Columbia College
Vancouver, Canada

<table>
<tr><th colspan="4">Course Outline</th></tr>
<tr><td>Term: FALL 2021</td><td>Course No: CSCI 275</td><td colspan="2">Course Credits: 3</td></tr>
<tr><td>Instructor: Golnar Sheikhshab</td><td>Course Section No: X19</td><td>Total Hours:
5 per week</td><td>Total Weeks:
14</td></tr>
<tr><td>Instructor Office:
https://columbiacollege.zoom.us/j/8188648910</td><td rowspan="2">Course Title:
Software Engineering</td><td colspan="2" rowspan="2">Class Room No.
https://columbiacollege.zoom.us/j/8188648910</td></tr>
<tr><td>Instructor Email:
gsheikhshab@columbiacollege.bc.ca</td></tr>
<tr><td colspan="4">Class Meeting Days/Time:
Tuesday, Friday 5:45-8:10pm</td></tr>
<tr><td colspan="2">Instructor Office Hours:
TBA</td><td colspan="2">Course Format:
Live Lectures on Zoom</td></tr>
<tr><td colspan="2">Course Prerequisites: 12 credits and CSCI 225, Math 120 (or Math 111/113 /115 with a C)</td><td colspan="2">Course Corequisties:
ENGLISH 100</td></tr>
<tr><td colspan="2">Transferability to: Please search in BCTransferGuide</td><td colspan="2"></td></tr>
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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:

1. You are expected to have a computer/laptop with stable access to the Internet.
2. During scheduled exam times, you are expected to keep your cameras on and be in a quiet place so that you can turn your microphone on per request.
3. **Late Assignments:** The first day costs you 10% of the assignment's mark. After the first day, each day costs you 20% of the assignment's mark.
4. **Missed exams**: If you miss a test and you have an acceptable excuse such as a verifiable doctor note, your mark in the next exam (test/midterm/final) will also be your mark in the missed test. If you miss the midterm and you have an acceptable excuse such as a verifiable doctor note, your mark in the final exam will also be your mark in the missed midterm.

Required Texts/Readings/Learning Resources:

1. Project-Based Software Engineering: An Object-Oriented Approach, Evelyn Stiller and Cathie LeBlanc, Addison Wesley
2. Software Engineering, Ian Sommerville, Addison Wesley, 10th Edition

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 a 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 team-work in a complete process of software development

Course Content/Schedule*

Week	**Topic(s)**	**Reading Texts/Readings/Learning Resources by Week**	**List All Assessments:**	**Briefly describe each listed Assessment and the Course Learning Outcome(s) being measured or assessed**
1	Introduction to Software Engineering	PBSE.CH1 & SEIS.CH1		
2	Object Oriented Paradigm & Software Processes	PBSE.CH2 & SEIS.CH2		
3	Object Oriented Analysis	PBSE.CH3 & SEIS.CH4	Test 1	Chapters 1 and 2
4	Product Design & System modeling	PBSE.CH4 & SEIS.CH5	Assignment 1	requirement analysis skills
5	Class Design	PBSE.CH5 & SEIS.CH7.1	Test 1	Chapters 3, 4
6	Case Study	PBSE.CH6	Assignment 2	software design skills
7			Midterm	Chapters 1 to 5
8	Software Implementation	PBSE.CH7 & SEIS.CH7.3		
9	Software Testing	PBSE.CH8 & SEIS.CH8	Assignment 3	A first partially working version of the software
10	Project Management	PBSE.CH9	Test 3	Chapters 7 and 8
11	Design Patterns	PBSE.CH10 & SEIS.CH7.2	Assignment 4	Ability to come up with effective testing plans
12	Software evolution	SEIS.CH9		

13	Project Presentations		Assignment 5	Final version of the software
14			Final Exam	All chapters

*Timing subject to change
*PBSE and SEIS stand for the first and second required textbooks mentioned above.

Evaluation Criteria

Evaluation Methods ** Summarize the list in the Course Content/Schedule (column 4 above)	**%**	**Comments**
Course Project	50	Divided into 5 Assignments (each 10%)
Tests	15	
Midterm	10	
Final Exam	25	
Total	**100%**	

Classroom Code of Conduct:
Students at Columbia College are expected to show respect for the rights of other students, in particular the right to study and learn. Any behaviour in a classroom that interferes with the instructor's ability to conduct the class will be treated as disruptive; the penalties for disruptive behaviour are set out in the College Calendar, and include suspension and even expulsion from the College. In general, students are expected to be attentive and courteous during class and lab time, to complete assigned work and to accept responsibility for their own achievement. In particular:

1. Students will aim to arrive at all classes early so as to be ready when the class begins – this means logging in and getting out paper, pens, necessary texts (and etexts) and so on before the class starts.
2. Students must agree to have their camera turned on during class (including quizzes, tests, exams, etc.) if requested by the Instructor.
3. Students should not use their student number during class time as a means of identifying themselves due to privacy reasons.
4. Students will not expect to leave the class before the instructor has finished. On those rare occasions when a student must leave a class early he/she should seek the permission of the instructor before the class starts via email. If a student must excuse himself/herself during a class the student should request permission via chat and leave as quietly as possible.
5. A secondary device may only be used during a class to engage in the class or source course material, unless given permission by the instructor.
6. Students will speak respectfully when asking a question or answering a question posed by the instructor or a student.
7. Students will communicate respectfully in discussion groups, during office hours and in any type of electronic communication.
8. Students will respond to emails/messages from the instructor or other classmates in a timely manner.

Cheating and Plagiarism Policy:

Columbia College expects 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 any educational institution. Depending on the severity of the offense such acts can result in a grade of zero on the test or assignment, a failing grade (F) in the course, or expulsion from the college. In all cases, the circumstances and the penalty are recorded in the student's file.

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 familiarize 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.

College Policies:

Please see the college calendar for more information and a complete list of academic policies.

Indigenous Statement of Acknowledgement *(optional)*

Columbia College acknowledges that we gather, work, and study on the unceded territories of the Coast Salish Peoples, including xwməθkwəy̓əm (Musqueam), Skwxwú7mesh (Squamish), Stó:lo̱ and Sel̓íl̓wətaʔ/Selilwitulh (TsleilWaututh) Nations. We also want to acknowledge all non-status peoples and members of other tribes who live in Vancouver.

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.