COURSE OUTLINE: CSD213 - WEB DEVELOPMENT II

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Course Code: Title	CSD213: WEB DEVELOPMENT II
Program Number: Name	2095: COMPUTER PROGRAMMING
Department:	COMPUTER STUDIES
Academic Year:	2024-2025
Course Description:	Students in this course learn how to take static web sites and turn them into dynamic and interactive web applications using modern web technologies. The Document Object Model (DOM) of web browsers is introduced, and students learn to create and manipulate DOM objects in response to user actions and system events. Students learn how to interact securely with HTTP APIs, and use various widely-used client-side APIs and JavaScript Libraries. The programming languages JavaScript and TypeScript are used in this course.
Total Credits:	4
Hours/Week:	4
Total Hours:	56
Prerequisites:	CSD112, CSD121
Corequisites:	There are no co-requisites for this course.
This course is a pre-requisite for:	CSD223, CSD226, CSD227, CSD228, CSD230, CSD235
Vocational Learning Outcomes (VLO's) addressed in this course: **Please refer to program web page for a complete listing of program outcomes where applicable.**	**2095 - COMPUTER PROGRAMMING** VLO 2 Contribute to the diagnostics, troubleshooting, documenting and monitoring of technical problems using appropriate methodologies and tools. VLO 3 Implement and maintain secure computing environments. VLO 8 Adhere to ethical, legal, and regulatory requirements and/or principles in the development and management of computing solutions and systems. VLO 10 Contribute to the development, documentation, implementation, maintenance and testing of software systems by using industry standard software development methodologies based on defined specifications and existing technologies/frameworks. VLO 11 Apply one or more programming paradigms such as, object-oriented, structured or functional programming, and design principles, as well as documented requirements, to the software development process.
Essential Employability Skills (EES) addressed in this course:	EES 5 Use a variety of thinking skills to anticipate and solve problems. EES 6 Locate, select, organize, and document information using appropriate technology and information systems.
Course Evaluation:	Passing Grade: 50%, D

	A minimum program GPA of 2.0 or higher where program specific standards exist is required for graduation.
Other Course Evaluation & Assessment Requirements:	Students are expected to be present to write all tests in class, unless otherwise specified. If a student is unable to write a test due to illness or a legitimate emergency, that student must contact the professor prior to class and provide reasoning. Should the student fail to contact the professor, the student shall receive a grade of zero on the test. If a student is not present 10 minutes after the test begins, the student will be considered absent and will not be given the privilege of writing the test. Students exhibiting academic dishonesty during a test will receive an automatic zero. Please refer to the College Academic Dishonesty Policy for further information. In order to qualify to write a missed test, the student shall have: a.) attended at least 75% of the classes to-date. b.) provide the professor an acceptable explanation for his/her absence. c.) be granted permission by the professor. NOTE: The missed test that has met the above criteria will be an end-of-semester test. Labs / assignments are due on the due date indicated by the professor. Notice by the professor will be written on the labs / assignments and verbally announced in advance, during class. Labs and assignments that are deemed late will have a 10% reduction per academic day to a maximum of 5 academic days at 50% (excluding weekends and holidays). Example: 1 day late - 10% reduction, 2 days late, 20%, up to 50%. After 5 academic days, no late assignments and labs will be accepted. If you are going to miss a lab / assignment deadline due to circumstances beyond your control and seek an extension of time beyond the due date, you must contact your professor in advance of the deadline with a legitimate reason that is acceptable. It is the responsibility of the student who has missed a class to contact the professor immediately to obtain the lab / assignment. Students are responsible for doing their own work. Labs / assignments that are handed in and are deemed identical or near identical in content may constitute academic dishonesty and result in a zero grade. Students are expected to be present to write in-classroom quizzes. There are no make-up options for missed in-class quizzes. Students have the right to learn in an environment that is distraction-free, therefore, everyone is expected to arrive on-time in class. Should lectures become distracted due to students walking in late, the professor may deny entry until the 1st break period, which can be up to 50 minutes after class starts or until that component of the lecture is complete. Grade Definition Grade Point Equivalent A+ 90 - 100% 4.00 A 80 - 89% B 70 - 79% 3.00 C 60 - 69% 2.00 D 50 - 59% 1.00 F (Fail) 49% and below 0.00 CR (Credit) Credit for diploma requirements has been awarded.

S Satisfactory achievement in field /clinical placement or non-graded subject area.
U Unsatisfactory achievement in field/clinical placement or non-graded subject area.
X A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.
NR Grade not reported to Registrar`s office.
W Student has withdrawn from the course without academic penalty.

Books and Required Resources:

Eloquent JavaScript by Marijn Haverbeke
Edition: 4
This resource is free online: https://eloquentjavascript.net/

Course Outcomes and Learning Objectives:

Course Outcome 1	**Learning Objectives for Course Outcome 1**
1. Use JavaScript to build working programs	1.1 Write programs that use variables, conditionals, loops, functions, I/O, error handling, and data structures such as strings, arrays, objects, Maps, and Dates 1.2 Modularize code with ES modules 1.3 Discuss JavaScript`s type coercion and weak type system 1.4 Describe the difference between client-side and server-side JavaScript programming 1.5 Describe the JSON data format and its common uses
Course Outcome 2	**Learning Objectives for Course Outcome 2**
2. Use the DOM API to manipulate and enhance static web pages	2.1 Access elements by id, tag name, class, name, or selector 2.2 Read and change element content, CSS properties, and attributes 2.3 Add and remove document nodes 2.4 Manipulate form elements and values 2.5 Describe the nature of the History, Location, Navigation, and Screen objects
Course Outcome 3	**Learning Objectives for Course Outcome 3**
3. Use events and event handling to respond to user interactions and system events	3.1 Define events and event handlers 3.2 Discuss the nature of callback functions 3.3 Create programs that respond to user and system events 3.4 Create programs that feature timed/periodic operations 3.5 Prevent cross-site scripting (XSS) attacks using input sanitization
Course Outcome 4	**Learning Objectives for Course Outcome 4**
4. Create secure, asynchronous HTTP requests and handle responses	4.1 Discuss the nature of the HTTP protocol 4.2 Discuss the Same-Origin Policy and its role in web security 4.3 Use the Cross-Origin Resource Sharing (CORS) mechanism to make cross-origin requests 4.4 Explain the difference between synchronous and asynchronous operations 4.5 Describe the disadvantages of using callbacks in asynchronous operations 4.6 Describe the nature of Promises 4.7 Write Promise-based code using both the raw and the async/await syntax 4.8 Create HTTP requests using the Fetch API

	4.9 Build dynamic web apps using asynchronous calls to an HTTP API
Course Outcome 5	**Learning Objectives for Course Outcome 5**
5. Use other important browser APIs and JavaScript libraries	5.1 Explain what cookies are and how they are used in web applications 5.2 Describe the Web Storage APIs, and explain when they are useful instead of cookies 5.3 Write programs that use cookie, localStorage, and sessionStorage data 5.4 Write programs using other browser APIs and JavaScript libraries as time permits
Course Outcome 6	**Learning Objectives for Course Outcome 6**
6. Use TypeScript to add type safety to web code	6.1 Describe the structural type system that TypeScript adds to JavaScript 6.2 Configure a TypeScript development environment 6.3 Add simple type annotations to existing JavaScript code

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Coding Assignments	40%
Oral Assessment	20%
Test 1	20%
Test 2	20%

Date: June 16, 2024

Addendum: Please refer to the course outline addendum on the Learning Management System for further information.