WEB 3200 - Dynamic Languages for Web Development

Instructor

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Course Description

General purpose dynamic languages like Python and Ruby have become increasing popular and well suited for the creation of full stack web applications. This course will introduce students to the syntax and programmatic idioms of both Ruby and Python. The following topics will be covered in both languages: complex data types, loops, conditionals, command line applications, and the object-oriented programming paradigm. The commonly used web frameworks of each language will be explored and used to create and deploy a full stack web application to a cloud provider.

Course Outcomes

Upon successful completion of this course, the student shall be able to demonstrate the following skills:

- Create a Python CLI application that uses list, dictionaries, loops, and conditionals.
- Create an Object-oriented Python application
- Create a Python dynamic web application using the Flask framework.
- Create and style Jinja2 templates and deploy a Flask Application to a cloud provider.

Textbooks

There will be several resources that will be used in the course and you will find all of these resources in the relevant modules. However, there are several free books that are great resources.

Dive Into Python
By: Mark Pilgrim
Publisher: Apress
Print ISBN-13: 978-1430224150
https://diveintopython3.problemsolving.io/

Think Python
By: Allen B. Downey
Publisher: O'Reilly Media, Inc.
Print ISBN-13: 978-1491939369
http://greenteapress.com/thinkpython2/html/index.html

Tools

Python, Source Code Editor or IDE

Schedules

Below you will find the schedule for the course.

Week	Topics
Week 01	Python: Variables & Data Types
Week 02	Python: Conditionals & Loops
Week 03	Python: List & Dictionaries
Week 04	Python: Functions
Week 05	Python: Classes
Week 06	Python: Classes
Week 07	Python: Modules
Week 08	Python: Modules
Week 09	Python: Flask
Week 10	Python: Flask
Week 11	Python: Flask
Week 12	Python: Flask
Week 13	Python: Flask
Week 14	Python: Flask
Week 15	Final Project Work
Finals Week	Final Project Work

For the final project you will be creating a dynamic web application in Flask.

Grade Scheme

94 – 100	A	74 – 76	C
90 – 93	A-	70 – 73	C-
87 – 89	B+	67 – 69	D+
84 – 87	B	64 – 67	D
80 – 83	B-	60 – 63	D-
77 – 79	C+	0 – 59	E

Extra Credit

I will occasionally give extra credit. It will most often replace portions of an assignment. Please don't ask for extra credit.

Late Work

You will be able to submit one assignment as late for full credit and after that all late assignments will be given half credit.

Time Commitment

As a general rule you should spend at least twice as much time outside of class as in class.

Tips for Success

One cannot learn all of the material by just reading the texts. Practice is critical when learning new software and programming languages. Successful students read the upcoming material ahead of time. They participate actively in class. If you are struggling with any concept please come see me during my office hours. The number one thing you can do is ask questions when you don't understand something.

Technical Support

For assistance with Canvas or related technical issues, please call 626-6499. This phone is staffed Monday - Thursday from 8am - 5pm and Fridays from 8 - 4:30pm. A message can be left during non-business hours for a return call. Alternatively, students can send an email message to wsuonline@weber.edu

If you are having technical issues related to usernames/passwords, please call the Service Desk at 626-7777, or email csupport@weber.edu.

Accommodations

Any student requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD) in room 181 of the Student Services Center. SSD can also arrange to provide course materials (including the syllabus) in alternative formats if necessary.

For more information about the SSD contact them at 801-626-6413, ssd@weber.edu, or departments.weber.edu/ssd

Course Fees

Course fees for the Computer Science major are designed to cover the costs of lab equipment maintenance and replacement including desktop and server computer systems and software; consumable materials and supplies; and support for lab aides, student tutors, and online instructional resources.

Ethical Conduct

Any form of academic dishonesty (cheating, plagiarism, etc.) will not be tolerated. Proof of academic dishonesty will result in a failing grade (E) for the course. The following is an explanation of cheating as stated in the student code.

1. Cheating, which includes but is not limited to:
    a. Copying from another student's test;
    b. Using materials during a test not authorized by the person giving the test;
    c. Collaborating with any other person during a test without authorization;
    d. Knowingly obtaining, using, buying, selling, transporting, or soliciting in whole or in part the contents of any test without authorization of the appropriate University official
    e. Bribing any other person to obtain any test;
    f. Soliciting or receiving unauthorized information about any test;
    g. Substituting for another student or permitting any other person to substitute for oneself to take a test.
2. Plagiarism, which is the unacknowledged (uncited) use of any other person's or group's ideas or work. This includes purchased or borrowed papers;
3. Collusion, which is the unauthorized collaboration with another person in preparing work offered for credit;
4. Falsification, which is the intentional and unauthorized altering or inventing of any information or citation in an academic exercise, activity, or record-keeping process;
5. Giving, selling, or receiving unauthorized course or test information;
6. Using any unauthorized resource or aid in the preparation or completion of any course work, exercise, or activity;
7. Infringing on the copyright law of the United States which prohibits the making of reproductions of copyrighted material except under certain specified conditions.