
SYLLABUS

EXSM 3929: Digital Accessibility

User Experience / User Interface Design Certificate

Online and Continuing Education | University of Alberta

Course Dates: April, 25, 2023 – June, 11, 2023

Location/Format: online (Asynchronous) with online (Synchronous) Tuesdays 6:30 pm to 7:15 pm

Course instructor(s) and contact information:	Jonathan Sanderson jo10@ualberta.ca Responses within 48 hours during business days; office hours from 4:00 pm to 9:00 pm.
Program office information:	If you have any concerns or questions regarding the course, you can contact the program staff, Monday through Friday, at techprog@ualberta.ca
Date of last syllabus revision:	Spring 2023 Copyright © 2023. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of the University of Alberta. Note: Should there be a discrepancy between printed and online course materials, online copies will be considered the correct and up-to-date version. No part of these notes constitutes legal advice.

The University of Alberta acknowledges that we are located on Treaty 6 territory, and respects the histories, languages, and cultures of First Nations, Metis, Inuit, and all First Peoples of Canada, whose presence continues to enrich our vibrant community.

ABOUT THE COURSE

Course Description

Digital accessibility refers to the practice of building digital content and applications that can be used by a wide range of people, including children and individuals who have visual, motor, auditory, speech, or cognitive disabilities. This course will teach students how to incorporate accessibility into the design process. Students will explore the principles of universal design in the light of multimedia accessibility to improve the experience of websites, apps and forms for people with disabilities. They will develop their own design guidelines to make online content more accessible.

Course Outcomes

After completing this course, students should be able to:

- Extend their current knowledge of disability to a more inclusive perspective
- Explain the types and models of disability and the differences between adaptive strategy and assistive technology
- Practice using specific assistive technology and gain familiarity with various types
- Experiment with manual and automated accessibility testing procedures
- Demonstrate knowledge of common accessibility standards
- Synthesize own best practices from standards, general guidelines, and case studies
- Create an accessibility report and evaluate a website for accessibility issues

Course Materials

- All required course materials can be found for free online. The links and APA references can be found under each module section within this syllabus.

COURSE SCHEDULE

Key Course Dates

All assignment submission deadlines follow **Mountain Time (MT)**, listed below.

Please note that online synchronous meetings **will be recorded**.

Refer to this document's Recording in the Classroom policy section for further details.

	Key Dates & Times
Synchronous Sessions (Tuesdays, Zoom)	Apr 25, 2023 : Zoom session 6:30 pm – 7:15 pm May 2, 2023 : Zoom session 6:30 pm – 7:15 pm May 9, 2023 : Zoom session 6:30 pm – 7:15 pm May 16, 2023 : Zoom session 6:30 pm – 7:15 pm May 23, 2023 : Zoom session 6:30 pm – 7:15 pm May 30, 2023 : Zoom session 6:30 pm – 7:15 pm Jun 6, 2023 : Zoom session 6:30 pm – 7:15 pm
Weekly Responses (Saturdays)	Apr 29, 2023 : Weekly Response M1 due by 11:59 pm May 6, 2023 : Weekly Response M2 due by 11:59 pm May 13, 2023 : Weekly Response M3 due by 11:59 pm May 20, 2023 : Weekly Response M4 due by 11:59 pm May 27, 2023 : Weekly Response M5 due by 11:59 pm Jun 3, 2023 : Weekly Response M6 due by 11:59 pm Jun 10, 2023 : Weekly Response M7 due by 11:59 pm
Course Assignments (Sundays)	May 14, 2023 : Assignment 1 due by 11:59 pm (with Response M3) May 21, 2023 : Assignment 2 due by 11:59 pm (with Response M4) May 28, 2023 : Assignment 3 due by 11:59 pm (with Response M5) Jun 4, 2023 : Assignment 4 due by 11:59 pm (with Response M6) Jun 11, 2023 : Assignment 5 due by 11:59 pm (with Response M7)

MODULE OVERVIEWS

Pre-Course

Activities & Assignments

- Watch the welcome video on eClass
 - Introduce yourself in the course forum
 - Test your settings and microphone for eClass Live
-

Module 1: Understanding Accessibility

Topics

- Accessibility introduction
- Sharing accessibility stories
- Understanding different perspectives

Learning Outcomes

After completing this module, students should be able to:

- Understand the need for inclusive design
- Connect the concept of accessible design to a real user story
- Respond to another person sharing their experience with accessibility issues
- Identify unique accessibility requirements

Required Readings

- Weblink:
Young, S. (2014). I'm not your inspiration, thank you very much. ted.com.
https://www.ted.com/talks/stella_young_i_m_not_your_inspiration_thank_you_very_much

- Weblink:
Copower (n.d.). Welcome to Assistive Technology Success Stories. copower.org.
<https://www.copower.org/assistive-tech/at-success-stories>
- Weblink:
Worldbank. (n.d.). Disability Inclusion. worldbank.org
<https://www.worldbank.org/en/topic/disability#1>
- Weblink:
W3. (2017). Stories of Web Users. w3.org
<https://www.w3.org/WAI/people-use-web/user-stories/>

Activities & Assignments

- Online Zoom discussion
- Weekly response

Module 2: Defining Accessibility

Topics

- Types of disabilities
- Models of disability
- Adaptive strategies

Learning Outcomes

After completing this module, students should be able to:

- Describe the models of disability
- Compare and contrast the Medical Model and Social Model of disability
- Define assistive technology and adaptive strategies
- Describe the main types of disabilities

Required Readings

- Weblink:
TheWeb. (n.d.). Models of Disability: Keys to Perspectives. theweb.ngo
https://www.theweb.ngo/history/ncarticles/models_of_disability.htm
- Weblink:

UKDHM. (2021). The Social Model. ukdhm.org
<https://ukdhm.org/what-is-ukdhm/the-social-model/>

- Weblink:
Pearson. (n.d.). Assistive Technology and Adaptive Strategies. Accessibility.pearson.com
<https://accessibility.pearson.com/resources/accessibility-fundamentals/assistive-technology/index.php>
- Weblink:
ADU. (n.d.). Different Types of Disabilities. services.anu.edu.au
<https://services.anu.edu.au/human-resources/respect-inclusion/different-types-of-disabilities>

Activities & Assignments

- Online Zoom discussion
- Weekly response

Module 3: Assistive Technology

Topics

- Assistive technology
- Vision assistance
- Alternative input

Learning Outcomes

After completing this module, students should be able to:

- List various popular assistive technology types
- Practice using a screen reader to navigate the web
- Consider the usability of assistive technology
- Evaluate and compare two screen readers

Required Readings

- Weblink:
Tuke, H. (2021). Assistive technology devices: How disabled people use the web. bighack.org
<https://bighack.org/assistive-technology-devices-definitions-how-disabled-people-use-the-web/>
- Weblink:

W3. (2017). Tools and Techniques. w3.org
<https://www.w3.org/WAI/people-use-web/tools-techniques/>

- Weblink:
Google Chrome Developers. (2016). Screen Reader Basics: VoiceOver. youtube.com
<https://www.youtube.com/watch?v=5R-6WvAihms>
- Weblink:
Google Chrome Developers. (2016). Screen Reader Basics: NVDA. youtube.com
https://www.youtube.com/watch?v=Jao3s_CwdRU

Activities & Assignments

- Online Zoom discussion
- Weekly response
- Assignment 1

Module 4: Evaluating a Digital Experience

Topics

- Manual testing
- Automated testing
- User testing

Learning Outcomes

After completing this module, students should be able to:

- Create a process for manually auditing a webpage for basic accessibility
- Use automated testing to evaluate a webpage or website
- Practice manual accessibility testing, and compare with automated tests
- Explain the importance of user testing for digital accessibility

Required Readings

- Weblink:
EqualizeDigital. (2021). How to Manually Check Your Website for Accessibility.equalizedigital.com
<https://equalizedigital.com/accessibility-checker/how-to-manually-check-your-website-for-accessibility/>

- Weblink:
W3. (n.d.). Web Accessibility Evaluation Tools List. w3.org
<https://www.w3.org/WAI/ER/tools/>
- Weblink:
W3. (n.d.). Involving Users in Evaluating Web Accessibility. w3.org
<https://www.w3.org/WAI/test-evaluate/involving-users/>
- Weblink:
McNaly, P. (2018). Tips For Conducting Usability Studies With Participants With Disabilities. Smashingmagazine.com
<https://www.smashingmagazine.com/2018/03/tips-conducting-usability-studies-participants-disabilities/>

Activities & Assignments

- Online Zoom discussion
- Weekly response
- Assignment 2

Module 5: Accessibility Guidelines

Topics

- WCAG 2.0, WCAG 2.1, WCAG 2.2
- 508, ADA, AODA
- Canadian laws

Learning Outcomes

After completing this module, students should be able to:

- Describe the four principles of digital accessibility
- List common accessibility guidelines
- Describe Canadian accessibility standards
- Compare and Contrast WCAG 2.1 to WCAG 2.0 and the A/AA/AAA success criteria

Required Readings

- Weblink:

Mozilla. (2021). Understanding the Web Content Accessibility Guidelines. Developer.mozilla.org
https://developer.mozilla.org/en-US/docs/Web/Accessibility/Understanding_WCAG#what_is_wcag_2.1

- Weblink:
WebAIM. (2021). WebAIM's WCAG 2 Checklist. webaim.org
<https://webaim.org/standards/wcag/checklist>
- Weblink:
Abdalla, A. (2019). Difference between 508, ADA, AODA and WCAG 2.0 — Simple Guide to Understanding Accessibility Requirements. Medium.com
<https://medium.com/product-x-culture/difference-between-508-ada-aoda-and-wcag-2-0-206ee44fce97>
- Weblink:
Doyle, J. (2021). A Complete Overview of Canada's Accessibility Laws. siteimprove.com
<https://siteimprove.com/en-ca/blog/a-complete-overview-of-canada-s-accessibility-laws/>

Activities & Assignments

- Online Zoom discussion
- Weekly response

Module 6: Accessibility Design Patterns

Topics

- Case studies
- Accessible design
- Common best practices

Learning Outcomes

After completing this module, students should be able to:

- Describe good general accessibility design practices
- Reference accessibility standards within a case study
- Use a case study to extend knowledge of accessible design principles
- Compare similar accessibility principles among multiple design standards

Required Readings

- Weblink:
Kaur, A. (2018). Accessibility guidelines for UX Designers. uxdesign.cc
<https://uxdesign.cc/accessibility-guidelines-for-a-ux-designer-c3ba775539be>
- Weblink:
W3. (2016). Designing for Web Accessibility. W3.org
<https://www.w3.org/WAI/tips/designing/>
- Weblink:
Swan, H. (2015). Accessibility Originates with UX: A BBC iPlayer Case Study. Smashingmagazine.com
<https://www.smashingmagazine.com/2015/02/bbc-iplayer-accessibility-case-study/>
- Weblink:
Nielsen, L. (n.d.). Hulu Accessibility UX Case Study. Lauranielsen.co
<https://lauranielsen.co/listen-to-me>

Activities & Assignments

- Online Zoom discussion
- Weekly response
- Assignment 3

Module 7: Improving a Digital Experience

Topics

- Accessibility statements
- Design improvements
- Reporting accessibility issues

Learning Outcomes

After completing this module, students should be able to:

- Create your own accessibility report template
- Use an accessibility report template to evaluate a design
- Evaluate and prioritize accessibility concerns

- Recommend and prototype accessibility improvements

Required Readings

- Weblink:
Remix, T. (2021). How to do a UX accessibility evaluation. makeitclear.com
<https://makeitclear.com/insight/how-to-do-a-ux-accessibility-evaluation>
- Weblink:
Groves, K. (2011). Prioritizing Remediation of Web Accessibility Issues. karlgroves.com
<https://karlgroves.com/2011/06/12/prioritizing-remediation>
- Weblink:
W3. (2021). Template for Accessibility Evaluation Reports. w3.org
<https://www.w3.org/WAI/test-evaluate/report-template/>
- Weblink:
W3. (2018). Developing an Accessibility Statement. w3.org
<https://www.w3.org/WAI/planning/statements/>

Activities & Assignments

- Online Zoom discussion
- Weekly response
- Assignment 4
- Assignment 5

COURSE ASSESSMENT & GRADED ACTIVITIES

Assessments Overview and Weighting

Please refer to the “Key Course Dates” section for a list of all assessment due dates.

Assessment	Weighting
Weekly Response Documents (seven individual marks)	40%
Assignment 1	10%
Assignment 2	10%
Assignment 3	10%
Assignment 4	10%
Assignment 5 (group work recommended)	20%
TOTAL	100 %

Marking criteria for all assignments will be specified within the instructions for the assignment. Please review these criteria before completing your assignments.

Assessment Details and Evaluation Criteria

Weekly Response Documents

Description / Instructions

Each weekly module has required readings and a response document to submit as an assignment. The document is to be completed before the weekly discussions. See eClass for details.

Evaluation Criteria

The evaluation criteria is attached to the cover page of each document. See eClass for details.

Assignment 1: Screen Reader Research

Description / Instructions

Research, select, and install two different screen readers that are compatible with your computer and/or

browser. Create your own evaluation criteria for the screen reader usability. Evaluate the screen readers with your criteria. Summarize your research in a short report.

- Create a testing plan and simple rubric to evaluate your chosen assistive technology
- Evaluate your chosen screen readers using your testing plan and record the results
- Create a short report (1-3 pages) on your assistive technology research

Evaluation Criteria

The evaluation criteria and more detailed instruction is attached to the cover page of the assignment document. See eClass for details.

Assignment 2: Manual and Automated Accessibility Testing

Description / Instructions

Choose a popular website or web application. Create your own usability testing evaluation criteria or user flow. Manually audit the website with a focus on accessibility for your usability testing criteria or user flow. Additionally, perform two different automated accessibility tests. Summarize your research in a short report.

- Create a testing plan and simple rubric to evaluate your chosen website or web application
- Evaluate your chosen website using your testing plan and record the results
- Create a short report (1-3 pages) on your accessibility research

Evaluation Criteria

The evaluation criteria and more detailed instruction is attached to the cover page of the assignment document. See eClass for details.

Assignment 3: Accessibility Case Study and Standards Research

Description / Instructions

Find a descriptive case study on digital accessibility with a focus on UX/UI design practices. Identify the exact specifications that the case study addresses in at least two accessibility standards (WCAG 2.2, 2.1, 2.0, 1.0, or 501, ADA, AODA, or other). Compare and contrast any differences among the specifications. Summarize your research in a short report.

- Create a table to compare the specifications for two different accessibility standards
- Use the table to deconstruct the case study into specifications from the standards
- Create a short report (1-3 pages) on your case study and accessibility standards research

Evaluation Criteria

The evaluation criteria and more detailed instruction is attached to the cover page of the assignment document. See eClass for details.

Assignment 4: Frameworks and Best Practices

Description / Instructions

Create a strategy for an organization or product to improve its digital accessibility. Discuss the current problem, best practices, and how you plan to lead change. Use the EVVCC framework and discuss how you will educate stakeholders and/or skilled technicians on empathy, values, vision, context, and communication.

- Use the EVVCC Framework to plan a Accessibility improvement strategy for your chosen organization
- Create a checklist of the the best practices you have accumulated this far in simple language
- Create a short report (1-3 pages) on accessibility strategy and discuss on you will educate your team

Evaluation Criteria

The evaluation criteria and more detailed instruction is attached to the cover page of the assignment document. See eClass for details.

Assignment 5: Digital Accessibility Report

Description / Instructions

Create your own complete accessibility report template. Use your template to submit a detailed analysis of a single website or web application. Create accessibility design recommendations, and prioritize the tasks. Clearly explain all reasoning.

- Perform an accessibility evaluation on a website or web application
- Include manual testing, automated testing, a discussion on best practices, references to applicable accessibility standards, and any recommendations for further user testing
- Create a clear list of prioritized accessibility improvements
- Create a short report (2-5 pages) on your accessibility evaluation

Evaluation Criteria

The evaluation criteria and more detailed instruction is attached to the cover page of the assignment document. See eClass for details.

COURSE-SPECIFIC POLICY STATEMENTS

Penalty for Late Assessments

In this course, the penalty for late assessments will be a loss of **10%** of the assessment's weight **per day**. If you have extenuating circumstances preventing you from handing in your assignments on time, please contact your instructor *before* the due date to discuss the potential options.

Citation Style

Written assignments must comply with a University-accepted citation style, either MLA or APA. For more information, visit the [University Libraries website](#) and click 'Citation Guides' in the Library Services menu.

Understanding Your Grades

The University of Alberta uses a letter grading system with a four-point scale of numerical equivalents for calculating grade point averages. Grades reflect judgments of student achievement made by instructors. These judgments are based on a combination of absolute achievement and relative performance in a class.

All final results are reported using a letter grade or grade point value.

The following table presents an approximate guide for understanding the relationship between percentage grades and letter grades:

A+	A	A-	B+	B	B-	C+	C	C-	D+	D	F	Letter Grade
96–100	91–95	86–90	81–85	77–80	72–76	69–71	64–68	60–63	55–59	50–54	< 50	% range

ONLINE AND CONTINUING EDUCATION GRADING POLICY

Official Grade Notification

Students can access and print their final grades **only** through Bear Tracks, an online service provided to University of Alberta students. [Click here to log into Bear Tracks](#). To learn more about Bear Tracks and your CCID, please visit [Bear Tracks Help | Office of the Registrar](#).

Any other edition or statement of a final grade should be considered unofficial, including those released in eClass or other means. In the rare event, access is not available, a hard copy may be requested through the Program Office. Program Offices will not release grades over the telephone under any circumstances. ***If you would like to receive an email notifying you when your final grades are available, please sign on to Bear Tracks and visit the Grades section.***

The University of Alberta Grading System

The following table provides information about the meaning of letter grades:

Grading in Continuing Education Courses *		
Descriptor	Letter Grade	Grade Point Value
Excellent	A+	4.0
	A	4.0
	A-	3.7
Good	B+	3.3
	B	3.0
	B-	2.7
Satisfactory	C+	2.3
	C	2.0
	C-	1.7
Poor	D+	1.3
	D	1.0
Failure	F	0

*These descriptors above refer to continuing education and undergraduate courses using alpha grades. Graduate courses use an alternative descriptor set.

Courses that are graded using the “completed requirements” criteria use the following grades and remarks:

Final Grades	Description
CR	Completed requirements; no grade point value assigned.
NC	Failure; no grade point value assigned.

A complete list of current final grades and remarks can be found [§23.4](#) of the University Calendar.

Failing Grades

Students will receive a failing grade under the following conditions:

- if the student has failed to meet the course requirements at the required standards stipulated by the course instructor, e.g. the student's aggregate grade on submitted assignments is lower than the minimum passing grade for the course;
- if the student has failed to withdraw from the course. Non-attendance does not constitute notice of withdrawal from a course. If the student chooses to withdraw from a course, the student must contact the Student Service Centre and submit a written withdrawal request.

Grade Appeals

The assignment of grades is the responsibility of the course instructor. Any concerns regarding grades should first be discussed with the instructor. Students may contact their respective Program Office with grade appeal requests if the problem is not resolved. Online and Continuing Education has developed procedures so learners who encounter concerns and problems related to academic standing, learning assessment/grades, program requirements, or other matters may have them reviewed equitably and expeditiously. Copies of these procedures can be obtained from the Program Office.

ONLINE AND CONTINUING EDUCATION POLICY STATEMENTS

Course Outline Policies

Policy about course outlines can be found in the [Academic Regulations](#) section of the University Calendar.

Academic Integrity

The University of Alberta is committed to the highest academic integrity and honesty standards. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the Code of Student Behaviour provisions and avoid any behaviour that could result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

Recording in the Classroom

Audio or video recording, digital or otherwise, of lectures, labs, seminars or any other teaching environment by students is allowed only with the prior written consent of the instructor or as a part of an approved accommodation plan. Student or instructor content, digital or otherwise, created and/or used within the context of the course is to be used solely for personal study and is not to be used or distributed for any other purpose without prior written consent from the content author(s).

Please note that online synchronous meetings for this course may be recorded for the benefit of the class. Any recordings of this course will be disclosed to other students enrolled in this section of the class, the instructor, and any other teaching assistants and/or course administrators who may support the course. It is recommended that students remove all identifiable and personal belongings from the space in which they will be participating. Students have the right not to participate in the recording and, in such cases, are advised to turn off their cameras and audio recording devices before recording; students can still participate in online synchronous sessions through text-based chat. Unless otherwise specified, recordings will be saved to Zoom cloud storage, accessible via eClass, and made available for as long as the course eClass section remains active. Please direct any questions about this digital collection of recordings to your course instructor.

Accommodating Disabilities

If you have a disability or condition that may require some modifications, please contact Accessibility Resources (1-80 Students' Union Building; PH: (780) 492-3381; TTY: (780) 248-1665) and obtain a determination as to what accommodations should be made.

Refunds, Withdrawal, and Transfer Information

If you wish to drop or withdraw from this course, you must do so by the official drop or withdrawal deadline. Please refer to the [Refunds, Withdrawals, and Transfers page](#) for information about official drop and withdrawal policies and deadlines and guidelines for the withdrawal process. Non-attendance does not constitute notice of withdrawal from a course. In graded courses, please note that a failing grade can be assigned to any student who has not officially withdrawn from the course.

Your @ualberta.ca Email Address

The University of Alberta uses email to communicate important information and notices to our students, and you have been automatically assigned an @ualberta.ca email account. It is your responsibility to check your @ualberta.ca email account regularly.

Visit the [New Student Checklist](#) for more information.

Applying for Graduation

Continuing Education students who expect to complete the certificate or citation program requirements by the end of the winter term must apply for graduation by Feb. 1 using Bear Tracks under Academics > My Academics > Graduation.

In Case of Emergency

All students attending classes at UofA campuses MUST be familiar with the Emergency protocols. [Click here to visit UofA Emergency Procedures](#). Enterprise Square has location-specific emergency protocols. [Click here to visit Fire Safety and Emergency Procedures for Enterprise Square](#).

Records in General Studies Courses

Online and Continuing Education general studies courses (those with the prefix EXGEN) are non-graded and will appear on the transcript as “Non-graded.”

Records in Courses in Certificate and Citation Programs

Online and Continuing Education courses offered as part of certificate or citation programs are assessed. Any learner, meeting course prerequisites can take a course that is part of a credentialed program. If you are not registered to take the full program at this time, taking a graded course gives you the opportunity to participate in assessments and earn a grade that reflects your achievement. Grades earned can later be applied to applicable program requirements. Grades in Continuing Education courses contribute to your University of Alberta Continuing Education GPA. University of Alberta undergraduate and graduate GPAs are calculated independently.

If you do not wish to complete assessments, receive a grade, or apply course credit to a credential, you must register to “audit” the course. Courses will appear on the transcript as “Audit.” Students registered into graded courses that do not self-identify and officially register as audit students will receive the grade earned.