally followed throughout the document; one or two minor language errors</p>	<p>Rules of English grammar, usage, spelling and punctuation are followed consistently throughout the document; no language errors</p>

**\*PLEASE NOTE:** Assessment rubrics for other assignments are located in the Bb course.