SENG265: Software Development Methods

Course Dates

CRN(s):	Section A01 CRN: 12766 Section A02 CRN: 12767 Section A03 CRN: 12768
Term:	Fall 2020
Course Start:	2020-09-09
Course End:	2020-12-21
Withdrawal with 100% reduction of tuition fees:	2020-09-22
Withdrawal with 50% reduction of tuition fees:	2020-10-13
Last day for withdrawal (no fees returned):	2020-10-31

Scheduled Meeting Times (M=Mon, T=Tue, W=Wed, R=Thu, F=Fri)

Section:	Location:	Classes Start:	Classes End:	Days of week:	Hours of day:	Instructor:
A01		2020-09-09	2020-12-04	MR	10:00-11:20	Daniela Damian
A02		2020-09-09	2020-12-04	MR	10:00-11:20	Daniela Damian
A03		2020-09-09	2020-12-04	MR	10:00-11:20	Daniela Damian
B01		2020-09-14	2020-12-04	M	12:00-13:20	
B02		2020-09-14	2020-12-04	M	14:00-15:20	
B03		2020-09-14	2020-12-04	W	16:30-17:50	
B04		2020-09-14	2020-12-04	R	11:30-12:50	
B05		2020-09-14	2020-12-04	R	13:00-14:20	

Instructor(s)

Name: **Daniela Damian**
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Phone: (250) 472-5788
Email: damian dot daniela at gmail dot com

Office Hours:	Comments
Mon 01:00pm-02:00pm	

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.

A word about course delivery

This course is given as a **synchronous online-only course.** The class will meet virtually using Zoom; meeting links and meeting passwords will be posted at the conneX site for the course. Course content including lectures and tutorials/labs will be delivered with a mix of live streaming sessions, pre-recorded videos, and the usual prepared slides plus curated links to resources on the World Wide Web. Throughout this semester we will use a mix of online tools (i.e., Zoom for lectures and labs, conneX for other prepared content, slack for questions and discussion).

The course schedule is in Pacific Daylight Time (PDT, Vancouver Zone). Therefore scheduled lectures, labs, quizzes, exams, assignment deadlines, and office hours are in PDT. Recordings of the most recent lectures will be provided for your later review; these will be made available on conneX. **However, you are expected to attend and participate during the scheduled lecture and labs.** For those who are in distant time zones and cannot

synchronously take part in course activities such as exams, we strongly suggest you consider a future offering of the course when you will be able to attend all course components.

A word about students and their IT

This course is offered online but similar expectations apply as for a face-to-face offering that would be offered on-campus. All students are expected to fully participate in this course. This will require reliable and consistent access to a relatively new computer (desktop or laptop, made in 2014 or later, with at least 8GB of DRAM and at least 250 GB of disk space, plus a webcam and microphone for labs and office hours, and lectures if desired). 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. If you cannot ensure your access to these items for the entire semester, we strongly suggest you consider a future offering of this course. 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 the course. **Information on student numbers, student grades, submitted work, etc. 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
- Multi-version software development
- Software documentation
- C programming language
- Python 3 programming language
- Git version control system
- GDB debugging tool
- Build tools such as "make"
- Testing
- Software evolution and the software life cycle

Course Objectives and Learning Outcomes

Students successfully completing SENG 265 will be able to:

- Define elementary software-engineering terms.
- Describe elementary software-engineering concepts.
- Construct solutions for small- to medium-sized problems using Python 3 and C.
- Organize development work using software-configuration management tools such as git, make, and others.
- Explain the purpose of a software-development process.
- Investigate the dynamic behavior of C programs using a debugger.
- Employ the bash-shell and the Linux operating system in the work of developing software.

Textbooks and Other Resources

This course has no required text. All resources required for this course will be posted on the course conneX site at https://connex.csc.uvic.ca

Assignments

This course includes four (4) major assignments plus a very small initial assignment. **The due dates may change as the course proceeds**; the official due date for an assignment will be given when the assignment is handed out.

Assignment	Weight	Tentative Due Date
Assignment 0	4%	Sep 18
Assignment 1	10%	Oct 13
Assignment 2	10%	Oct 27
Assignment 3	10%	Nov 20
Assignment 4	10%	Dec 9

Please note that A0 is a Pass/Fail assignment, and it requires students to demonstrate that they have installed and can use the needed technical infrastructure to be used in the course. **Failing A0 could result in our recommendation that you withdraw from the course due to the inability to install and use the recommended technical infrastructure of the course. Waitlisted students also have to submit and pass A0.**

In general 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. On some assignments, 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.

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 three in-class exams only (*i.e.*, there is **no exam for this course during the final-exam period of the semester**). Each of the three exams will be 45-60 minutes in length, and will be administered using conneX.

Exam	Weight	Date
Exam 1	15%	Oct 15
Exam 2	15%	Nov 16
Exam 3	15%	Dec 3

Grading

Coursework	Weight (out of 100%)
Assignments	44%
Labs (participation)	11%
Exams	45%

In order to pass the course, students must **obtain a passing grade on the average of all assignments** and **obtain a passing grade on the average of all three exams.**

The mark for labs is based on lab participation (i.e., attendance determined by completion of an in-lab activity).

Oral, online assessments

Throughout the term, each student will be asked to participate in one 10-15 minute oral online assignment demo in which they will be asked questions related to a particular assignment to-date. Students will be randomly assigned to these assignment demo dates. **During such a demo, the inability of a student to explain satisfactorily their submitted work may result a referral to the department's Academic Integrity committee.**

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 *self-initiating*, *exceeds expectation* and has an *insightful* 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 *good* grasp of the subject matter or *excellent grasp in one area balanced with satisfactory grasp in the other areas*.
C+, C	**Satisfactory**, or **minimally satisfactory**. These grades indicate a *satisfactory performance and knowledge* of the subject matter.
D	**Marginal Performance**. A student receiving this grade demonstrated a *superficial grasp* of the subject matter.
F	**Unsatisfactory performance**. Wrote final examination and completed course requirements; no supplemental.

Posting of Grades

Typically marks for assignments, examinations, and provisional final grades, are made available through conneX, or CourseSpaces 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.

Course Experience Survey (CES)

I value your feedback on this course. Towards the end of term you will have the opportunity to complete a confidential course experience survey (CES) 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 CES 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.

Csc Student Groups

The Computer Science Course Union (https://onlineacademiccommunity.uvic.ca/cscu/) serves all students who are either in a computer science program or taking a class in computer science. Please sign yourself up on their mailing list if you would like to be informed about their social events and services.

The Engineering Students' Society (ESS) serves all students registered in an Engineering degree program, including Software Engineering (BSEng). For information on ESS activities, events and services navigate to http://www.engr.uvic.ca/~ess .

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: All marks must be appealed **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 Standards for Professional Behaviour are at
https://www.uvic.ca/engineering/assets/docs/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.

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 (formerly the Resource Centre for Students with a Disability) 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.

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