Columbia College
Vancouver, Canada

Course Outline			
Term: Summer 2025	Course No: CSCI 275	Course Credits: 3	
Instructor: Jetic Gū	Course Section No: 19	Total Hours: 65	Total Weeks: 13
Instructor Office: Room No. 544 Main Campus	Course Title: Software Engineering	Main Campus Room 420	
Instructor Email: jgu@columbiacollege.ca			
Class Meeting Days/Time: TF 18:00-20:25			
Instructor Office Hours: TF 16:00-18:00	Course Format: In person delivery		
Course Prerequisites: Computer Science 225 and 12 credits, Math 120 (or Math111/113/115 with C)	Course Corequisites: English 100		
Transferability to: visit bctransferguide.ca			

Course Description:

This course introduces the basic concepts and the modern tools and techniques of Software Engineering. The course emphasizes the development of reliable and maintainable software via system requirements and specifications; software design methodologies including object-oriented design, implementation, integration, and testing; software project management; life-cycle documentation; software maintenance; and consideration of human factor and ethical issues. The course provides experience in working as a team to produce software systems that meet specifications while satisfying an implementation schedule, and trains students to produce professional quality oral/written presentations of system designs, reviews, and project demonstrations.

Additional Course Details:

- You are expected to have a computer/laptop with uninterrupted access to the Internet.

Required Texts/Readings/Learning Resources:

Software Engineering, Ian Sommerville, Addison Wesley, 10th Edition, 2016

Software Engineering - A Practitioner's Approach. Roger Pressman. Latest edition

McGraw-Hill or other textbook/s approved by the department or additional notes and resources to be provided by instructor.

Course Learning Outcomes: Upon successful completion of this course the student will be able to:

1. Understand and explain key concepts in software engineering such as different software engineering paradigms, reliability, maintainability, etc.
2. Solicit software requirements from users and represent these requirements unambiguously.
3. Make rational design decisions and justify them.
4. Use UML diagrams to present design decisions effectively.
5. Implement software in accordance with design documents.
6. Come up with an effective testing plan for the software and use it to verify the implementation correctness.
7. Recognize the necessity and the challenges of working in a team.
8. Engage in successful teamwork in a complete process of software development.

Course Content/Schedule*

Week	Topic(s)	Readings	Activities
1	Course Introduction Lecture 1: The Software Process: Agile and Scrum Git, Linux/Unix/WSL	Lecture notes	Lab 1
2	Lecture 2: Modelling: • Requirement Analysis • UML Use case	Lecture notes	Quiz 1
3	Lecture 3: Design • Design Concepts • Object Oriented Design • Architectural Patterns	Lecture notes	Assignment 1
4	Lecture 3: Design • Design for Mobility	Lecture notes	Lab 2

	• Design for User Experience • UML-Class Diagram		
5	Lecture 4: Quality Management • Quality Concepts • Review Techniques	Lecture notes	Quiz 2
6	Lecture 5: Software Testing • UML Diagram-Sequence Diagram	Lecture notes	Lab 3 Assignment 2
7	Lecture 5: Software Testing • UML Diagram-Activity Diagram	Lecture notes	
8	Review; Midterm	Lecture notes	Midterm
9	Lecture 6: Security	Lecture notes	Assignment 3
10	Lecture 7: Project Management • website, config, management	Lecture notes	Lab 4
11	Lecture 7: Project Management • UML Diagram – State Transition Diagram	Lecture notes	Lab 5
12	Lecture 7: Project Management • Scheduling, Estimation	Lecture notes	Quiz 3
13	Project Presentation	Lecture notes	Assignment 4
14	FINAL EXAM		

*Timing subject to change

Evaluation Criteria

Evaluation Methods	**%**	**Comments**
Assignments + Final Project Deliverable	30	
Quiz	10	
Midterm	30	
Final	30	
Total	**100%**	

Classroom Code of Conduct:

Students will be prepared for any appointments with the instructor or other students – this means logging in and getting out paper, pens, necessary texts and so on before the appointment starts.

1. Students will communicate respectfully when interacting with the instructor or classmates.
2. Students will respectfully communicate with the instructor and classmates in discussion groups, office hours, and in any type of electronic communication.
3. Students will respond to messages/emails from the instructor or other classmates in a timely manner.

Late Submissions/Resubmission Policy:

If you are affected by personal issues such as sickness, injuries, the passing of a relative, or other traumatising experiences, you should contact an advisor and seek professional help and I'll try to accommodate as much as possible. Otherwise, late submissions and resubmission are not allowed. I can give you one unconditional late submission/resubmission for up to 7 days from the original due date, but only once. Outside of this, here is a list of NOT-GONNA-WORK excuses:

1. I don't have a laptop/computer;
2. I have to work / I forgot;
3. I have too many courses;
4. I am travelling;
5. I am not happy with my grade;
6. My mum doesn't want me to study and beats me if I do.

Cheating and Plagiarism Policy:

I expect all students to uphold the principle of academic honesty. Cheating and plagiarism (presenting another person's words or ideas as one's own) are not acceptable behaviour at anywhere. Depending on the severity of the offence such acts can result in a grade of zero on the test or assignment, a failing grade (F) in the course, or expulsion. In all cases, the circumstances and the penalty are recorded in the student's file. **Do not share your files with others. Do not let others copy or mimic your files. You may take inspiration, but any work you do must be original.** Failure to comply will result in plagiarism charges to both the party providing assistances, as well as the party receiving.

Academic misconduct not covered in the College's Cheating and Plagiarism Policy, is covered under Academic Policy 2.6 Academic Misconduct. It can be found at the following link: https://www.columbiacollege.ca/about/college-policies/ . You are expected to familiarise yourself with this policy, as it covers serious issues including uploading copyright material, submission of falsified records and other strategies to gain unfair academic advantage. If you are unclear on the contents, please ask for clarification.

Course-Specific Policies: (*If any, optional)*

Grading System

Grade Percentage	Grade Points	Rating
A+ 90-100	4.3	Excellent
A 85-89	4.0	
A - 80-84	3.7	Very Good
B+ 76-79	3.3	
B 72-75	3.0	
B - 68-71	2.7	Good
C+ 64-67	2.3	
C 60-63	2.0	Satisfactory
C- 55-59	1.7	
D 50-54	1.0	Marginal Pass
F 0-49	0.0	Fail
N Below 50	0.0	Failure for non-completion or non-attendance

Please see the college calendar for more information about grading and related policies.