

# **COMP 370 – Software Engineering**

Dr. Majid Babaei

<https://majidbabaei.com>



**R3iSE**  
SE @ MCGILL UNIVERSITY

HOME  
ABOUT PI  
NEWS  
OUR TEAM  
SERVICES  
APPROACH  
PROJECTS  
TEACHING  
INDUSTRY  
BLOG

# WELCOME TO R3iSE!

**Here, we are passionate about:**  
Driving Innovation,  
Embracing Emerging Technologies  
Empowering Individuals.

If you share the same passion, contact us at [R3iSE@acm.org](mailto:R3iSE@acm.org).  
Let's create something extraordinary together!



## Principal Investigator

**Name:** Majid Babaei

**Email:** [majid.babaei@ufv.ca](mailto:majid.babaei@ufv.ca)

**Degree:** Ph.D. in Computing from [Queen's University](#)  
(With a focus on [Software Engineering](#))

**Academic Level:** Assistant Professor

- Assistant Professor at SoC, UFV (Since Aug. 2025)
- Assistant Professor at SCS, McGill University (2023-2025)
- Associate Member of ECE, McGill University (Since Nov. 2024)
- ACM Professional Member (Since Dec. 2024)

**Meeting:** By appointment ([ZOOM](#))

**Address:**

*University of Fraser Valley,  
School of Computing,  
Abbotsford - Building C - Room ABC-2454*

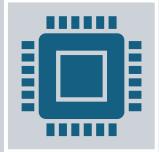
*- My Queens [website](#) is not active anymore!*

# Administrative Details

- Lectures – Hybrid
  - Lecture Notes (published on BrightSpace + Recorded Videos (only for online sessions))
  - Lecture Notes (published before classes).
- Office Hours

| <b>Day</b>       | <b>Start</b> | <b>End</b> | <b>Location</b>  |
|------------------|--------------|------------|--|
| <b>Friday</b>    | 3:00 PM      | 4:00 PM    | Online via Zoom ( <u>by appointment</u> )                |
| <b>Wednesday</b> | 3:00 PM      | 4:30 PM    | Abbotsford - Building C - Room ABC-2454 (by appointment) |
- Please ensure your subject is of the form '**COMP 370 ON/AB1 - [INSERT YOUR SUBJECT]**'.

# Textbooks



["Object Oriented Software Engineering: Practical Software Development Using UML and Java"](#) by T C. Lethbridge and R. Laganiere



"Object Oriented and Classical Software Engineering, 8th Ed" by Stephen Schach. ISBN - 13:9780073376189

# After completing this course, you will be able to:

- Perform the activities which occur in each phase of the software development life-cycle;
- Describe reuse and portability and explain the factors which affect them and how they are affected;
- Apply UML, the standard way of expressing requirements and design in software engineering;
- Design and analyze software systems with UML;
- apply software engineering process, including requirements gathering, specification, and testing;
- describe key behavioral criteria for assuring software quality; and
- Apply the principles of object-oriented analysis and design, as well as software architecture (especially the client-server architecture) and basic UI design.
- ...
- For further information, please refer to: Official Course Outline.

# Be Professional!

- Be **professional**, when asking questions in class, email, interacting with one another;
- **NOT participate or abet** academic misconduct;
- **Attend lectures** – talk to class or team mates when you are away;
- (Where possible), please **turn off your phone or set to silent mode**;
- **Participate** during – discussions, activities, group project; and
- **Ask questions or clarifications** as often as needed.

# Studying for this course!

- make possible effort to **attend classes (when scheduled) and watch lecture videos;**
- Solve problems **everywhere (including your homes);**
- Read **lecture notes, books and solve problems** (in the exercises);
- **Practice! Practice!! Practice!!! - no shortcut to success with system development;**
- Learning software development is an **incremental process**



# Marking Scheme

| Assessment Type            | % Of Grade | Due Date           | Description  |
|----------------------------|------------|--------------------|--|
| Class Participation        | 5          | -                  | -  |
| Team Information           | 5          | End of the week 3  | Between 3 to 5 people  |
| Mini-Project-1             | 20         | End of the week 6  | Designing and developing a java project for <i>Server Redundancy Management System</i> (SRMS). You will produce a PDF report file (Report-1).  |
| Mini-Project-2             | 20         | End of the week 12 | Refactoring SRMS by applying design patterns in the UML file and the source code. You will produce a PDF report file (Report-2).   |
| Midterm Exam               | 30         | Week 8             |  |
| Final Project Presentation | 20         | Week 13            | Each team will give a 10-minute presentation (with 5 minutes for Q/A) about SRMS, lessons learned and producing the final report. You can use the content of Report-1 and Report-2 in your final report. |

# Deliverables: Team Info

- Form a team between 3 to 5 people (**deadline: end of the second week**)
  - Pick a name for your team!
  - Choose your Team Lead (extra tasks with bonus points!)
    - Mini-Project-1
    - Mini-Project-2
    - Final presentation + report

| Team Name: AABBCC |  |    |
|-------------------|--|----|
| Student Name      | Email  | ID |
| A (Team Lead)     | <a href="mailto:a@student.ufv.ca">a@student.ufv.ca</a> |    |
| B                 | <a href="mailto:b@student.ufv.ca">b@student.ufv.ca</a> |    |
| C                 | <a href="mailto:c@student.ufv.ca">c@student.ufv.ca</a> |    |

# Weekly Schedule

| Week | Topic   | Additional Information                                       | Mode/Date                         |
|------|---|--|-----------------------------------|
| 1    | Software and software engineering                         | <ul style="list-style-type: none"><li>• Chapter 1</li></ul>  | Online<br>Jan 7 <sup>th</sup>     |
| 2    | Review of Object-orientation                              | <ul style="list-style-type: none"><li>• Chapter 2</li></ul>  | In-person<br>Jan 14 <sup>th</sup> |
| 3    | Basing software development on reusable technology        | <ul style="list-style-type: none"><li>• Chapter 3</li></ul>  | Online<br>Jan 21 <sup>st</sup>    |
| 4    | Developing Requirements                                   | <ul style="list-style-type: none"><li>• Chapter 4</li></ul>  | In-person<br>Jan 28 <sup>th</sup> |
| 5    | MINI-Project-1  | <ul style="list-style-type: none"><li>• No Lecture</li></ul> | Online<br>Feb 4 <sup>th</sup>     |
| 6    | Modeling with Classes                                     | <ul style="list-style-type: none"><li>• Chapter 5</li></ul>  | In-person<br>Feb 11 <sup>th</sup> |
| 7    | Reading Week, No Classes                                  |  |                                   |
| 8    | Midterm (in-person, Feb 25 <sup>th</sup> )                |  |                                   |
| 9    | Midterm Exam Review and Discussion                        |  | Online<br>Mar 4 <sup>th</sup>     |
| 10   | Software Design Patterns                                  | <ul style="list-style-type: none"><li>• Chapter 6</li></ul>  | In-person<br>Mar 11 <sup>th</sup> |
| 11   | MINI-Project-2  | <ul style="list-style-type: none"><li>• No Lecture</li></ul> | Online<br>Mar 18 <sup>th</sup>    |
| 12   | Focusing on Users and Their Tasks                         | <ul style="list-style-type: none"><li>• Chapter 7</li></ul>  | In-person<br>Mar 25 <sup>th</sup> |
| 13   | Group Project Presentation (online, Apr 1 <sup>st</sup> ) |  |                                   |

# AI Impact on Software Engineering Student Capabilities

<https://tinyurl.com/comp370>

