

# Course Syllabus

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[this syllabus is tentative until this line is removed]

***Last updated: Monday 11 September 2023 (added late policy for homework)***

## CSC207H1: Software Design

### Calendar description:

An introduction to software design and development concepts, methods, and tools using a statically-typed object-oriented programming language such as Java. Topics from: version control, unit testing, refactoring, object-oriented design and development, design patterns, advanced IDE usage, regular expressions, and reflection.

### Learning Objectives:

By the end of this course, you will:

- be able to effectively communicate about software design with your peers
- be comfortable using version control
- be able to write Java code to satisfy program specifications
- be able to apply the SOLID design principles and Clean Architecture to design object-oriented software solutions
- have experienced what it is like to work in a collaborative software development environment
- have a deeper understanding of how to approach testing your code
- be confident in your ability to learn and apply new concepts, software tools, and features of your IDE

## Course Contact Information

**Course email address:** [csc207-2023-09@cs.toronto.edu](mailto:csc207-2023-09@cs.toronto.edu) (<mailto:csc207-2023-09@cs.toronto.edu>)

**Course coordinator:** Jonathan Calver (BA4222)

**Lab coordinator:** Sophia Huynh

**Instructional support:** Amin Gillani

# Lecture Schedule

Lecture times, locations, and instructors for each section.

Lecture Section	Lecture Time	Location	Instructor
LEC 0101	T, Th 10–11am	EM001	Jonathan Calver
LEC 0201	T, Th 1–2pm	EM001	Paul Gries
LEC 0301	T, Th 2–3pm	UC140	Paul Gries
LEC 0401	T, Th 3–4pm	RW117	Jonathan Calver
LEC 0501	T 4–5pm	BA1130	Lindsey Shorser
LEC 5101	Th 6–8pm	KP108	Lindsey Shorser

## Office Hours

Instructor and TA office hours will be held weekly throughout the term. The schedule will be posted on the homepage of the course.

## Course Project

A major component of your experience in this course is contributing to a group software design project (teams of 4). For the first several weeks of the semester, we will be meeting during the Monday tutorial time slots to work on weekly skill development activities in a group setting. In subsequent weeks, you will apply these skills in an open software project, which will see you and your team build an application from scratch.

## Final Exam

The final exam is a comprehensive exam. **You need to achieve at least 40% on the final exam; otherwise, your course grade will be no higher than 47% and you cannot pass the course.**

## Marking Scheme

Course marking scheme

	Portion of	
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Course Work Title	Portion of Course Mark	Due Date / Notes
Weekly Activities	30% (3% each)	Due every Friday at 6pm during the term starting September 15th; These consist of a mix of reflection, design questions, and implementation.
Midterm Test	10%	During the first hour of your tutorial on October 23rd.
Ethics Surveys	1% (.5% each)	First survey will be announced around the middle of the term, with at least a week to complete; second survey will be released near the end of term and due December 6th
Group Project	20%	Presentations on Monday / Thursday (MakeUp Monday) of last week of classes during your tutorial time.  Grade based on final presentation (10%) and your overall contribution to the project (10%).
Final Exam	39%	To be scheduled by the Faculty of Arts and Science

## Course Topics by Week

Topics covered in the course by week

Week	Dates	Topics (exact order may change)
0	Sept 7–10	Course overview, software setup
1	Sept 11–17	Version control, Java I
2	Sept 18–24	Java II, UML, Class Diagrams
3	Sept 25–Oct 1	SOLID, APIs
4	Oct 2–8	UI, Specifications, Architecture

5	Oct 9–15	Clean Architecture, Sequence Diagrams
6	Oct 16–22	Serialization, Packaging, Exceptions
7	Oct 23–29	Design Patterns, Testing
8	Oct 30–Nov 5	Disability (first ethics topic), Code Smells
--	Nov 6–12	Reading Week
9	Nov 13–19	Accessibility (second ethics topic), Regex
10	Nov 20–26	Interviewing, Floating Point
11	Nov 27–Dec 3	Course Review
12	Dec 4–8	Project Presentations

## Tutorials

All room information for the weekly tutorials (AKA labs) will be posted in the CSC207H1 F Tutorial (All Sections) Quercus instance.

## Textbook

Most of the core design concepts discussed in this course can be found in Clean Architecture by Robert Martin. **The textbook is optional, but highly recommended, and should be available through the bookstore soon.** Past students have shared that they found the textbook to be very useful. You may also find the following optional books to be interesting reads:

- Effective Java by Joshua Bloch (highly recommended if you plan to code more in Java beyond this course; its emphasis is on how you can best use Java — not learning the syntax)
- Program Development in Java by Barbara Liskov with John Guttag (takes a very formal approach to software design; in particular, their UI–FP (user interface – functional part) partitioning of the design of a system and their subsequent discussion fits well with our discussion of Clean Architecture in this course)

# Piazza

We will be using Piazza for class discussion. The system is highly catered to getting you help fast and efficiently from both classmates and instructors. Rather than emailing course content specific questions to the teaching staff, we encourage you to post such questions on Piazza — don't be shy! If you have any problems or feedback for the developers, you can email [team@piazza.com](mailto:team@piazza.com) (<mailto:team@piazza.com>). From experience, they are very responsive and even open to implementing missing features!

Find our class signup link at: <https://piazza.com/utoronto.ca/fall2023/csc207h1f>  
(<https://piazza.com/utoronto.ca/fall2023/csc207h1f>)

## Late Policy

You are responsible for meeting all deadlines. Weekly activities are due at 6pm each Friday during the term and will be accepted until midnight on the following Sunday without penalty (54-hour grace period). Homework will not be accepted beyond that time without special consideration. Please plan to complete your homework during the week and submit at the Friday deadline.

If you're experiencing illness, mental health crises, family/personal emergencies, or other exceptional circumstances beyond your control that prevent you from being able to complete an assessment on time, you can apply for special consideration by completing a form. The form will be posted at the top of the home page closer to the first course deadline.

Please note that special consideration cannot be granted to accommodate for heavy course load, multiple assignments and/or tests scheduled during the same period, or challenges with time management.

In the case of illness, please email your completed form to the course address as soon as possible and we'll make appropriate accommodations, for example, re-weighting of missed term work.

## Remark Requests

All [remark requests](#) should be submitted through the linked form. All remark requests will be handled before final course grades are submitted. You are responsible to submit any such requests within two weeks of the work being returned.

## Accessibility

If you have an acute or ongoing disability issue or accommodation need, you should register with Accessibility Services (AS) at the beginning of the academic year by visiting

<http://www.studentlife.utoronto.ca/as/new-registration> (<http://www.studentlife.utoronto.ca/as/new->

[registration](#)). Without registration, you will not be able to verify your situation with your instructors. AS will assess your situation, develop an accommodation plan with you, and support you in requesting accommodation for your course work. Remember that the process of accommodation is private: AS will not share details of your needs or condition with any instructor, and your instructors will not reveal that you are registered with AS. Please reach out to the course address if you have any questions or concerns.

## **Academic Integrity**

Please familiarize yourself with the Rules and Regulations from the U of T Calendar (especially the Code of Behaviour on Academic Matters): <http://www.artsci.utoronto.ca/osai>

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## **Use of Generative AI**

The use of Generative AI is allowed throughout the course, and it will not be required to complete any aspect of this course. With this said, we caution you to not rely entirely on these tools to complete your coursework. Instead, we recommend treating the use of generative AI as a supplementary tool only for exploration and engaging with the course material. Ultimately, you (and not any AI tool) are responsible for your own learning in this course, and for all the work you submit for credit. It is your responsibility to critically evaluate the content generated, and to regularly assess your own learning independent of generative AI tools. Over reliance on generative AI may give you a false sense of how much you've actually learned, which can lead to poor performance on the midterm test or final exam, in later courses, or in future work or studies after graduation.