

WEB 3200 - Dynamic Languages for Web Development

Instructor

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Course Description

General purpose dynamic languages like Python and Ruby have become increasingly popular and well suited for the creation of full stack web applications. This course will introduce students to the syntax and programmatic idioms of 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 Django templates and deploy a Flask Application to a cloud provider.

Textbooks (Optional)

Python in a Nutshell, 3rd Edition

By: Alex Martelli; Anna Ravenscroft; Steve Holden

Publisher: O'Reilly Media, Inc.

Pub. Date: April 24, 2017

Print ISBN-13: 978-1-4493-9292-5 (available for free online through the library)

Python for Everybody, Dr. Chuck

-free at <https://www.py4e.com/book.php>

Flask Web Development, 2nd Edition

By: Miguel Grinberg

Publisher: O'Reilly Media, Inc.

Pub. Date: March 20, 2018

Print ISBN-13: 978-1-4919-9173-2

Tools

Python, Flask, Source Code Editor or IDE

Schedule & Assignments

Below you will find the schedule & assignments for the course.

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

The final project will be worth 30% of your grade. For the final project you will be creating a dynamic web application in Python & 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 wsonline@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.