COMP-8347-01 and 02
Internet Applications and Distributed Systems
Summer 2021

Instructor: Dr. Saja Al Mamoori
sajak@uwindsor.ca
Office hours:
Mon 02:00 am-04:00 pm via BlackBoard Collaborate Ultra

IMPORTANT: all classes, labs, office hours will be in online format via BlackBoard Collaborate Ultra.

Lecture: Tuesday/Thursday 01:00 to 03:50 PM

Masters of Applied Computing
School of Computer Science
http://www.uwindsor.ca/cs

GAs and office hours

Anwar Shahid (shahi116@uwindsor.ca)
- Tuesday 06:00 to 08:00 pm

Mayank Semwal (semwal@uwindsor.ca)
- Thursday 02:00 - 04:00 pm

Office hours: all scheduled office hours are uploaded on (tutor.cs.uwindsor.ca)

Course content

This course will introduce students to the latest tools and technologies for developing internet applications. Topics covered may include a review of client/server model and applications, multi-tier software architecture, content management systems, dynamic server-side applications, principles of parallel programming and distributed systems and techniques for solving complex problems using distributed systems. *This course is restricted to students in the Master of Applied Computing program.*

Learning Outcomes

Students will gain hands-on experience in developing dynamic web applications. The will learn to about industry accepted web frameworks and how to use them to develop and modify internet applications. A number of different aspects of web development will be covered including HTML/CSS, working with templates, creating appropriate database models and querying and updating databases in response to user requests. Students will also learn about user authentication systems, how to implement login/logout functionality, restrict access to specific pages, and store information in cookies and/or user sessions.
Students will research a specific topic related to internet applications and/or distributed systems and present their findings to the class and submit a report.

Tentative Class Schedule

Week	Topics
1-2	Introduction to Python
3	HTML/CSS, Dynamic Web, Web Frameworks
4	Creating DB models/objects, querying DB using manager class
5	Simple view functionality
6-7	Working with templates, custom templates and template inheritance
8-9	Processing forms, Form and ModelForms classes
10	User authentication, User sessions
11	Admin Interface
12	Final review

Evaluation

6 online quizzes (approximately 10-20 min each)	12% (2% each)
11 Lab assignments (**Group**)	33% (3% each)
Final Project (**Group**)	25%
Research Report (**Group**)	10%
Final Exam	20%

Test dates (tentative)

Quizzes: In class as scheduled

Lab Assignments: To be submitted by the end of Mon. for Sec.1 and Wed. for Sec. on BB the week after the previous lab.

Students must also demonstrate the working program for each lab during individual in class evaluations on the due date. Detailed submission schedule for individual labs are available on BB.

Final Exam: **TBA**

Final Project: **TBA**. Project submissions and demos will be scheduled during exam period.

Research Report: Due July 26 (To be submitted on BB)

Research topic (related to distributed systems, computing, parallel processing etc) must be finalized by June 14.

Lab Assignments

- Lab attendance is <u>MANDATORY</u>. You **must** attend the lab and be present for individual evaluation during scheduled class times in order to get credit for it.

- Lab work, research report and final project will be done in teams of 3-4. If you do not have a group before the first lab, you will be assigned to a group at the beginning of Lab #1.
- You will be in the <u>same team</u> for all three components (i.e. Lab assignments, Final project and Research report).

Research Report

Your research report should be in the form of a literature survey that identifies and discusses recent research in your chosen topic. Research topic should be related to distributed systems, computing, parallel processing etc.

Final Project

The project will involve <u>extending the application</u> you developed in your labs/assignments to include a list of **required** features as well as one or more **optional** features. The more features you add the better. A list of required and possible optional features will be made available under the project submission link in BB. If you would like to include features that are not on this list, please email me with your suggestions.

Optional Reference books

There is no required textbook for this course. Some useful books on the subject include:
1. Django Essentials, by Samuel Dauzon, 2014.
2. The Definitive Guide to Django: Web Development Done Right, 2014 by Katie Cunningham Adrian Holovaty, Jacob Kaplan-Moss.
3. Programming in Python 3: A Complete Introduction to the Python Language 2009 by Mark Summerfield.
4. Think Python Paperback 2012 by Allen B. Downey

Resources

- https://docs.python.org/3/tutorial/
- https://docs.djangoproject.com/en/2.2/
- http://www.tangowithdjango.com/book17/
- http://tutorial.djangogirls.org/en/index.html
- http://www.effectivedjango.com/tutorial/

Grades

Numeric final grade out of 100 will be assigned to each student based on the above-stated evaluation scheme. More information is available at:

Course Regulations

1. No student is allowed to take a course more than two times without permission from the Associate Dean.
2. There are no make-up exams for missed quizzes/midterm tests.
3. In case a student misses a midterm test for a **valid reason** and supported by **appropriate documentation** (e.g. medical note), the mark for that test's weight will be carried over to the final. In case of a Doctor's note, the student must submit a Student Medical Certificate signed by a Medical Doctor and the note **must** specifically state that the student was incapable of writing the exam on the day of the test.
4. If the final exam is missed for a valid reason and supported by appropriate documentation, a makeup exam will be arranged.
5. If a student is sick, s/he **must inform** the instructor about his/her illness **within 48 hours**, and with a supporting doctor's note which clearly states s/he is not able to attend the exam/test/assignment.
6. If a student has a medical condition, which may create problems during the term, s/he must inform the instructor in writing with supporting documents before the last day of classes. No consideration will be made afterwards, except for the final exam.
7. No extensions to the labs will be allowed, and no make-ups will be considered. If a student misses a lab assignment (for a documented valid reason), the corresponding mark will be carried over to the next lab(s) or final exam accordingly.
8. If a student is caught adopting unfair means (e.g. plagiarism), that student will face **serious consequences** including official disciplinary procedures (see below).

Policy on Misconduct

The instructor will put a great deal of effort into helping students to understand and learn the material in the course. However, the instructor will not tolerate any form of cheating. The instructor will report any suspicion of cheating to the Director of the School of Computer Science. If sufficient evidence is available, the Director will begin a formal process according to the University Senate Bylaws. The instructor will not negotiate with students who are accused of cheating but will pass all information to the Director of the School of Computer Science.
The following behaviour will be regarded as cheating (this list is not exhaustive – more examples in Appendix A, Senate Bylaws 31:

- Copying assignments or labs or presenting someone else's work as your own
- Allowing another student to copy an assignment/project from you and present it as their own work
- Copying from another student during a test or exam

- Referring to notes, textbooks, etc., during a test or exam (unless otherwise stated)
- Talking during a test or exam
- Not sitting at the pre-assigned seat during a test or exam
- Communicating with another student in any way during a test or exam
- Having access to the exam/test paper prior to the exam/test
- Explicitly asking a proctor for the answer to a question during an exam/test
- Modifying answers after they have been marked
- Any other behaviour which attempts unfairly to give you some advantage over other students during the grade-assessment process
- Refusing to obey the instructions of the officer in charge of an examination

Several University of Windsor students have been caught cheating during the last few years. In most cases the evidence was sufficient to invoke a disciplinary process which resulted in various forms of punishment including letters of censure, loss of marks, failing grades, and expulsions. As an example, a student who copied a project from another student and presented it as his own was expelled from the university. Another student who was caught copying in a midterm was suspended for one year. Do not cheat, if you are caught and found guilty, you could be expelled from the university and will have to explain why when you search for a job.

Exam Content Confidentiality

Examinations, quizzes, assignments and projects given in this course are protected by copyright. Reproduction or dissemination of examinations or the contents or format of examinations/quizzes in any manner whatsoever (e.g., sharing content with other students), without the express permission of the instructor, is strictly prohibited. Students who violate this rule or engage in any other form of academic dishonesty will be subject to disciplinary action under Senate Bylaw 31: Student Affairs and Integrity.

SET

Student Evaluation of Teaching forms will be administered in the last 2 weeks of classes, in accordance with Senate policy.

Important dates:

May 21: Last day for late registration for classes
June 19 – 27: Reading Week
June. 18: Last day to voluntarily withdraw from classes
August 11: Last day of classes