CUS 1172: Web Application Development, Fall 2020
Instructor:
Christoforos Christoforou, PhD

Course Description
This course will cover an introduction to web application development. Topics will include basics of HTML, CSS and SASS; overview of JavaScript concepts such as variables, control structures and functions; server-side/back-end development using current web development frameworks and modern databases and; front-end web development using current front-end framework. Additional related topics will be explored such as web database design, user experience, scalability, security, and application deployment. Assessment will be based on homework assignments/labs, in-class attendance, paper presentation from current literature, and a semester long project (with multiple project deliverables).
Pre-requisite : CUS1126

Course Topics

Module 1: Overview of HTML and CSS
- Basic HTML: HTML5, HTML tags, links, forms
- Basic CSS: attributes, selectors, responsive design
- Bootstrap: layouts, bootstrap components
- SASS: variables, nested-selectors, style-inheritance.
- User-centered design of web interfaces.

Module 2: Front-end Development
- Basic introduction to JavaScript.
- Defining variables.
- Manipulating the DOM using JavaScript.
- Create interactive web-pages using JavaScript.
- Accessing open-source APIs using JavaScript.

Module 3: Back-end development
- Introduction to a back-end web frameworks.
- View Layer: serve dynamic content using the web framework.
- Controller layer: defining routes.
- Model Layer: Using database through ORMs
- Build a CRUD app.

Module 4: Working with Application Programming Interfaces
- Use a web-framework to build an API
- Integrate third party API in back-end.
- Accessing API from back end.

Course Format

The course is offered in an online asynchronous format. Course reading materials, discussion forums, assignments and projects will be posted online through the Canvas LMS and the course support website. All communication about the course will take place through Canvas. Moreover, the instructor will use WebEx to host virtual office hours during the semester.

Virtual Office Hours:

As per the University policy, office hours for the Fall 2020 semester will take place online. To reserve a timeslot, you must use the University's Online Appointment Services available at:

https://www.stjohns.edu/cpsadvisement

Select your instructor's name from the appointment services options to see available timeslots and select your appointment from the available options. Once you reserve your timeslot and no time conflicts exist, the instructor will email you a WebEx Meeting link you can use to attend the meeting; otherwise, the instructor will schedule your meeting on the next available timeslot. Please schedule your appointment at least 24 hours prior to the requested meeting time. The following times will be made available every week, unless the university is closed:

Monday: 19:00-20:00 and Tuesday 7:30-9:30

Course Communication

All questions about the course should be posted on the "Q&A Forum – Questions for the instructor" which is available on your course's Canvas LMS Discussion module. The instructor will response to your questions between Monday to Friday, typically within 24-72 hours. Moreover, you are strongly encouraged to provide answers to your classmates' questions, if you feel you know the answer. If your question in not answered either by a classmate or by the instructor within the specified time, you can email the instructor using the Canvas email feature.

The instructor will communicate with participants through St. John's University email accounts only. Participants are required to ensure that St. John's University email accounts are working properly.

Resources and Tools

Textbook: Web Application Development Course Materials on support site.

Learning Management System: We will utilize our course Canvas website for posting course materials, submitting assignments, and all course communications.

Technologies, Tools and software:
For this course you will need access to the technologies and software listed below.

- Laptop or desktop computer, equipped with a web camera, a microphone and headphone or speaker.
- Access to the Internet, and an Internet Browser (i.e. chrome)
- WebEx (Available with your university account)
- M.S. Office (Word, Power-point) or similar software.

Moreover, throughout the course, we will make use of several software programs and software libraries and cloud services. These include the Atom code editor, Node.js,Git, GitHub and others. Most of the software required for the course are available online for free. You are expected to install this software on your computer. List of needed software will be included in the course materials.

Grading Policy

Your grade for this course shall reflect your understanding of the materials of the course as those are covered in the course. Tentatively, your grade will be based on the following grading matrix (also refer to the grading policy section)

- **Assignments (25%):** Includes programming assignments, quizzes, lab exercises, peer-review and feedback service thought-out the semester. Not all assignments carry equal weight towards your grade.

- **Final Capstone Project (30%):** This is a multi-milestone project where you will be asked to implement a web-applications according to requirements.

- **Online Technical Tutorial and presentation (15%):** Includes preparation of online tutorial and presentation explain a topic relevant to the course.

- **Online Midterm Exam or alternative comprehensive assessment (10%):** This will be a synchronous assessment and thus all students must be available at the same date/time. The mid-term assessment exam will be scheduled during common hours to ensure there is no conflict with other courses. Students are required to make themselves available online during that time and have access to a webcam, microphone and WebEx access.

- **Comprehensive Final Exam or alternative comprehensive assessment (15%)**: Final exam will be scheduled (or due) during the final's week. The format of the assessment (i.e. online, take-home, project, or other) will be determined by the instructor at a later time.

- **Participation and compliance with course policies (5 %):** Awarded if you engage to the course activities, submit your own work, follow class etiquette and comply with the course policies.

The grading policy is tentative and subject to change during the semester at the ins tractor's sole discretion.

Course Policy

Policy highlights

- Attendance and active participation is counted toward your grade.
- All work submitted must be completely your own original work.
- All content viewed or programs used on your laptop / desktop / tablet during class time must be related to the material we are working on in class.
- Mobile phone use is not permitted during class.
- It is expected that you take an active role in the class; your participation is valued. It is vital that you remain engaged during class, especially since our assignments and exams are directly related to material and topics that we will develop during class.

Assignment and Lab Policy

Assignments and labs should be submitted on time. All submissions MUST be your own work. No late assignments will be allowed except, at the discression of the instructor, in the case of documented emergencies. There will be a late penalty of 25% points for any late assignment (up to 24 hours from deadline). Any assignments, labs or projects submitted more that 24 hours late will receive no credit. You are expected to be in class during labs and actively working on the lab. If you are not present, or are present but not working, you will not get credit for the lab. If you do not finish the lab in class, it is still due on the deadline posted.

Grading Policy

The grading matrix as outlined in the syllabus is tentative and is subject to change at the instructor's sole discretion. The grading matrix aims to help the instructor evaluate your understanding of the materials covered in the course and your effort. It is up to the instructor to assess your undressing of the materials, not you. Asking for revisions on exam/assignment/labs grade, or any grade increase will automatically result to a score of 0, for you class "Participation and compliance with course policies" criterion of the grading policy.

Online sessions

For face-to-face classes, in case meeting in class is not possible for whatever reason, the instructor might choose to host a class session online, via WebEx, Slack or blackboard. In such case, participants will be informed through the course website on canvas, and/or via an email announcement.

Extra Credit Policy

Opportunities to earn extra credit in this course are extremely rare and should not be anticipated by students. If such an opportunity is provided by your instructor, it will be announced to all students in the course section. Student-initiated inquiries or requests for extra credit projects, curving scores, rounding grades, or requesting extra points that you did not earn are extremely inappropriate and will be ignored by your instructor.

Class cancellation or re-scheduling Policy.

If the instructor needs to cancel a class session you will be informed through canvas. Any missed sessions will be re-scheduled by the instructor for either a Saturday morning session 9:05-10:30 or

during the University common hours. For whatever reason, if class is cancelled, you are still expected to follow through on assignments.

Bad Weather Policy
On days that present severe weather and dangerous driving conditions, a decision may be made to close the campus. In case of inclement weather, call the St. John's University or view postings on the campus website at www.stjohns/edu.

Attendance and Participation Policy (For face-to-face clasees)

The University attendance policy is in effect for this course. Class attendance and participation is expected because the class is designed as a shared learning experience and because important information not in the textbook will be discussed in class. Attendance and participation in all class meetings is essential to the integration of course material and your ability to demonstrate proficiency. It is recommended that a student who misses a class coordinate with a student colleague to obtain a copy of the class notes.

Diversity/Tolerance Policy
Students are encouraged to contribute their perspectives and insights to class discussions. However, offensive or inappropriate language (such as swearing) and remarks offensive to others of a particular nationality, ethnic group, sexual preference, religious group, gender, or other ascribed status will not be tolerated.

Academic Honor Code
You are encouraged to discuss problem-solving strategies with each other, and ask each other technical questions, but submitted work must be your own. Copying program code without attribution is plagiarism. If you use ideas from another person or from a website, you must credit those sections properly. This means you should write down the names of all your collaborators and explain exactly what help you received. This includes tutoring help!! In addition, your program must be substantially your own. You cannot hand in a program that was mainly written by someone else, even if you do list that person's name. Keep in mind that I read through each program carefully and notice when programs submitted by different people are the same. Academic dishonesty will result in a failing grade. Here is a link to the section in the Student Handbook pertaining to violations of the academic honor code:
http://www.stjohns.edu/campus/handbook/chapter6/regulations/discipline.stj

Class Etiquette
- Be on time for class. Coming to class late is NOT acceptable except in the case of documented emergencies.
- Cell phones and beepers usage: NOT allowed except when permitted by the instructor.
- Computers Usage: Not allowed except when permitted by the instructor.
- Recording equipment: Not allowed except when permitted by the instructor
- Leaving early: Not allowed except when permitted by the instructor.
- Food and beverages are not permitted in the class or labs
- Violation any of the course policies will result in a deduction of class participation grade.

Health Notification Accommodation Statement

In addition to contacting Student Health Services, students are responsible for sharing any health issues with the professor, including the need to self-isolate or quarantine

ODS/ADA Statement

If you are a student with a disability who requires accommodations, please contact the Office of Disabilities Services during the first few days of the semester. Learn more 6 by visiting St. John's University ODS services.

University policy on Copyrighted Materials

The use of Computing Resources in violation of international and federal copyright laws is strictly prohibited. These federal laws provide to the author of an original work, whether that work is a video, a sound recording, software, or printed material, the exclusive rights to reproduce, adapt, publish, perform and display that work. Anyone other than the copyright holder is required to obtain the express permission of the copyright holder to use the work for any of these purposes. The University's policy on Copyrighted Material :https://www.stjohns.edu/computer-and-network-use-policy

Intellectual Property Statement

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NOTE: This syllabus is subject to change during the semester.