
SYLLABUS

EXSM 3928: Code for Designers

User Experience / User Interface Design Certificate

Online and Continuing Education | University of Alberta

Course Dates: 31 October 2022 – 19 December 2022

Location/Format: online (Asynchronous)

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:	Fall 2022 Copyright © 2022. 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

Gain an understanding of web design principles and client-side scripting. Be introduced to HTML5 and CSS, as well as the fundamentals of web development and design. Develop foundational knowledge on web page construction, wireframing, prototyping, and development. Understand the anatomy of a web page and learn how to work and communicate with developers. You will have an opportunity to design and develop a personal website.

Course Outcomes

After completing this course, students should be able to:

- Practice using Glitch as an interactive development environment to build and share working web projects
- Compare the roles of designer and developer and answer for yourself “to what extent should designers learn code?”
- Understand the HTML document structure, and learn to apply common HTML tags to content as markup
- Understand the CSS cascade, specificity rules, and custom properties, and learn to apply CSS in order to realize a design
- Understand the Document Object Model (DOM), and learn to attach an event listener to a user interaction (click event)
- Reference and interpret popular online documentation
- Implement mobile-first responsive design practices through CSS media queries at multiple device width breakpoints

Course Materials

- All required course materials can be found for free online.

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
Course Assignments	Nov 6, 2022 : Module 1 Assignment due by 11:59 pm Nov 13, 2022 : Module 2 Assignment due by 11:59 pm Nov 20, 2022 : Module 3 Assignment due by 11:59 pm Nov 27, 2022 : Module 4 Assignment due by 11:59 pm Dec 4, 2022 : Module 5 Assignment due by 11:59 pm Dec 11, 2022 : Module 6 Assignment due by 11:59 pm Dec 18, 2022 : Module 7 Assignment due by 11:59 pm
Course Quizzes	Nov 27, 2022 : Module 3 Quiz due by 11:59 pm Dec 4, 2022 : Module 4 Quiz due by 11:59 pm Dec 11, 2022 : Module 5 Quiz due by 11:59 pm
Final Response	Dec 18, 2022 : Final Response due by 11:59 pm

MODULE OVERVIEWS

Pre-Course

Activities & Assignments

- Watch the welcome video on eClass
 - Introduce yourself in the course forum
 - Answer the multiple choice question in "My Coding Background" on eClass
 - Install a browser of your choice (Firefox, Chrome, or Edge recommended)
 - Create a Glitch account (<https://glitch.com/signup>)
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Module 1: Become a VR Artist and Coder in One Day

Topics

- Glitch interface
- Write and edit code
- Virtual reality (VR)

Learning Outcomes

After completing this module, students should be able to:

- Use a pre-built demo and development environment
- Recognize a development folder structure and file extensions
- Experiment with code by making changes and fixing errors
- Create a virtual reality scene and share a live URL

Required Readings

- Weblink:
Viera, J. (n.d.). Coding for Designers – How Much Should We Know? Toptal.
<https://www.toptal.com/designers/ui-ux/designers-coding>
- Weblink:
Glitch. Welcome To Glitch! Glitch.
<https://www.youtube.com/watch?v=DmnMTsH4fyY>

Activities & Assignments

- Module 1 Assignment, see eClass for details

Module 2: Website Structure and Development Tools

Topics

- Websites and applications
- Reading documentation
- Programming languages

Learning Outcomes

After completing this module, students should be able to:

- Understand the structure and components of a web page
- Describe the purpose of common web programming languages
- Compare and contrast a website, web app, and a native application
- Compare and contrast frontend and backend development

Required Readings

- Weblink:
n.a. (2022). Document and website structure. MDN Web Docs.
https://developer.mozilla.org/en-US/docs/Learn/HTML/Introduction_to_HTML/Document_and_website_structure
- Weblink:
Decker, A. (n.d.). The Beginner's Guide to Website Development. Hubspot Blog.
<https://blog.hubspot.com/website/website-development>

Activities & Assignments

- Module 2 Assignment, see eClass for details

Module 3: Understanding HTML

Topics

- Common HTML tags
- Writing HTML
- Semantic HTML

Learning Outcomes

After completing this module, students should be able to:

- Describe HTML semantics, and list the benefits
- Understand HTML syntax: elements, tags, attributes, properties
- List common HTML elements
- Examine existing HTML code blocks
- Experiment with writing HTML
- Organize code and understand nested structure
- Deconstruct a design and translate the content to HTML

Required Readings

- Weblink:
n.a. (2022). HTML basics. MDN Web Docs.
https://developer.mozilla.org/en-US/docs/Learn/Getting_started_with_the_web/HTML_basics
- Weblink:
Simplilearn. (2020, December 1). HTML In 10 Minutes | HTML Tutorial For Beginners | HTML Basics For Beginners | Simplilearn [Video]. YouTube.
<https://www.youtube.com/watch?v=MDLn5-zSQQI>

Activities & Assignments

- Module 3 Assignment, see eClass for details
- Module 3 Quiz, see eClass for details

Module 4: Understanding CSS

Topics

- Common CSS properties
- Writing CSS
- CSS box model

Learning Outcomes

After completing this module, students should be able to:

- Practice using CSS to add style to HTML
- List common CSS properties and their use
- Describe the CSS box model, and common units
- Describe CSS display and positioning properties
- Describe the purpose of CSS flexbox and CSS grid
- Examine existing CSS and edit according to some specification
- Deconstruct a design and develop the corresponding CSS required

Required Readings

- Weblink:
n.a. (2022). CSS basics. MDN Web Docs.
https://developer.mozilla.org/en-US/docs/Learn/Getting_started_with_the_web/CSS_basics
- Weblink:
Web Dev Simplified. (2018, August 22). Learn CSS in 20 Minutes [Video]. YouTube.
https://www.youtube.com/watch?v=1PnVor36_4Q

Activities & Assignments

- Module 4 Assignment, see eClass for details
- Module 4 Quiz, see eClass for details

Module 5: Understanding JavaScript

Topics

- Document Object Model (DOM)
- Writing JavaScript
- JavaScript ecosystem

Learning Outcomes

After completing this module, students should be able to:

- Describe the purpose of JavaScript
- Identify script tags and embed them into a webpage
- Recall seven built in JavaScript types and their purpose
- Interpret JavaScript comparison and logical operators
- Interpret JavaScript IF ELSE conditional statements
- Examine Javascript code and predict the output
- Customize options from an existing JavaScript library

Required Readings

- Weblink:
n.a. (2022). JavaScript basics. MDN Web Docs.
https://developer.mozilla.org/en-US/docs/Learn/Getting_started_with_the_web/JavaScript_basics
- Weblink:
Jake Wright. (2018, August 22). Learn JavaScript in 12 Minutes [Video]. YouTube.
https://www.youtube.com/watch?v=Ukg_U3CnJWI

Activities & Assignments

- Module 5 Assignment, see eClass for details
- Module 5 Quiz, see eClass for details

Module 6: Design and Develop a Website

Topics

- Creating wireframes and sitemaps

- Building a page layout from design
- Design to development workflow

Learning Outcomes

After completing this module, students should be able to:

- Design, develop, and share a personal website
- Create a visual sitemap and wireframe for a personal website
- Describe a complete design process with iterative improvement
- Recognize challenges moving from design to development

Required Readings

- Weblink:
n.a. (2022). How do I start to design my website?. MDN Web Docs.
https://developer.mozilla.org/en-US/docs/Learn/Common_questions/Thinking_before_coding

Activities & Assignments

- Module 6 Assignment, see eClass for details

Module 7: Responsive Web Design

Topics

- Responsive web design (RWD)
- Writing CSS media queries
- Web developer communication

Learning Outcomes

After completing this module, students should be able to:

- Explain and demonstrate mobile first responsive web design
- List common breakpoints and approximate device widths
- Experiment with writing multiple CSS media queries
- Organize and refactor code within an existing web project
- Contrast graceful degradation and progressive enhancement

- Demonstrate practical knowledge of HTML, CSS, and JavaScript
- Relate and explain “to what extent should a designer learn to code?”

Required Readings

- Weblink:
n.a. (2022). Responsive design. MDN Web Docs.
https://developer.mozilla.org/en-US/docs/Learn/CSS/CSS_layout/Responsive_Design

Activities & Assignments

- Module 7 Assignment, see eClass for details
- Final Response Document, see eClass for details

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
Module 1 Assignment	10%
Module 2 Assignment	10%
Module 3 Assignment	10%
Module 4 Assignment	10%
Module 5 Assignment	10%
Module 6 Assignment	10%
Module 7 Assignment	10%
Quiz 1	5%
Quiz 2	5%
Quiz 3	5%
Final Response Assignment	15%
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

Module 1 Assignment

Description / Instructions

An assignment covering topics included in Module 1. Detailed instructions can be found on eClass from the assignment introduction video and supporting instruction document.

Evaluation Criteria

Evaluation information is available on eClass.

Module 2 Assignment

Description / Instructions

An assignment covering topics included in Module 2. Detailed instructions can be found on eClass from the assignment introduction video and supporting instruction document.

Evaluation Criteria

Evaluation information is available on eClass.

Module 3 Assignment

Description / Instructions

An assignment covering topics included in Module 3. Detailed instructions can be found on eClass from the assignment introduction video and supporting instruction document.

Evaluation Criteria

Evaluation information is available on eClass.

Module 4 Assignment

Description / Instructions

An assignment covering topics included in Module 4. Detailed instructions can be found on eClass from the assignment introduction video and supporting instruction document.

Evaluation Criteria

Evaluation information is available on eClass.

Module 5 Assignment

Description / Instructions

An assignment covering topics included in Module 5. Detailed instructions can be found on eClass from the assignment introduction video and supporting instruction document.

Evaluation Criteria

Evaluation information is available on eClass.

Module 6 Assignment

Description / Instructions

An assignment covering topics included in Module 6. Detailed instructions can be found on eClass from the assignment introduction video and supporting instruction document.

Evaluation Criteria

Evaluation information is available on eClass.

Module 7 Assignment

Description / Instructions

An assignment covering topics included in Module 7. Detailed instructions can be found on eClass from the assignment introduction video and supporting instruction document.

Evaluation Criteria

Evaluation information is available on eClass.

Module 3 Quiz

Description / Instructions

A quiz covering topics included in Module 3 (HTML)

Module 4 Quiz

Description / Instructions

A quiz covering topics included in Module 4 (CSS)

Module 5 Quiz

Description / Instructions

A quiz covering topics included in Module 5 (JavaScript)

Final Response Document

Description / Instructions

A written response designed to help consolidate your knowledge and answer the following question, “To what extent should designers learn to code?” See eClass for details.

Evaluation Criteria

The evaluation criteria is attached to the cover page of each 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 student will receive the grade earned.