

Advanced Web Apps

JOU 4930 | Spring 2016 | Section 1211 | 1070 Weimer Hall
Tuesdays 11:45 a.m.–2:45 p.m. (periods 5, 6 and 7)

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Office hours: Wednesdays 1–3 p.m. | And by appointment
Workshop: Hours TBA
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WEBSITE: <https://webappsplus.wordpress.com/>

Course Description

This course adds server-side (back-end) Web skills to the client-side (front-end) Web skills students have already developed in the preceding course, with the goal of developing Web apps that include a server-side component to advance journalism storytelling. Web scraping is also covered to enable journalists to gather open data from the Web for analysis. Learning a server-side programming language is part of this course.

Course Objectives

In this course, students learn how to:

1. Use SQL (Structured Query Language) to create databases and to read/write data.
2. Scrape websites to collect data that can then be stored, analyzed and reused.
3. Write programs in Python.
4. Create server-side Web apps using Flask, a Python framework.
5. Solve problems in setting up and using command-line tools.

Attendance and Attitude

Students are expected to show respect for one another and for the instructor. Attendance and arriving on time for class are necessary. **Lateness and absences will result in a lower final grade.** If you have been absent, you are responsible for finding out about any missed material by consulting another student or going to the instructor's office hours. These matters will not be handled via email.

Mobile devices must be turned OFF and placed out of sight during class. Do not check text messages, social media, email, etc., during class, as your instructor considers this quite rude and therefore grounds for disciplinary action. **Give your full and undivided attention to anyone who is speaking in class, including your fellow students.**

Students are expected to use a laptop computer during class. However, if you are seen checking social media or any other sites unrelated to the immediate topics being discussed in class, penalties will be imposed. Penalties range from a warning (first offense) to grade point deductions. Please give your full attention to the class while you are in the classroom.

UF Attendance Policies

> <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Course Deadlines and Makeup Work

Late assignments are not accepted. This means that an assignment submitted late is graded as a zero. Assignments are not accepted via email unless requested by the instructor. If an illness or a personal emergency prevents you from completing an assignment on time, advance notice and written documentation are required. No work for “extra credit” is accepted.

NOTE: Assignment deadlines in Canvas are usually set for 11:59 p.m. If you submit after the deadline, your assignment is late.

Academic Dishonesty

Academic dishonesty of any kind is not tolerated in this course. It will be reported to the student’s department chair AND to the university’s Dean of Students—and **it will result in a failing grade for this course.** A formal report of the offense will be filed with the university’s Dean of Students.

Academic dishonesty includes, but is not limited to:

- Using any work done by another person and submitting it for a class assignment.
- Submitting work you did for another class.
- Copying and pasting code written by another person in place of solving the assigned problem on your own. (Note: In some cases an assignment will require you to use code written by others. Those cases are exempt.)
- Sharing code written by you with another student.

UF Student Honor Code

> <https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>

Required Books and More

Students are required to read several assigned chapters and complete exercises in these two books:

Web Scraping with Python: Collecting Data from the Modern Web, by Ryan Mitchell (O’Reilly, 2015)

Flask Web Development: Developing Web Applications with Python, by Miguel Grinberg (O’Reilly, 2014)

All students are expected to possess their own copy of each book, whether printed or electronic. **Quiz questions are taken from the books and other assigned materials.** Students might need to use the book during class. Ebooks (PDF, etc.) available at O'Reilly: <http://www.oreilly.com/> Printed books might be cheaper from Amazon.

Web hosting

Students are required to have full-service Web hosting at their own domain. The recommended provider is Reclaim Hosting. Other hosting companies are acceptable if they provide SSH access and provide MySQL (or MariaDB) via phpMyAdmin.

> <https://reclaimhosting.com/>

Laptop

All students in this course must own a laptop they can bring to class with them. **A tablet will NOT be sufficient for this course.** Any operating system is okay, but **Mac OSX is strongly preferred.** For assistance with your operating system or hardware, please use the UF Computing Help Desk if you cannot solve a problem. *Bring your power cord to class with you.*

Headphones or earbuds

During class, you might find you need to watch or re-watch videos. For this reason, please be sure to always bring headphones or earbuds with you.

Students with Disabilities

Students requesting accommodations must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student, who must then provide this documentation to the instructor when requesting accommodations.

UF Disability Resource Center

> <https://www.dso.ufl.edu/drc/>

Course Requirements

Read this entire document in the first week of classes. If anything is not clear to you, ask me for clarification before Jan. 11, 2016. This syllabus is a contract between you and me.

Please make sure to check the course website at least once a week. If you rely only on a printed or downloaded copy, you may miss a change in the schedule.

> WEBSITE: <https://webappsplus.wordpress.com/>

Quizzes

There will be quizzes on the assigned reading. Quizzes are in Canvas and are open-book. On the Course Schedule page on the course website (see above), the readings covered on that week's quiz are listed under *the same week as the quiz*. Deadlines: In Canvas.

Assignments

Assignments are listed and LINKED on the Course Schedule page on the course website (see above). Exact deadlines: In Canvas. For many of the assignments, students will begin the work during class. Students will likely need to work on all assignments outside class to complete them. All students are encouraged to come to the scheduled workshop hours for help with the week's assignment. Students are encouraged to help one another on assignments but NOT to give solutions to others.

Presentations

Twice during the semester, each student will be responsible for presenting an interesting Web app or website that uses back-end technologies. The student is responsible for finding and "deconstructing" the app/site and telling the class what is interesting, admirable, especially cool, etc. The purpose of the presentation is to inspire the class and show how current Web technologies and techniques are used. Students are encouraged not only to view source but also to find "how we made this" articles or interviews about the app/site. Students might contact the makers of the app/site and interview them. Think of this as a show-and-tell that educates the whole class and offers creative inspiration.

Final project

In the final three weeks of the course, each student will produce and complete a Web project suitable for your professional portfolio. The project must include *at least two* of the following: Python, Web scraping, a SQL database, a Flask app. It may also include Web forms, JavaScript, Bootstrap and any additional technologies you desire. The project must be live and functional at your domain by the deadline.

Attendance and participation

Points will be subtracted if you miss more than one (1) class meeting, are chronically late, or repeatedly show inattention. Participation is expected; you will be working on assigned projects during class.

UF Dates (Spring 2016)

Classes begin	Jan. 5	Jan. 18	MLK Jr. Day
Drop/Add	Jan. 5–11	Feb. 27–March 5	Spring Break
Classes end	April 20		
Final Exams	April 23–29		

Grades and Grading Policies

Quizzes	30 points
Assignments	40 points
Presentations	10 points
Final project	10 points
Attendance and participation	10 points
TOTAL	100 points

92–100 points	A	72–77 points	C
90–91 points	A–	70–71 points	C–
88–89 points	B+	68–69 points	D+
82–87 points	B	62–67 points	D
80–81 points	B–	60–61 points	D–
78–79 points	C+	59 points or fewer	E

UF Policies about Student Grades

> <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Course Evaluations

Students are expected to provide feedback on the quality of instruction in this course based on 10 criteria. These evaluations are conducted online: <https://evaluations.ufl.edu>

Evaluations are typically open during the final weeks of the semester. Students will be given specific dates when they are open. Summary results of these assessments are available to students: <https://evaluations.ufl.edu/results/>

Course Schedule and Required Readings

Please note that many important details are on the website (<https://webappsplus.wordpress.com/>) and do not appear herein. Assigned readings, links to videos, resources, etc., are on the **Course Schedule** page of the website. Quizzes are based on the assigned readings in that same week.

Week 1 | Jan. 5

Introduction to the course. Tools, technologies and outcomes.

Week 2 | Jan. 12

Introduction to SQL and databases.

Introduction to XAMPP, an Apache Web server that runs on your computer.

Week 3 | Jan. 19

SQL and databases, part 2. More advanced SQL queries; security issues.

Week 4 | Jan. 26

SQL database project.

Week 5 | Feb. 2

Introduction to Python.

Week 6 | Feb. 9

Introduction to Web scraping with Python and BeautifulSoup.

Using PIP and virtualenv.

Week 7 | Feb. 16

Web scraping, part 2. More Python.

Week 8 | Feb. 23

Web scraping project.

Week 9 | March 1

Spring Break — class does not meet.

Week 10 | March 8

Web apps with Python; introduction to Flask, a Web framework.

Week 11 | March 15

Flask: Basic application structure and templates.

Week 12 | March 22

Flask for Web forms and databases.

Week 13 | March 29

Flask project.

Week 14 | April 5

Student's individual Web project.

Week 15 | April 12

Student's individual Web project.

Week 16 | April 19

Student's individual Web project.

Weekly topics are subject to change. Please check the Course Schedule page on the course website for the latest updates.