DEPARTMENT OF MATHEMATICAL AND COMPUTATIONAL SCIENCES
UNIVERSITY OF TORONTO MISSISSAUGA

CSC301H5S LEC0103
Introduction to Software Engineering
Course Outline - Winter 2023

Class Location & Time	Wed, 09:00 AM - 11:00 AM MN 1190
Instructor	Jason Wang
Office Location	DH-3072
Office Hours	Wed 11am-12pm
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Course Web Site	https://mcs.utm.utoronto.ca/~301/
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Course Description

An introduction to agile development methods appropriate for medium-sized teams and rapidly-moving projects. Basic software development infrastructure; requirements elicitation and tracking; estimation and prioritization; teamwork skills; basic UML; design patterns and refactoring; security.

Prerequisite: CSC209H5
Exclusion: CSC301H1 or CSCC01H3 (SCI)
Distribution Requirement: SCI

Students who lack a pre/co-requisite can be removed at any time unless they have received an explicit waiver from the department. The waiver form can be downloaded from here.

Learning Outcomes

After completing this course, you will have a solid foundation in software engineering.

- **apply** your knowledge, best practices, and standards appropriate for engineering complex software systems.

- **analyse, design, evaluate and adapt** software processes and software development tools to meet the needs of an advanced development project;

- **analyse, design, test and implement** software solutions in a real life startup company

- **understand and apply enterprise design patterns** in real life applications

- **gain experience in cutting edge software tools** that are industry standard

- **design** software systems and define architectures in open and distributed environments in a holistic and integrative manner

- **apply** the best software engineering practices and standards to software development and the evolution of diverse types of software systems.

- **analyse and develop** digital business models and value creation practices through the re-engineering of processes and services

- **evaluate** the business impact and cost benefits of digitalisation on individuals, organisations, society and the world, and design supporting enterprise architectures.

Textbooks and Other Materials

There is not textbook for this course. The relevant materials will be published on the course website: https://mcs.utm.utoronto.ca/~301.

Assessment and Deadlines

Type	Description	Due Date	Weight
Class Participation	Tutorial Participation		5%
Assignment	Assignment1	2023-02-18	15%
Assignment	Assignment2	2023-04-05	20%
Other	This is the CSC301 project component. Must be done in teams of 5-7 students. Presentations scheduled April 8.	On-going	60%
		Total	100%

More Details for Assessment and Deadlines

The CSC301 project will be divided into 5 phases plus presentation. The mark allocation of each phase will be specified in the project handout. The timeline for the project will stretch from week 2 to week 12, also this work is a team work. Specifically, students will perform their project related duties in a simulated work environment, where everyone can miss work for legit reasons. If any of the team members is unable to perform their duties due to illness or other legit reasons, the other team members need to fulfill their duties. Upon recovery the team member accommodated by others needs to perform extra duties to compensate those who helped them. Everyone is expected to act in a professional manner and cooperate with other team members as necessary in order to respect the deadlines.

There are 10 tutorials, where 4 tutorials will be dedicated to agile meetings tied to to the project, and the other 6 tutorials will be dedicated to practicing new techonolgies needed for the CSC301 project. The agile tutorial meetings are mandatory and the mark associated to those tutorials is part of the final project mark.

The students may work in pairs for their assignments. If a student is working alone and has documented reasons that render them unable to perform academic duites for the assignment period, they will be offered extensions to the discretion of the instructor, reducing the extension in case the student is working in a pair.

Penalties for Lateness

All deadlines are strict. Exceptions may be made to the discretion of the instructor for documented reasons. All work will be submitted electronically. Having technical problems, poor Internet connection, etc. will not be accepted as reasons for late submissions.
In case of illness or other exceptional circumstances, please email supporting documentation to your instructor and declare your absence on acorn. For the assignments student will be offered an extension to the discretion of the instructor.

Procedures and Rules

Missed Term Work

In order to receive special consideration, you must email the course coordinator and declare your absence on ACORN. For more information, visit the Office of the Registrar website (https://www.utm.utoronto.ca/registrar/utm-absence).

In case of illness or other exceptional circumstances, please email supporting documentation to your instructor and declare your absence on Acorn. The declaration must specify the exact period during which you were unable to carry out your academic work. In case of extraordinary circumstances seriously affecting your life, contact your instructor as soon as possible.

Academic Integrity

Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto Mississauga is a strong signal of each student's individual academic achievement. As a result, UTM treats cases of cheating and plagiarism very seriously. The University of Toronto's Code of Behaviour on Academic Matters outlines behaviours that constitute academic dishonesty and the process for addressing academic offences. Potential offences include, but are not limited to:

In papers and assignments:

1. Using someone else's ideas or words without appropriate acknowledgement.
2. Submitting your own work in more than one course, or more than once in the same course, without the permission of the instructor.
3. Making up sources or facts.
4. Obtaining or providing unauthorized assistance on any assignment.

On tests and exams:

1. Using or possessing unauthorized aids.
2. Looking at someone else's answers during an exam or test.
3. Misrepresenting your identity.

In academic work:

1. Falsifying institutional documents or grades.
2. Falsifying or altering any documentation required, including (but not limited to) doctor's notes.

Keep in mind that the department uses software that compares programs for evidence of similar code. Below are some tips to help you avoid committing an academic offence, like plagiarism.

- Never look at another student's lab/assignment solution(s). Never show another student your lab/assignment solution. This applies to all drafts of a solution and to incomplete and even incorrect solutions.
- Keep discussions with other students focused on concepts and examples. Never discuss labs/assignments before the due date with anyone but your Instructors and your TAs.
  Do not discuss your solution publicly on the discussion board or publicly in the lab rooms/office hours.

All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters. If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, you are expected to seek out additional information on academic integrity from your instructor or from other institutional resources.

Plagiarism Detection

Normally, students will be required to submit their course essays to the University's plagiarism detection tool for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the tool's reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of this tool are described on the Centre for Teaching Support & Innovation web site (https://uoft.me/pdt-faq).

Students may wish to opt out of using the plagiarism detection tool. In order to opt out, contact your instructor by email no later than two (2) weeks after the start of classes. If you have opted out, then specific information on an alternative method to submit your assignment can be found below.

Informed Consent – Email Lists

As a student enrolled in this course, you understand that you are providing your implicit consent to be included in an email list for the department to send you non-essential information from time to time. If you do not wish to be included in such an email list, please request to be removed by contacting one of the Academic Advisors & Undergraduate Program Administrators. Their information can be found on the MCS Website Contact Us page .

Additional Information

For office hours, please make an appointment, either with me over email or before class starts. Otherwise we can agree on a mutually available time to talk outside of class virtually.

Course information, lecture notes, tutorial material, important announcements, etc. will be posted on the course website. Your marks will be posted on quercus only. It is your responsibility to visit it frequently. You are responsible for reading all announcements on the quercus, on the course website and on the discussion board; please check at least weekly. You are encouraged to use the discussion board to discuss the course material, pose questions on the assignments, etc. Please refrain from posting partial or full solutions on the discussion board.

If a piece of work has been mis-marked or if you believe the rubric used to evaluate the work is not appropriate, you may request a re-mark. For a re-mark to succeed, you must clearly and concisely express what you believe was mis-marked or unfairly

marked. To request a re-mark, set up an appointment with the instructor. Be prepared for the entire work to be re-evaluated and for the mark to be adjusted up or down after the re-evaluation. Remark request MUST be made in one week after the mark is made available. No remark request will be accepted after one week.

In this course, we will use git version control system. Each of you will have your own repository for each assignment on GitHub Classroom, shared by you, your instructor, and a TA. You will submit all your coursework by ensuring your work is in the corresponding repository at the due date and time. Teams will have repositories as well, shared by the team, the team's TA, and the instructor. Course work is due by 11:59pm sharp on the specified date.

Do not use another student's work. As a precaution, I suggest that you only discuss high level ideas with other students, or, in case of your team's work, with other team's members. You are not permitted to take any notes during these discussions, nor are you permitted to consult other students' work. Sharing your work with other students is a violation of this policy. If challenged by either a tutor or the instructor, you must be able to reproduce and explain any work you submit in an oral exam. Failure to observe this policy is an academic offence, carrying a penalty ranging from a zero on a homework or a test to suspension from the university.

Last Date to drop course from Academic Record and GPA is March 19, 2023.