UNIVERSITY OF CALGARY
FACULTY OF SCIENCE

Department of Computer Science
ICT 602
403 220-6015
cpsc@cpsc.ucalgary.ca

COURSE OUTLINE

1. **Course:** SENG 300, Introduction to Software Engineering - Fall 2023

   Lecture 01 : TR 11:00 - 12:15 in ENA 101

Instructor	Email	Phone	Office	Hours
Prof. Robert Walker	walker@ucalgary.ca	403 210-9593	ZOOM	MW 1500-1700, online via Zoom

   Lecture 02 : TR 15:30 - 16:45 in EEEL 161

Instructor	Email	Phone	Office	Hours
Prof. Robert Walker	walker@ucalgary.ca	403 210-9593	ZOOM	MW 1500-1700, online via Zoom

   To account for any necessary transition to remote learning for the current semester, courses with in-person lectures, labs, or tutorials may be shifted to remote delivery for a certain period of time. In addition, adjustments may be made to the modality and format of assessments and deadlines, as well as to other course components and/or requirements, so that all coursework tasks are in line with the necessary and evolving health precautions for all involved (students and staff).

   In Person Delivery Details:

   All lectures and tutorials will be held in-person. While slides and videos will be available on the course website, the content therein may differ slightly from what is presented in in-person lectures or tutorials; in such cases, the in-person content takes precedence.

   Course Site:

   D2L: SENG 300 Introduction to Software Engineering, Fall 2023

   Note: Students must use their U of C account for all course correspondence.

   Equity Diversity & Inclusion:

   The University of Calgary is committed to creating an equitable, diverse and inclusive campus, and condemns harm and discrimination of any form. We value all persons regardless of their race, gender, ethnicity, age, LGBTQIA2S+ identity and expression, disability, religion, spirituality, and socioeconomic status. The Faculty of Science strives to extend these values in every aspect of our courses, research, and teachings to better promote academic excellence and foster belonging for all.

2. **Requisites:**

   See section 3.5.C in the Faculty of Science section of the online Calendar.

   Prerequisite(s):
   3 units from Computer Science 219, 233 or 235.

   Antirequisite(s):
   Credit for Software Engineering 300 and any of Software Engineering 301, 311, 403, 411, Computer Science 301, 333, 451 or Software Engineering for Engineers 480 will not be allowed.

   You are expected to already understand concepts around object-oriented programming and specifically the Java programming language. Slides on object-oriented programming topics (with a focus on Java) are available on the course website as a review; no additional lecture time nor videos will be made available for that material. You are welcome to ask questions about it, however.

3. **Grading:**

   The University policy on grading and related matters is described in F.1 and F.2 of the online University Calendar.

   In determining the overall grade in the course the following weights will be used:

Course Component	Weight	Due Date (duration for exams)	Modality for exams	Location for exams
Assignment 1	5%	Sep 19 2023		
Assignment 2	5%	Oct 03 2023		
Assignment 3	5%	Oct 12 2023		
Midterm Examination[1]	25%	Oct 24 2023 at 12:00 am (75 Minutes)	in-person	Regular lecture classroom
Project, Iteration 1	5%	Nov 04 2023		
Project, Iteration 2	10%	Nov 20 2023		
Project, Iteration 3[2]	20%	Dec 04 2023		
Live Project Demonstration[3]	10%	Dec 05 2023		
Take-Home Final Examination[4]	15%	Dec 13 2023 at 11:59 pm (7 Days)	online	At home

[1] The midterm exam will be held during the regular lecture time for your section.

[2] The correct due date should be December 4, but this does not appear above due to a bug in the Course Outline Management system.

[3] Student teams will sign up for a demonstration slot to occur during one of the lecture times on December 5.

[4] You will have access to the final exam for 7 days, so you can read the questions and think about the answers, fitting the exam into your own schedule. Actually answering the questions should not require more than 2 hours.

Each of the above components will be given a letter grade using the official university grading system (see section F.1.1). The final grade will be calculated using the grade point equivalents weighted by the percentages given above and then converted to a final letter grade using the official university grade point equivalents.

To receive a grade of C- or better in the course, a C- or better must be obtained on the weighted average of the midterm, project iteration 3, the live project demonstration, and the final examination.

The University of Calgary offers a flexible grade option, Credit Granted (CG) to support student's breadth of learning and student wellness. Faculty units may have additional requirements or restrictions for the use of the CG grade at the faculty, degree or program level. To see the full list of Faculty of Science courses where CG is not eligible, please visit the following website: https://science.ucalgary.ca/current-students/undergraduate/program-advising/flexible-grading-option-cg-grade

4. **Missed Components Of Term Work:**

In the event that a student legitimately fails to submit any online or in-person assessment on time (e.g. due to illness, domestic affliction, etc...), please contact the course coordinator, or the course instructor if this course does not have a coordinator to arrange for a re-adjustment of a submission date, or possible exemption and reweighing of components. Absences not reported within 48 hours will not be accommodated. Students may be asked to provide supporting documentation (Section M.1) for an excused absence, See FAQ.

If an excused absence is approved, options for how the missed assessment is dealt with is at the discretion of the coordinator or course instructor. Some options such as an exemption and pro-rating among the components of the course may not be a viable option based on the design of this course.

5. **Scheduled Out-of-Class Activities:**

There are no scheduled out of class activities for this course.

6. **Course Materials:**

Required Textbook(s):

Roger Pressman and Bruce Maxim, *Software Engineering: A Practitioner's Approach, 9th edition*: McGraw Hill.

Additional materials will be posted on the course D2L website.

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:

- A computer with a supported operating system, as well as the latest security, and malware updates;
- A current and updated web browser;
- Webcam/Camera (built-in or external);
- Microphone and speaker (built-in or external), or headset with microphone;
- Current antivirus and/or firewall software enabled;
- Stable internet connection.

For more information please refer to the UofC ELearning online website.

7. **Examination Policy:**

On the midterm examination, a "cheat sheet" is permitted (US Letter size: 8.5" x 11"), double-sided, on which the student may manually write or otherwise print any material they wish, prior to the examination start. **No other aids are permitted and communication with other people during the examination is not permitted.**

On the final examination, the student may utilize all materials previously created by their group(s), all materials provided by the instructor, the textbook, and any notes the student has previously made. **Communication with other people during the examination is not permitted.**

Students should also read the Calendar, Section G, on Examinations.

8. **Approved Mandatory And Optional Course Supplemental Fees:**

There are no mandatory or optional course supplemental fees for this course.

9. **Writing Across The Curriculum Statement:**

For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also Section E.2 of the University Calendar.

10. **Human Studies Statement:**

Students will not participate as subjects or researchers in human studies.

See also Section E.5 of the University Calendar.

11. **Reappraisal Of Grades:**

A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See Section I.3 of the University Calendar.

  a. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **ten business days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall submit the Reappraisal of Graded Term work form to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See sections I.1 and I.2 of the University Calendar

  b. **Final Exam:** The student shall submit the request to Enrolment Services. See Section I.3 of the University Calendar.

The student should first appeal to the person who graded the assignment, specific question, etc. as indicated in the grades posted on D2L. Only if not satisfied should they escalate their appeal to Prof. Walker, who will then ask for details of the issues from both the student and the grader, in order to arrive at a decision.

12. **Other Important Information For Students:**

  a. **Mental Health** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, Mental Health Services Website) and the Campus Mental Health Strategy website (Mental Health).

  b. **SU Wellness Services:** For more information, see their website or call 403-210-9355.

  c. **Sexual Violence:** The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email (svsa@ucalgary.ca) or phone at 403-220-2208. The complete University of Calgary policy on sexual violence can be viewed here.

d. **Student Ombuds Office:** A safe place for all students of the University of Calgary to discuss student related issues, interpersonal conflict, academic and non-academic concerns, and many other problems.

e. **Student Union Information:** SU contact, Email your SU Science Reps: science1@su.ucalgary.ca, science2@su.ucalgary.ca, science3@su.ucalgary.ca,

f. **Academic Accommodation Policy:**

It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The student accommodation policy can be found at: https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf

Students needing an accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities: https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf.

Students needing an accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, by filling out the Request for Academic Accommodation Form and sending it to by email preferably 10 business days before the due date of an assessment or scheduled absence.

g. **Misconduct:** Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. Research integrity, ethics, and principles of conduct are key to academic integrity. Members of our campus community are required to abide by our institutional Code of Conduct and promote academic integrity in upholding the University of Calgary's reputation of excellence. Some examples of academic misconduct include but are not limited to: posting course material to online platforms or file sharing without the course instructor's consent; submitting or presenting work as if it were the student's own work; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; borrowing experimental values from others without the instructor's approval; falsification/fabrication of experimental values in a report. Please read the following to inform yourself more on academic integrity:

> Student Handbook on Academic Integrity
> Student Academic Misconduct Policy and Procedure
> Faculty of Science Academic Misconduct Process
> Research Integrity Policy

Additional information is available on the Student Success Centre Academic Integrity page

h. **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or non-academic misconduct, in addition to any other remedies available at law.

i. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). Students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information, see Legal Services website.

j. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction (USRI) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.

Course Outcomes:

- Model a small- to medium-scale software system to represent the relevant aspects in a specified context.
- Design a small- to medium-scale software system that conforms to a given description.
- Critique the strengths and weaknesses of a given design.
- Implement a small to medium-scale software system conforming to a design.

- Modify an existing design and its implementation in order to achieve a specified effect.
- Explain the operation, the strengths, and the weaknesses of a variety of development lifecycle models
- Implement and to execute an automated test suite.
- Manage team conflict, in order to avoid foreseeable conflict and to resolve conflict that happens during a project.
- Communicate and to negotiate with stakeholders in deciding on project requirements.
- Plan and to track project requirements and their realization.
- Communicate progress and problems to a project team.
- Cope with needed change by altering project plans and by utilizing configuration management techniques.

Electronically Approved - Aug 28 2023 14:26

Department Approval

Electronically Approved - Aug 29 2023 16:42

Associate Dean's Approval