

Fall 2025 SENG 265: Software Development Methods (Units: 1.5)

Territory Acknowledgement

We acknowledge and respect the Łək'wəŋən (Songhees and X̱sepsəm/Esquimalt) Peoples on whose territory the university stands, and the Łək'wəŋən and W̱SÁNEĆ Peoples whose historical relationships with the land continue to this day.

Withdrawal without reduction of tuition fees: 2025-09-16

Withdrawal with 50% reduction of tuition fees: 2025-10-07

Last day for withdrawal (no fees returned): 2025-10-31

Accessible Learning

The University of Victoria is committed to creating a learning experience that is as accessible as possible. If you are registered with the Centre for Accessible Learning and anticipate or experience any barriers to learning in this course, please feel welcome to discuss your concerns with me. If you are a student with a disability or chronic health condition, you can meet with a CAL advisor to discuss access and accommodations.

How to contact CAL: <https://www.uvic.ca/accessible-learning/students/how-to-register/index.php>.

Academic Concessions

The university recognizes its responsibility to offer academic concessions to students whose ability to complete course requirements is interrupted by unexpected and unavoidable circumstances or conflicting responsibilities.

Review the Academic Concession Regulation:

<https://www.uvic.ca/calendar/future/undergrad/index.php#/policy/HJjAxiGO4?bc=true&bcCurrent=11%20-%20Academic%20Concessions&bcGroup=Undergraduate%20Academic%20Regulations&bcltemType=policies>

and web site:

<https://www.uvic.ca/students/academics/academic-concessions-accommodations/request-for-academic-concession/index.php#ipn-undergraduate-requests-for-academic-concession>.

Course Overview

Software engineering is more than just programming. There exists a set of concepts, techniques and tools that every new software engineer needs to learn and practice, and their use becomes essential once the software engineer begins working with others in non-trivial software projects. This course provides an introduction to this set, and further courses with both use and build on the topics covered this semester.

This course requires reliable and consistent access to a relatively new computer (desktop or laptop, with at least 8GB of DRAM and at least 250 GB of disk space). You must also have a reliable internet connection, although we will do our best to ensure work on assignments can be completed on your computer. It will not be possible to adjust the course

expectations, due dates or learning outcomes for students who do not have the technological resources available to complete this course. Information on student numbers, student grades, submitted work will be stored in file systems and computers under the physical control of UVic.

Topics

The topics covered by this course will include:

- Linux command-line basics
- Linux shell scripts
- Multi-version software development
- Git version control system
- C programming language
- Python 3 programming language (including more advanced language use)
- Libraries and frameworks for software development
- Debugging tools
- Build tools
- Incremental software development and testing
- Software documentation
- Software evolution and the software life cycle

Textbooks

This course has no required text. All resources required for this course will be posted on the Brightspace course website.

Course Objectives and Learning Outcomes

Students successfully completing SENG 265 will be able to:

- Define elementary software engineering terms.
- Describe elementary software engineering concepts.
- Explain the purpose of a software development process.
- Employ the bash-shell and the Linux operating system in the work of developing software.
- Construct solutions for small- to medium-sized problems using Python 3 and C.
- Investigate the dynamic behavior of C programs using a debugger.
- Use scripting languages, libraries and frameworks to improve software productivity.
- Organize development work using software configuration management tools.
- Identify and outline the test cases needed to give confidence in the correctness of a software development artifact.

Labs

There will be **10 (ten)** labs of equal weight each. From those, the **8 (eight)** best lab grades will be used to compute a lab average grade, comprising **10%** of the total course mark. See the course syllabus on Brightspace for the lab schedule.

For each of the labs, there will be a set of exercises to work through. You must demonstrate your work to a TA during your registered lab time. If so required in the lab instructions, you should also submit your work by the end of the lab. If you do not demonstrate the lab work during your scheduled lab time, you will receive a grade of zero for the lab. Your

lab grade is recorded for each of the labs and each lab contributes to the 10% lab component that is part of your overall course grade.

We will do spot-check grading in this course. That is, all lab work should be completed, BUT only a subset of your code might be graded. You will not know which portions of the code will be graded, so all of your code must be complete and adhere to specifications to receive marks.

You are encouraged to elicit help from your TA during your allocated lab time. A few labs will be done individually while the remaining labs will be done in pairs. Final lab submissions must be generated independently and you (or your pair) will only receive credit for your own work.

We encourage you to augment your learning with external resources (e.g., textbooks, educational Websites, forums, etc.). However, you can use these resources only for learning about the problem high-level solution strategies. You must develop your concrete solutions independently.

The use of an editor or tutor, either paid or unpaid, to correct or augment your work is strictly prohibited.

Other Materials

Lab and assignment resources will be available on Brightspace and in the UVic software development environment for SENG 265.

Assignments

There will be **5 (five)** programming assignments of equal weight each. From those, the **4 (four)** best assignment grades will be used to compute an assignments average grade, comprising **45%** of the total course mark.

This schedule is subject to change. Please consult the course webpage for accurate due dates.

| Assignment | Weight | Tentative Due Dates |
|--------------|--------|---------------------|
| Assignment 1 | 9% | September 29 |
| Assignment 2 | 9% | October 13 |
| Assignment 3 | 9% | November 3 |
| Assignment 4 | 9% | November 17 |
| Assignment 5 | 9% | December 3 |

We will do spot-check grading in this course. That is, all assignments are graded BUT only a subset of your code might be graded. You will not know which portions of the code will be graded, so all of your code must be complete and adhere to specifications to receive marks.

You should start assignments early enough to allow time to seek help if you encounter difficulties. **Late Assignments will not be accepted.**

Students are encouraged to discuss assignment problems with each other and form study groups. However, final assignment submissions must be generated independently, and you will only receive credit for your own work. We encourage you to augment your learning with external resources (e.g., textbooks, educational websites, forums, etc.). However, you can use these resources only for learning about the problem high-level solution strategies. You must develop your concrete solution independently. On some assignments, however, you may be permitted to use material from other sources **with proper attribution**. Submitting the work of others without proper acknowledgement will be considered a serious academic offense and may result in failure of the course.

The last three assignments will be performed in pairs to better reproduce software development practices, and more on this subject will be presented in the Brightspace course website when those assignments are posted.

The use of an editor or tutor, either paid or unpaid, to correct or augment your work is strictly prohibited.

Please consult the instructor if you are unsure whether or not you are following these guidelines when working on an assignment.

Exams

There will be one midterm exam and one final exam.

| Exam | Weight | Date |
|---------|--------|-----------------------------|
| Midterm | 15% | October 15 (Wednesday) |
| Final | 30% | scheduled by the university |

Missed exams:

- Normally a missed midterm exam will be given a zero grade.
- Academic concession for a missed midterm exam is granted in extenuating circumstances (i.e., illness) **only if** the following is provided to the course instructor:
 - Notification by e-mail *from your uvic.ca e-mail account sent to the instructor uvic.ca e-mail account before the date/time of the exam.*
 - Some form of documentation or concrete explanation to support the extenuating circumstances.
 - We understand that COVID-19 protocols may make this difficult (i.e., individual decisions to self-isolate) and this will be taken into account by the teaching team.

For courses which have final exams, students are strongly advised not to make final plans for travel or employment during the exam period since special arrangements will not be made for examinations that may conflict with such plans.

In the event that you cannot write the final exam due to unexpected and unavoidable circumstances or conflicting responsibilities (as described here - <https://www.uvic.ca/students/academics/academic-concessions-accommodations/request-for-academic-concession/index.php>) then you must submit a request for a deferral (<https://www.uvic.ca/students/academics/academic-concessions-accommodations/request-for-academic-concession/index.php#ipn-request-a-deferral>) to Student Support Services after the final grades have been submitted.

Academic concession requests cannot be granted for more than one exam.

Grading

| Coursework | Weight (out of 100%) |
|--------------|----------------------|
| Assignments | 45% |
| Labs | 10% |
| Midterm exam | 15% |
| Final Exam | 30% |

In order to pass the course, students must **obtain a passing grade of 50% on the weighted average of all assignments** and **obtain a passing mark of 50% on the final exam.**

The mark for labs is based on lab participation (i.e., attendance may be determined -- in part -- by completion of certain in-lab exercises).

Students are strongly advised not to make final plans for travel or employment during the exam period since special arrangements will not be made for examinations that may conflict with such plans.

Regrade policy

At times, you may feel that marks were unfairly deducted during an assignment, lab or exam. In this situation, you can submit your work for a regrade.

We will only take regrades if they are submitted within **7 days** of the marks for that assessment being released. Also note that we reserve the right to regrade the entirety of any submission. When requesting a regrade, your old grade will be removed and your new grade could be higher or lower.

To submit a regrade request, you must email the Instructor with the following information (requests missing any of this information will not be considered):

- Your name and student number;
- The submission that you would like regraded;
- The part you would like regraded;
- The reason for requesting a regrade. You must specify which parts of the grading rubric/tests you feel was graded incorrectly.
- Regrade requests need to point to a specific, clear error in grading not an argument about the allocation of marks in the rubric. We can only apply a consistent rubric and standard across all assignments.

Participation

This course will be delivered in-person. Therefore students are expected to be physically present in the lecture room and in the lab room for their registered lab.

All students are expected to fully participate in lectures and labs of this course.

Term Schedule

The term schedule will be available on Brightspace, with lecture topics, proposed readings and assignments' due dates. The schedule is subject to changes during the term.

Posting of Grades

Typically marks for assignments, examinations, and provisional final grades are made available through a Learning Management System (LMS) like Brightspace, where each student will be able to view only their own grades. Sometimes numerical marks/grades may be posted publicly to the entire class. In that case, full student numbers or names will not be included with the posted information.

Csc Student Groups

The Engineering & Computer Science Students' Society (ECSS) serves all students registered in an Engineering and Computer Science degree program, including Software Engineering (BSEng). For information on ECSS activities, events and services navigate to <https://sites.google.com/view/uvic-ecss/>.

Course Policies And Guidelines

Late Assignments: No late assignments will be accepted unless prior arrangements have been made with the instructor **at least 48 hours before** the assignment due date.

Coursework Mark Appeals: Appeals of marks for coursework will only be considered if received within **7 days** of the mark being posted.

Attendance: We expect students attend all lectures and labs. It is entirely the students' responsibility to recover any information or announcements presented in lectures from which they were absent.

Electronic devices in labs and lectures: No unauthorized *audio* or *video* recording of lectures is permitted.

Electronic devices in midterms and exams: Calculators are only permitted for examinations and tests if explicitly authorized and the type of calculator permitted may be restricted. No other electronic devices (e.g. cell phones, pagers,

PDA, etc.) may be used during examinations or tests *unless explicitly authorized*.

Plagiarism: Submitted work may be checked using plagiarism detection software. Cheating, plagiarism and other forms of academic fraud are taken very seriously by both the University and the Department. You should consult the link given below for the UVic policy on academic integrity. Note that the university policy includes the statement that "A largely or fully plagiarized assignment should result in a grade of F for the course."

The Faculty of Engineering and Computer Science Standards for Professional Behaviour are at

<https://www.uvic.ca/ecs/assets/docs/student-forms/professional-behaviour.pdf>

U.Vic guidelines and policy concerning fraud and academic integrity are at

<http://web.uvic.ca/calendar/undergrad/info/regulations/academic-integrity.html>

U. Vic Privacy Policy: If any student has concerns about their private information being stored or accessed outside of Canada, they are required to inform the course instructor about their concerns before the end of second week of classes.

Grading System

The University of Victoria follows a percentage grading system in which the instructor will submit grades in percentages. The University will use the following Senate approved standardized grading scale to assign letter grades. Both the percentage mark and the letter grade will be recorded on the academic record and transcripts.

| F | D | C | C+ | B- | B | B+ | A- | A | A+ |
|-----------|---|-------|-------|-------|-------|-------|-------|-------|--------|
| 0-49 | 50-59 | 60-64 | 65-69 | 70-72 | 73-76 | 77-79 | 80-84 | 85-89 | 90-100 |
| Grades | Description | | | | | | | | |
| A+, A, A- | Exceptional, outstanding or excellent performance. Normally achieved by a minority of students. These grades indicate a student who is <i>self-initiating, exceeds expectation</i> and has an <i>insightful</i> grasp of the subject matter. | | | | | | | | |
| B+, B, B- | Very good, good or solid performance. Normally achieved by the largest number of students. These grades indicate a <i>good</i> grasp of the subject matter or <i>excellent grasp in one area balanced with satisfactory grasp in the other areas</i> . | | | | | | | | |
| C+, C | Satisfactory, or minimally satisfactory. These grades indicate a <i>satisfactory performance and knowledge</i> of the subject matter. | | | | | | | | |
| D | Marginal Performance. A student receiving this grade demonstrated a <i>superficial grasp</i> of the subject matter. | | | | | | | | |
| F | Unsatisfactory performance. Wrote final examination and completed course requirements; no supplemental. | | | | | | | | |

Student Experience of Learning (SEL)

I value your feedback on this course. Towards the end of term you will have the opportunity to complete a confidential Student Experience of Learning (SEL) survey regarding your learning experience. The survey is vital to providing feedback to me regarding the course and my teaching, as well as to help the department improve the overall program for students in the future. When it is time for you to complete the survey, you will receive an email inviting you to do so. If you do not receive an email invitation, you can go directly to the [SEL site](#)

You will need to use your UVic NetLink ID to access the survey, which can be done on your laptop, tablet or mobile device. I will remind you closer to the time, but please be thinking about this important activity, especially the following three questions, during the course.

- What strengths did your instructor demonstrate that helped you learn in this course?
- Please provide specific suggestions as to how the instructor could have helped you learn more effectively.
- Please provide specific suggestions as to how this course could be improved.

Equality

This course aims to provide equal opportunities and access for all students to enjoy the benefits and privileges of the class and its curriculum and to meet the syllabus requirements. Reasonable and appropriate accommodation will be made available to students with documented disabilities (physical, mental, learning) in order to give them the opportunity to successfully meet the essential requirements of the course. The accommodation will not alter academic standards or learning outcomes, although the student may be allowed to demonstrate knowledge and skills in a different way. It is not necessary for you to reveal your disability and/or confidential medical information to the course instructor. If you believe that you may require accommodation, the course instructor can provide you with information about confidential resources on campus that can assist you in arranging for appropriate accommodation. Alternatively, you may want to contact the [Centre for Accessible Learning](#) located in the Campus Services Building.

The University of Victoria is committed to promoting, providing, and protecting a positive, and supportive and safe learning and working environment for all its members.

Resources for students

- [UVic Learn Anywhere](#) is the primary learning resource for students that offers many learning workshops and resources to help students with academics and learning strategies.
- [Library resources](#)
- [Indigenous Student Services \(ISS\)](#)
- [Academic Skills Centre \(ASC\)](#)
- [Math & Stats Assistance Centre \(MSAC\)](#)
- [Learning Strategies Program \(LSP\)](#)
- [Community-Engaged Learning \(CEL\)](#)
- [Academic concession](#)
- [Academic accommodation](#)
- [Academic accommodation & access for students with disabilities](#)
- [Student groups and resources](#)
- [Student wellness](#)
- [Ombudsperson](#)

University statements and policies

- [University Calendar - Information for all students](#)
- [Accommodation of Religious Observance](#)
- [Student Conduct](#)
- [Non-academic Student Misconduct](#)
- [Academic Accommodations and Accessibility](#)
- [Diversity / EDI – VPAC commitment](#)
- [Sexualized Violence Prevention and Response](#)
- [Discrimination and Harassment](#)

Copyright Statement

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further use or distribution of materials to others requires the written permission of the instructor, except under fair dealing or another exception in the Copyright Act. Violations may result in disciplinary action under the Resolution of Non-Academic Misconduct Allegations policy (AC1300).