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 - Winter 2021

   Lecture 01:

Instructor	Email	Phone	Office	Hours
Prof. Robert Walker	walker@ucalgary.ca	403 210-9593	ICT 546	TR 0800-1000, online

   Lecture 02:

Instructor	Email	Phone	Office	Hours
Prof. Robert Walker	walker@ucalgary.ca	403 210-9593	ICT 546	TR 0800-1000, online

   Online Delivery Details:

   This course does not follow a scheduled meeting pattern.

   All lectures will be recorded with audio and video, and posted on the course website, aiming to provide the equivalent of 3 hours of lectures per week. Slides will also be provided in handout configuration as PDF files, also on the course website.

   Course Site:

   D2L: SENG 300 L01-(Winter 2021)-Introduction to Software Engineering

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

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.

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:

Component(s)	Weighting %	Due date
Individual assignment 1	5	27 January 2021, 11:59 PM MT
Individual assignment 2	5	8 February 2021, 11:59 PM MT
Individual assignment 3	5	26 February 2021, 11:59 PM MT
Midterm examination	25	9 March 2021, 11:59 PM MT
Group project, iteration 1	10	17 March 2021, 11:59 PM MT
Group project, iteration 2	15	31 March 2021, 11:59 PM MT
Group project, iteration 3	20	14 April 2021, 11:59 PM MT
Final examination	15	25 April 2021, 11:59 PM MT

   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.

   The midterm examination will be **asynchronous and oral** (students must submit their exam by the exam end time; students must record audio and video of themselves answering the questions, in conjunction with a screen recording of the pertinent material required for explanation; the recordings must have a duration no longer than

15 minutes; the questions will be released 48 hours prior to the exam end time, i.e., on 7 March 2021 at 11:59 PM MT).

The final examination will be **asynchronous and oral** (students must submit their exam by the exam end time; students must record audio and video of themselves answering the questions, in conjunction with a screen recording of the pertinent material required for explanation; the recordings must have a duration no longer than 15 minutes; the questions will be released 15 April 2021 at 11:59 PM MT).

To receive a grade of C- or better in the course, a C- or better must be obtained on the midterm examination, on the weighted average of the group assignments, and on the final examination. To receive a D or better in the course, a D or better must be obtained on the midterm examination, on the weighted average of the group assignments, and on the final examination.

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

The university has suspended the requirement for students to provide evidence for absences. Please do not attend medical clinics for medical notes or Commissioners for Oaths for statutory declarations.

In the event that a student legitimately fails to submit any online assessment on time (e.g. due to illness 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. Absences not reported within 48 hours will not be accommodated. If an excused absence is approved, then the percentage weight of the legitimately missed assignment could also be pro-rated among the components of the 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 readings of online, freely-accessible materials will be posted on the course website relative to the lecture content to which they are connected.

You will be required to record audio and video of yourself for the two examinations. I suggest that you use the software tool available for this purpose from https://screencast-o-matic.com/ - the free version allows for 15-minute recordings which will suffice for your needs in this course.

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:**

All examinations are open book/open notes. The midterm examination will make use of each student's own submissions for the three individual assignments. The final examination will make use of each student's group project(s). Students should keep all these materials in order to make explicit reference to them on the examinations.

All examinations will be **asynchronous and oral**. For the midterm examination, questions will be released 48 hours prior to the exam end time; for the final examination, questions will be released 15 April 2021 at 11:59 PM MT. Students will be required to record audio and video of themselves answering the questions, in conjunction with a screen recording of the pertinent material required for explanation; the recordings must have a duration no longer than 15 minutes.

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.

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 www.ucalgary.ca/wellnesscentre 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 at (https://www.ucalgary.ca/policies/files/policies/sexual-violence-policy.pdf)

   d. **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
   Research Integrity Policy

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

e. **Academic Accommodation Policy:** Students needing an accommodation because of a disability or medical condition should contact Student Accessibility Services in accordance with the procedure for accommodations for students with disabilities available at procedure-for-accommodations-for-students-with-disabilities.pdf.

Students needing an accommodation in relation to their coursework or to fulfill requirements for a graduate degree, based on a protected ground other than disability, should communicate this need, preferably in writing, to the Associate Head of the Department of Computer Science, Nelson Wong by email nelson@cpsc.ucalgary.ca or phone 403-210-8483. Religious accommodation requests relating to class, test or exam scheduling or absences must be submitted no later than **14 days** prior to the date in question. See Section E.4 of the University Calendar.

f. **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.

g. **Student Union Information:** VP Academic, Phone: 403-220-3911 Email: suvpaca@ucalgary.ca. SU Faculty Rep., Phone: 403-220-3913 Email: sciencerep@su.ucalgary.ca. Student Ombudsman, Email: ombuds@ucalgary.ca.

h. **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.

i. **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.

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 - Dec 21 2020 16:26

Department Approval

Associate Dean's Approval