VALENCIACOLLEGE

CEN 4350C: Open Source Web Technologies
Spring 2024 | CRN 24674
Course Modality: Online Asynchronous

<u>Instructor</u>: Professor Ashley Evans

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<u>Phone</u>: 407.582.1109

<u>Student Engagement Hours:</u> The engagement hours listed in the table on the first page of the syllabus represent the times that I will be at my computer responding to messages and holding online meetings. This is when we can communicate synchronously. In-person meetings and meetings outside of student engagement hours are available by student request.

Student Engagement Hours

Day	Time and Location
Monday	3 PM – 5 PM / Canvas messages, e-mail, or Zoom
Tuesday	3 PM – 5 PM / Canvas messages, e-mail, or Zoom
Wednesday	3 PM – 5 PM / Canvas messages, e-mail, or Zoom
Thursday	3 PM – 5 PM / Canvas messages, e-mail, or Zoom
Friday	3 PM – 5 PM / Canvas messages, e-mail, or Zoom

Catalog Description

This course covers Web application development using currently popular open-source/open-standard tools with a concentration on the user interface, business layer, database, and deploying to the web server.

Prerequisites

A minimum grade of C in COP 2805C or COP 3330C.

Course Learning Outcomes

Use existing databases in web-based applications
- Explain the use of databases in web-based applications
- Integrate an existing database into a web document
- Establish different levels of user permissions for reading and entering data into a database via a web interface
- Discuss issues of database and server security

Test and troubleshoot scripting language programs
- Use appropriate debugging tools and principles

- Explain the importance of, and the recommended practices for, testing and debugging in script development
- Successfully test and debug scripts

Set up web server software
- Understand the architecture of a web server
- Prepare a system for web server installation
- Install web server software and configure the system after installation

Design, code, and build scripting language programs for web-based applications
- Use data structures such as arrays to store values in a program
- Use the appropriate operators, functions, and procedures in the writing of a scripting language program
- Explain the role of predefined functions and objects in a scripting language and write a program that takes advantage of functions and objects
- Discuss the importance of events and handlers in the creation of an interactive web-based application and will use event handlers in a program

Important Calendar Dates

	Full Term	H1	TWK	H2
Classes Begin	January 8, 2024 (Monday)	January 8, 2024 (Monday)	February 12, 2024 (Monday)	February 29, 2024 (Monday)
Drop/Refund Deadline by 11:59PM ET	January 16, 2024	January 16, 2024	February 19, 2024	March 7, 2024
No Show Reporting Period	January 18-27, 2024	January 18-27, 2024	February 20-29, 2024	March 8-17, 2024
Graduation Application Deadline	February 2, 2024	February 2, 2024	February 2, 2024	February 2, 2024
Withdrawal Deadline by 11:59PM ET	March 15, 2024	February 9, 2024	April 5, 2024	April 12, 2024
Day/Evening Classes End	April 28, 2024	February 18, 2024	April 28, 2024	April 28, 2024
Final Exams	April 22-28, 2024	Last Class Meeting	Last Class Meeting	Last Class Meeting
Term Ends	April 28, 2024	February 28, 2024	April 28, 2024	April 28, 2024
Grades Due by 9:00 AM ET	April 29, 2024	April 29, 2024	April 29, 2024	April 29, 2024
College Closed (Credit classes do not meet)	January 1, 2024 (Martin Luther King Jr.) February 9, 2024 (Learning Day) March 18-24 (Spring Break)			

Required Materials

Required Textbook
This course uses open educational resources (OERs) and other materials for educational usage. Therefore, students are not required to purchase any textbooks for this course. The required resources for this course are provided on Canvas. There may be additional required and/or recommended readings, supplemental materials, or other resources and websites necessary, which will be provided within the course, and throughout the term via the assignment/discussion/quiz or exam areas.

Required Software
You will be required to use a variety of open source web technologies during this course. All required software is based on each student's project proposal.

Assessment Methods and Evaluation

Grading Scale
A   100 % to 89.5%
B   < 89.5 % to 79.5%
C   < 79.5 % to 69.5%
D   < 69.5 % to 59.5%
F   < 59.5 % to 0.0%

Grading Breakdown
Proposal – 10%
Status Updates – 25%
Front-End Demonstration and Report – 15%
Back-End Demonstration and Report – 15%
Final Demonstration – 25%
Project Report – 10%

No-Show Policy | Required Attendance Activities

If you do not log in to the course during the first week and complete the Academically Related Attendance Activities (Orientation Quiz and Introductions Discussion) you will be withdrawn from the class as a "no show". Class attendance is required for online classes; students who are not actively participating in an online class and/or do not submit the required attendance activity or assignment by the scheduled due date must be withdrawn by the instructor at the end of the first week as a "no show". If you are withdrawn as a "no show," you will be financially responsible for the class and a final grade of "WN" will appear on your transcript for the course.

Any student who does not attend class by the drop/refund deadline for this part of term will be withdrawn by the professor as a no-show. This will count as an attempt in the class, and students will be liable for tuition. If your plans have changed and you will not be attending this class, please drop yourself through your Atlas account by the drop deadline.

Attendance Policy

This is an online course, available 24/7, managed through Canvas. You must have access to the Internet (available on all Valencia campuses) to complete the course requirements. Your online attendance is required; attendance will be checked based on your participation in the course and submission of coursework. You must submit a minimum of two assignments [quiz, checkpoint activity, or programming project] each week to meet the attendance requirement. In the event of an

extended absence, you should contact me via email or phone as soon as possible to indicate the reason and discuss the impact on your course performance.

Late Work/Makeup Policy

Late work will be accepted only if students provide written documentation of a medical emergency or ongoing medical condition that is submitted on the first day of the student's return to the course. **Outside of documented medical emergencies/conditions or severe personal circumstances, late assignments and makeup assignments are not permitted.**

Honorlock / Video Demonstrations Policy

At several points during the semester, you will be required to submit a video demonstration of your project. This demonstration must capture your face and your screen as you discuss the features of your project. Honorlock is a convenient tool we will use to make it easy and seamless to record your demo and submit it to the instructor.

All demonstrations are required to be submitted using Honorlock software. While using this software:

- you will have to submit a picture of your face.
- you will have to submit a picture of your Valencia ID or driver's license.
- your face and screen will be recorded while you perform your demonstration.

Use of the Honorlock software is required for demonstration assignments.

Honorlock Requirements
To use Honorlock, you will need:

- a webcam.
- a microphone.
- a computer.
- the Chrome web browser. (this software only runs on Chrome).
- to install the Honorlock extension within your web browser (Chrome recommended).

Privacy
Your privacy is important. Read the Honorlock Privacy Policy to learn more. If you are concerned about your privacy, please read the entire list of FAQ's regarding Honorlock in the link below. In a nutshell, Honorlock is bound by contract to protect your privacy. It is explicitly stated in the terms set up with Valencia College. Valencia takes privacy seriously. Read Valencia's agreement with Honorlock to protect your privacy.

Extra Credit Policy and "Grade Requests"

Extra Credit Policy
No opportunities for extra credit will be provided during this course. Please make an appointment to speak with me if you have concerns about your grade.

"Grade Requests"
Throughout the semester, please do not e-mail me with grade requests, such as:
- "I need at least a C to get credit for this class."
- "I need at least a D to keep my financial aid."

- "If I fail this class I'll be on academic probation."
- "How can I get extra credit to improve my grade?

If you know that you need a certain grade in this class to avoid a dire consequence (such as loss of financial aid, citizenship status, or GPA requirements), you need to make sure the choices you are making now will provide you with the result you want later.

This means putting forth the time and effort to study, ask questions, learn from your mistakes, and understand the concepts taught in each module. Please do not attempt to bias my thinking, or grading, by sending a grade request at any point during the semester.

Your final grade will be exactly what you earn, by putting in the time and effort that is required to learn the material. You can expect the grad book to be updated weekly. That grade is an accurate picture of your progress in the course. If you are unhappy with your grade, please contact me to discuss what actions you can take to change it.

Withdrawal Policy
Per Valencia policy a student who withdraws from class before the established deadline for a particular term will receive a grade of "W". A student is not permitted to withdraw after the withdrawal deadline.

I will not withdraw students from class for any reason. If you do not intend to complete the course, you must withdraw yourself prior to the withdrawal date. After the withdrawal deadline, faculty will not withdraw a student and the student will receive the grade earned at the end of the course. Any student who withdraws or is withdrawn from a class during a third or subsequent attempt in the same course will be assigned a grade of "F." For a complete policy and procedure overview on Valencia Policy 6Hx28:4-07, please go to: College Policies .

NOTE: Before choosing to withdraw, students should speak first with me regarding your progress in the course and with an Academic Advisor to discuss the impact of the W on your academic progress, future fees, and financial aid.

Communication Policy
You may contact me during the follow ways throughout the semester:
- E-mail me: aevans57@valenciacollege.edu
- Send me a Canvas message
- Send me a message on our class Discord channel (link is provided in Canvas)
- Call me at 407.582.1109

All communications will receive a response within 24 hours.

Note to International Students (F-1 or J-1 VISA):
Please be advised that withdrawal from this course due to attendance may result in the termination of your visa status if you fall below the full-time enrollment requirement of 12 credit hours. Consult the International Student Services office for more information.

Standards of Classroom Conduct:
Valencia College is dedicated to the advancement of knowledge and learning and to the development of responsible personal and social conduct. By enrolling at Valencia College, a student assumes the responsibility for becoming familiar with and abiding by the general rules of conduct

as listed in 6Hx28: 8-03 and the Student Handbook. Even though Faculty manage the classroom environment, the primary responsibility for maintaining a respectful and civil learning environment rests with the students. Students who violate the Student Code of Conduct may be referred to the Dean of Student's Office for disciplinary action, which may result in a sanction up to and including expulsion. College Policies

As a registered student in this class, you assume the responsibility for conducting yourself in a manner that contributes positively to Valencia's learning community as described in the Student Code of Conduct. My role as an instructor is to facilitate academic discussions and promote critical thinking about sometimes challenging and uncomfortable facts and ideas. Your peers and instructor may share diverse ideas and viewpoints, or we may differ in our ideas and viewpoints, but we will always be respectful of other opinions as provided by the law and as expected in an academic environment. No lesson is intended to espouse, promote, advance, inculcate, compel a particular feeling, perception, viewpoint, or belief in a concept. Concepts as presented are not endorsed by the instructor but are presented as part of the larger course of instruction. Should a student feel uncomfortable with how course content is presented or discussed, please contact the instructor for further conversation.

Academic Honesty:

All forms of academic dishonesty are prohibited at Valencia College. Academic dishonesty includes but is not limited to, acts or attempted acts of plagiarism, self-plagiarism, cheating, furnishing false information, forgery, alteration or misuse of documents, misconduct during a testing situation, facilitating academic dishonesty, and misuse of identification with intent to defraud or deceive.

Turning in code that was written by another person, another source, or an AI tool (ChatGPT or otherwise) is considered plagiarism.

All work submitted by students is expected to be the result of the student's individual thoughts, research, and self-expression. Whenever a student uses ideas, wording, or organization from another source, the source shall be appropriately acknowledged. If a student is caught submitting plagiarized work a first offense will result in a zero score on the assignment, and a second offense will result in a class grade of F.

College Policies:

A full description of all College policies can be found in College Catalog and at College Policies .

Student Assistance Program:

Valencia College is interested in making sure all our students have a rewarding and successful college experience. To that purpose, Valencia students can get immediate help with issues dealing with stress, anxiety, depression, adjustment difficulties, substance abuse, time management as well as relationship problems dealing with school, home or work. BayCare Behavioral Health Student Assistance Program (SAP) services are free to all Valencia students and available 24 hours a day by calling (800) 878-5470. Free face-to-face counseling is also available.
Any student who has difficulty accessing sufficient food to eat, or who lacks a safe and stable place to live, and believes this may affect his or her performance in the course, is urged to meet with a Counselor in the Advising Center for information about resources that may be available from the college or community.

Using AI: How, When, and Why

This is a project-based course where research is required on a weekly basis. The use of AI to perform research is allowed, however, please review the policies below for *HOW* AI should be used.

Why should students use AI in this course?
Years ago, calculators transformed mathematics. Today, AI platforms like ChatGPT have similarly reshaped numerous tasks across diverse employment industries. However, it's crucial to understand that AI, much like a calculator, is a tool—its value stems from the user's ability to use it appropriately. After AI's release to the world in 2022, proficiency in AI tools like ChatGPT are becoming as expected in the workplace as Microsoft Office skills. To ensure you're fully prepared for the skills your future career will expect, this course introduces AI - covering aspects like prompt engineering, data validation, and potential pitfalls. We'll discern when AI enhances efficiency and when it hinders. Most critically, we'll explore its ethical use in our educational setting.

When should students use AI in this course?
You are allowed to use AI for research as you investigate the technologies needed to get your project working. Within your project reports, you should cite which AI platform you used, the prompts that were entered, how you assessed that the AI response was credible, and how you used the output to complete your assignment. You are expected to use AI as a research tool, and the code you turn in should be of your own design. The use of AI should be thoroughly cited in your reports.

How should students use AI in this course?
In this course, we will observe the following ethical practices concerning the use of AI:

1.) **Think critically.** AI is not infallible - it's not 100% right, 100% of the time. We must be able to evaluate its responses for accuracy and correctness. We must also consider whether we have we gotten the wrong answer from AI, or if we have asked it the wrong question.

2.) **Use AI as a tool, not a crutch.** Merely copying and pasting AI's suggestions is not genuine learning. Remember, proctored exams in this course prohibit AI access. If you sidestep understanding core concepts, your project will suffer, putting your course success at risk.

3.) **Analyze bias in AI.** Large language models draw from diverse human-authored content, which may contain biases. It's our duty to be cognizant of these biases when interpreting AI responses.

4.) **Confirm accuracy.** There was a time (early 2000s) when people would use Wikipedia as a credible source of information. Now, we all know that it's not. An AI-generated response is not to be considered accurate and trustworthy by default. You should perform additional analysis and research to confirm what AI is telling you.

5.) **Respect Privacy**. Once you enter information into any AI platform, it's no longer private information. Refrain from feeding personal details, especially pertaining to peers or educators, into any AI system.

6.) **Be Transparent**. If you used AI to help complete an AI-approved assignment, indicate how and where you used it within your assignment submission.

7.) **Uphold Academic Integrity.** If you have been explicitly told not to use AI for an assignment, quiz, or exam - don't use it. These assessments are designed to see what YOU know, not what ChatGPT knows. Even with the introduction of AI into our daily lives, humans will never stop needing to know how and why things work. If we depend on computers to spit out answers without knowing how the

answers can be found, we are headed for a future where ChatGPT will be telling us what to do, instead of the other way around.

Office of Students with Disabilities Information:

Students with disabilities who qualify for academic accommodations must provide a Notification to Instructor (NTI) form from the Office for Students with Disabilities (OSD) and discuss specific needs with the professor, preferably during the first two weeks of class. The Office for Students with Disabilities determines accommodations based on appropriate documentation of disabilities.

East Campus Bldg. 5, Rm. 216 Ph: 407-582-2229 Fax: 407-582-8908 TTY: 407-582-1222
West Campus SSB, Rm. 102 Ph: 407-582-1523 Fax: 407-582-1326 TTY: 407-582-1222
Osceola Campus Bldg. 1, Rm. 140A Ph: 407-582-4167 Fax: 407-582-4804 TTY: 407-582-1222
Winter Park Campus Bldg. 1, Rm. 212 Ph: 407-582-6887 Fax: 407-582-6841 TTY: 407-582-1222

Disclaimer:

This syllabus is an agreement between the student and the instructor. By enrolling in and then attending this course, the student agrees to and accepts the terms and conditions of this agreement. It is the responsibility of the student to carefully read this syllabus/agreement in its entirety and to adhere to all policies and procedures within the syllabus. Please retain a copy of this syllabus for your records.

Changes may be made at the discretion of the instructor.

Course Schedule

Week	Task	Deliverables	Due Date
1	Orientation / Project Proposal	Orientation Activities	10-JAN-2024
2	Project Proposal	Project Proposal	17-JAN-2024
3	Front-End / Custom Features / Server Deployment	Status Update #1	24-JAN-2024
4	Front-End / Custom Features / Server Deployment	Status Update #2	31-JAN-2024
5	Front-End / Custom Features / Server Deployment	Status Update #3 (includes demo video)	07-FEB-2024
6	Front-End / Custom Features / Server Deployment	Status Update #4	14-FEB-2024
7	Front-End Demonstration and Front-End Report	Front-End Report and Demo Video	21-FEB-2024
8	Back-End / Database / API	Status Update #5	28-FEB-2024
9	Back-End / Database / API	Status Update #6	6-MAR-2024
10	Back-End / Database / API	Status Update #7 (includes demo video)	13-MAR-204
11	Back-End / Database Security	Status Update #8	27-MAR-2024
12	Back-End Demonstration and Back-End Report	Back-End Report and Demo Video	03-APR-2024
13	Final Modifications/Updates	Status Update #9	10-APR-2024
14	Final Modifications/Updates	Status Update #10	17-APR-2024
15	Project Demo	Final Demo Video and Project Report	21-APR-2024