COURSE OUTLINE: CSD223 - ADVANCED WEB APPS

Prepared: Rodney Martin
Approved: Corey Meunier, Chair, Technology and Skilled Trades

Course Code: Title	CSD223: ADVANCED WEB APPLICATIONS
Program Number: Name	2090: COMPUTER PROGRAMMER
Department:	COMPUTER STUDIES
Semesters/Terms:	21W
Course Description:	This course builds on web programming concepts introduced in previous courses. Students will learn to build dynamic web sites and web applications using modern JavaScript techniques, interacting with HTML5 and REST APIs. Several popular libraries and front-end frameworks will be explored based on time and student interest.
Total Credits:	4
Hours/Week:	4
Total Hours:	60
Prerequisites:	CSD212
Corequisites:	There are no co-requisites for this course.
Vocational Learning Outcomes (VLO's) addressed in this course: **Please refer to program web page for a complete listing of program outcomes where applicable.**	**2090 - COMPUTER PROGRAMMER** 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 5 Communicate and collaborate with team members and stakeholders to ensure effective working relationships. VLO 6 Select and apply strategies for personal and professional development to enhance work performance. VLO 7 Apply project management principles and tools when working on projects within a computing environment. VLO 8 Adhere to ethical, legal, and regulatory requirements and/or principles in the development and management of computing solutions and systems. VLO 10 Cntribute 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. VLO 13 Contribute to the integration of network communications into software solutions by adhering to protocol standards.
Essential Employability Skills (EES) addressed in	EES 1 Communicate clearly, concisely and correctly in the written, spoken, and visual form

In response to public health requirements pertaining to the COVID19 pandemic, course delivery and assessment traditionally delivered in-class, may occur remotely either in whole or in part in the 2020-2021 academic year.

this course:	that fulfills the purpose and meets the needs of the audience. EES 2 Respond to written, spoken, or visual messages in a manner that ensures effective communication. EES 4 Apply a systematic approach to solve problems. 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:	The student must pass both the lab and test portions of the course. Attendance: Sault College is committed to student success. There is a direct correlation between academic performance and class attendance, therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session. Absences due to medical or other unavoidable circumstances should be discussed with the instructor. Students are required to be in class on time and attendance will be taken within the first five minutes of class. A missed class will result in a penalty in your marks unless you have discussed your absence with the professor as described above. The penalty depends on course hours and will be applied as follows: Course Hours Deduction 5 hrs/week (75 hrs) 1% / hr 4 hrs/week (60 hrs) 1.5% /hr 3 hrs/week (45 hrs) 2% /hr 2 hrs/week (30 hrs) 3%/hr Absentee reports will be discussed with each student during regular meetings with Faculty Advisors. Final penalties will be reviewed by the professor and will be at the discretion of the professor. 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.

In response to public health requirements pertaining to the COVID19 pandemic, course delivery and assessment traditionally delivered in-class, may occur remotely either in whole or in part in the 2020-2021 academic year.

NR Grade not reported to Registrar`s office.
W Student has withdrawn from the course without academic penalty.

Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
Store and transmit session data using Cookies and Web Storage APIs	1.1 Create multi-page forms using hidden form fields and sessionStorage 1.2 Store long-term data using localStorage 1.3 Transmit information to server via Cookies 1.4 Use best practices to prevent security breaches when storing and transmitting data
Course Outcome 2	**Learning Objectives for Course Outcome 2**
Handle pointer and touch events to increase usability across multiple device types	2.1 Create web pages that respond to touch events on touch-enabled devices 2.2 Make web pages adapt to different pointers depending on device type 2.3 Employ usability best practices to make web pages accessible to non-pointer devices such as screen-readers
Course Outcome 3	**Learning Objectives for Course Outcome 3**
Interact with first- and third-party APIs using JavaScript	3.1 Use XmlHttpRequest and the Fetch API to obtain information an external URI and inject it into a web page using the DOM API 3.2 Understand techniques such as server proxies, JSONP, and CORS as they pertain to resource fetching 3.3 Understand and use security best practices when employing the above techniques
Course Outcome 4	**Learning Objectives for Course Outcome 4**
Use jQuery	4.1 Understand the history and value of the jQuery library 4.2 Understand and employ basic jQuery concepts such as collection objects and the fluent API 4.3 Use jQuery to perform DOM and style manipulations 4.4 Use the jQuery AJAX module to perform data fetching
Course Outcome 5	**Learning Objectives for Course Outcome 5**
Understand and execute modern web programming using front-end frameworks	5.1 Describe popular front-end frameworks such as Angular, React, and Vue 5.2 Use a front-end framework to build custom web components 5.3 Build a web application using a front-end framework with an API back-end

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight
Labs	40%
Tests	60%

Date: July 22, 2020

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

In response to public health requirements pertaining to the COVID19 pandemic, course delivery and assessment traditionally delivered in-class, may occur remotely either in whole or in part in the 2020-2021 academic year.

information.