



Department of Computer Science

- **CS 4490Z/4460Z - Thesis/Bioinformatics Thesis**
- **CS 3380F/G/Z – Project**

Course duration:

- **September to April** (of the following year)
- **Summer Thesis (cs4490/4460) or Project (cs3380)**

Course Outline – Sep. 2026 – Apr. 2027

(Course Outline for Summer 2027 – see later below)

Class time: 8:30 - 9:30am, Mondays, [REDACTED].

(Actual class days will be announced via BRIGHTSPACE. Otherwise, by online interaction.)

Course Coordinator

Course coordinator	Email	Office	Phone	Office Hours
Prof. Nazim Madhavji	[REDACTED] [REDACTED]			[REDACTED]

Note: Email received after 5 PM during the weekdays and at anytime during the weekend may not be processed until the following weekday in deemed priority order.

Course Description

CS4490Z/4460Z

(For CS3380F/G/Z, please see later below)

This course provides students with an opportunity to work on a research project outside a particular course setting, with a faculty member at Western University as supervisor. The supervisor can be from any department at Western University. **Supervisors from another university will not be entertained.**

The topic of the thesis project can be in any field covered by the Dept. of Computer Science (CS) (and can intersect with non-computer science domains, e.g., engineering, sciences, law, social sciences, business, etc.). There are some guidelines in the project description template for the supervisor as to what constitutes a thesis in the CS field.

Students enrolled in bioinformatics (CS4460Z) are expected to focus on topics from the health domain apart from the CS content.

Finding a Supervisor and Preliminaries -- IMPORTANT

- Typically, many professors will submit their project descriptions to the coordinator in early September. These project descriptions will be made available to the class via OWL Brightspace.
- However, we recommend that students NOT wait for project descriptions to be submitted by professors but, instead, proactively find a supervisor (UWO faculty member) LONG BEFORE the start of the course.
 - For example, **during the summer months for the Sep-Apr thesis course and during the winter months for the May-July thesis course.**
 - **In either case, it is the student's responsibility to inform the course coordinator that s/he has found a supervisor. FAILURE TO DO SO WILL RESULT IN AN INVALID PROJECT THAT WILL NOT BE GRADED AND THE STUDENT WILL RECEIVE A FAILURE GRADE.**
 - A spreadsheet will be posted on the cloud to facilitate the process.
- **If the student cannot find a supervisor by end of November for the Sep-Apr course or by the end of March for the Summer thesis course then the student must drop the thesis course.** This has consequences for the student's thesis program. The student is advised to consult with Science Academic Advising: <https://www.uwo.ca/sci/advising/index.html>
- The research project description **must** come from the supervisor and not the student though the supervisor can involve the student in formulating the project description. The supervisor is accountable for the project description.
- Because this is a "thesis" course, a prime criterion for assessment is the **novelty** of the results. This should be reflected in the project described in the template by the supervisor.
- For student-found supervisors, the project template must be completed and uploaded by the supervisor as directed by the coordinator. Access details will be provided to the supervisor.

The objective of the course is to give the student an opportunity to undertake a project that is less structured than assignments and requires the student to apply knowledge and skills learnt from different courses and create new knowledge and/or solutions. It is also an opportunity for the student to learn and demonstrate skills and knowledge in independent

research.

This course can be a defining point in a student's life in terms of learning foundational research and development skills and of wetting the feet for advanced research (e.g., graduate studies) and of making career choices.

The anticipated learning outcomes:

- Students get experience of how to conduct research. This includes such issues as understanding the problem context; understanding related literature; defining research questions; learning about research methodologies to be used; executing the research methodologies; creating a novel system or investigating a phenomenon from observations or data; performing comparisons with related literature; drawing conclusions; performing threat analysis; etc.
- Experience with writing a research proposal and a thesis.
- If working with a supervisor from a non-computer science (CS) area (e.g., health, sciences, social sciences, business, etc.) then the student should experience interdisciplinary research (e.g., selecting or creating, and implementing an algorithm applied to non-CS areas for novel findings; or creating a novel system to tackle a problem in the non-CS areas).
- Experience with presenting and defending one's thesis.

The course suffix Z denotes that this course is an essay course, i.e., it has a significant writing component. There are progress reports, final report, as well as a presentation of the work accomplished at the end of the course.

Core Regulations

- The thesis projects will be carried out individually. However, the CS Dept. reserves the right to take exceptional measures under certain circumstances.
 - Students are asked NOT to make any requests or inquire about carrying out a group thesis.
- The guidelines for how to find a supervisor are in a separate document that will be shared with the class.
- **The presentation AND the thesis will be graded by the supervisor** as per the schedule set by the supervisor under the constraints of the course.
 - **The student is required to make arrangements with the supervisor and make a presentation before the deadline scheduled (see Evaluation below).**
- **Further regulations (implicit or discovered in real-time):** There may be other issues that may crop up (during the course) that are not listed above. The course coordinator reserves the right to make the final decision on those issues, and they may not be appealed.

Prerequisites

CS4490Z:

(2.0 courses from: Computer Science 3305A/B, 3307A/B/Y, 3331A/B, 3340A/B, 3342A/B, 3350A/B; plus registration in the Honors Specialization in Computer Science or (2.0 courses from: Computer Science 3305A/B, 3307A/B/Y, 3319A/B, 3331A/B, 3340A/B, 3357A/B; plus registration in the Honors Specialization in Information Systems)

CS4460Z:

Computer Science 3331A/B and 3340A/B; plus 1.5 courses from: Biochemistry 2280A, Chemistry 2213A/B, Computer Science 3319A/B, 3346A/B; plus registration in an Honors Specialization in Bioinformatics.

Antirequisites: Computer Science 3380F/G/Z, 4460Z (if taking 4490Z), 4470Y, 4480Y, 4490Z (if taking 4460Z)

***Note:** Unless you have either the prerequisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.*

CS3380F/G/Z

This is a supervised study involving **a research paper**, or the design and development of a software project with **a novel component**.

Antirequisite(s): Computer Science 4460Z, 4470Y, 4480Y, 4490Z.

Prerequisite(s): Permission from the department, plus: Computer Science 2212A/B/Y and registration in the Specialization or Major in Computer Science. To be permitted into this course, the student must have found a topic and a willing departmental supervisor before the end of the add period.

Regulations active for this course mirror those listed under cs4490/cs4460 above.

Course Texts

There are no required texts for this course. However, the students are advised to check out one or more of the following references that help in proposal or thesis writing. (Please note that the following list is not updated annually and so should be taken as a starting point only.)

- Eco, U. (2015) How to write a thesis. Cambridge, Massachusetts: The MIT Press.
- Roberts, C. & Hyatt, L. (2019) The dissertation journey : a practical and comprehensive guide to planning, writing, and defending your dissertation. Third Edition. Thousand Oaks, California: Corwin, a SAGE Company.
- Rudestam, K. E. & Newton, R. R. (1992) Surviving your dissertation : a comprehensive guide to content and process. Newbury Park, Calif: SAGE.

- Anon (2013) *Proposals that work; a guide for planning dissertations and grant proposals*, 6th ed. Reference & Research Book News 28 (5).
- Terrell, S. R. (2022) *Writing a proposal for your dissertation : guidelines and examples*. Second edition. New York, New York: The Guilford Press.
- Dawson, Christian W. (2009) [Projects in Computing and Information Systems: a Student's Guide, Second Edition](#); Pearson Education Limited..
- Turabian, K. L. (2018) *A Manual for Writers of Research Papers, Theses, and Dissertations*, Ninth Edition: Chicago Style for Students and Researchers. 9th edition. University of Chicago Press.

Course Webpage and BRIGHTSPACE

Class and project information, and announcements, will be posted on BRIGHTSPACE through the term. Students are expected to read this information on a regular basis.

Computing Facilities

Each student will have access to an account on the Computer Science Department undergraduate computing facility and abide by the department's [Rules of Ethical Conduct](#)

Note: *After-hours access to certain Computer Science lab rooms is by student card. If a student card is lost, a replacement card will no longer open these lab rooms, and the student must bring the new card to the Systems Group. Likewise, if a student card ceases to provide access where it should, it should be brought to the Systems Group as well.*

E-Mail Contact

We may need to send e-mail messages to the whole class, or to students individually. E-Mail will be sent to the UWO e-mail address assigned to students by Western Technology Services (WTS). It is each student's responsibility to read this e-mail on a frequent and regular basis.

Evaluation, Classes Schedule, Submission of Thesis and Project artefacts, and Presentation

There will be classes in-person or online only as announced (typically on BRIGHTSPACE) by the coordinator. It is anticipated that most of the communication between students and the coordinator will be done [REDACTED] or through BRIGHTSPACE.

Autumn Term course: Due dates for various deliverables and the weights are indicated in the table below. (For the Summer Term course, see later below)

(Note: schedule subject to change)

Date	Activity/Event/Deliverables	Weight %
Wednesday 9 th Sept., 2026	Autumn Term begins	
Monday 14th Sept., 2026	IN-PERSON CLASS: Course introduction.	
14-16 Sept., 2026	Submit your resume.	

	(Supervisors need them for student selection)	
As scheduled	Online: If needed, project briefing by the supervisors (at the trailing-end of the “Student-Prof. matching” process)	
10 – 18 October 2026	Reading Week A Term	
Monday, 30th November, 2026	HARD DEADLINE: Supervisor MUST be found by the student, else DROP the course – pl. see policy above.	
(Date as announced)	ONLINE CLASS: Thesis proposal explained. (What, Why, How, etc.)	
Within 2 weeks of finding a supervisor	A regular meeting SCHEDULE (for both A and B terms) made with the supervisor and SUBMITTED to Brightspace	MINUS 10% for failing to do this on time.
Monday, 4th January, 2027	Classes resume	
Friday, 8th January, 2027	Submission: Project proposal. *** (One copy to the supervisor, one copy to Brightspace)	Completeness check MINUS 10% for failing to submit on time.
13 - 21 February. 2027	Reading Week B Term	
Wednesday 24th February, 2027	Submission: Progress Report. *** (One copy to the supervisor, one copy to Brightspace)	Completeness check MINUS 10% for failing to submit on time.
Monday 29th March, 2027	Submission: Final Report (i.e., Thesis).*** (NO EXTENSION – WRAP IT UP!)	50% Zero mark for failing to submit on time.
Friday 9th April, 2027	Submission: ALL project artefacts *** (One copy to the supervisor, one copy to Brightspace) (class ends)	IMPORTANT: All project documentation, software artefacts (such as design, test cases, program code, a video of the system demo, etc.), research results are to be delivered to the supervisor. Without this delivery, a mark of zero will be given for the course.
As scheduled by the Supervisor on or before 9th April, 2027	Presentation.***	50% Zero mark for failing to present at the scheduled time.

*** **EXTREMELY IMPORTANT:**

(1) Mandatory deliverables:

- All deliverables (Proposal, Progress Report, and Final Report, Presentation, and project artefacts) are mandatory.
- The MAXIMUM grade attainable due to any missing deliverable is “C”.

(2) Delivery date of the Final Report (i.e., Thesis):

- Please note that final report delivery date is FIRM (exception being through university’s Accommodation consideration – see further below).
- The thesis is to be delivered to BOTH the supervisor AND BRIGHTSPACE

(3) Presentation of the thesis:

- A presentation is an EXAM.
- It must be made to the supervisor.
- Please settle the presentation date (must be on or before the term end date) with the supervisor.
- It can be in-person or online, as decided by the supervisor.

(4) Delivery of the project artefacts:

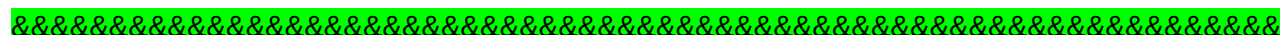
- All project artefacts (e.g., project documentation, code, results, etc.) are to be submitted to the supervisor.

Specification of the Project Deliverables

- Specification of the various project deliverables will be posted on BRIGHTSPACE. Please check announcements regularly.
- Any changes, updates, and clarifications to deliverables will also be posted on BRIGHTSPACE. It is your responsibility to monitor BRIGHTSPACE closely.

Use of Generative AI Tools

- The use of generative AI tools (e.g., ChatGPT, Copilot, Gemini, and others) is permitted only as follows:
 - First, create your own solution or description without the use of AI tools.
 - Then, optionally, you can use AI tools to produce a competitive solution or description (or part thereof).
 - Thirdly, if you do use AI tools for creating a partial or full solution then you must:
 - do a “comparative analysis” of your initial solution against the AI generated solution.
 - Document explicitly:
 - The comparative analysis performed.
 - WHAT you have learnt in solution creation from using AI tools.
- **NOTE: Using AI tools without documenting comparative analysis and lessons learnt will result in OVERALL thesis mark reduction by 50%.**



Summer Thesis or Project

CS 4490Z/4460Z CS 3380F/G/Z

Core Regulations

- The guidelines and regulations from the A term (Sep-Apr) course, i.e., **Finding a Supervisor and Preliminaries – IMPORTANT** and **Core Regulations** apply here (with possible date adjustments) – so please read the A term outline above.
- The student must first find a supervisor (a UWO faculty member) **well before the end of the A Term (typically by the end of MARCH)**.
 - o The student must confirm that s/he has found a supervisor along with the supervisor's details (Last and First names, title, department, UWO email address) to the CS Dept. staff.
 - o If successful, approval to enrol in the course for the summer thesis will be given.
- If a suitable supervisor is not found by the end of **MARCH**, **the student will not be permitted to enroll in the summer thesis course.**
- Only students enrolled in the summer thesis course will be able to conduct the summer thesis research.
- There are no lectures in the summer course.
- **All thesis-related advice is to be obtained from the supervisor.**
- It is the student's responsibility to create a meeting schedule in conjunction with the thesis supervisor by the end of May, which should include the following deliverables: proposal submission, progress report submission, and the final report (thesis) submission.
- **The student must handover all the research artefacts (thesis, software and its documentation, data, a video of the system demo, etc.) to the supervisor by the last day of the Summer term as defined by the university. Please also check BRIGHTSPACE "Assignment" for submission deadline.**
- Only the thesis supervisor grades (a) the research thesis and (b) the thesis presentation.
- The thesis supervisor submits the overall final thesis mark to the course coordinator at the end of the Summer Term.
- The coordinator will submit the course grade to the university.
- Any situation deemed important but not covered by the core regulations above is subject to the coordinator's prerogative to handle exceptions which may not be appealed.

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Additional Statements

Religious Accommodation

When conflicts arise with a religious holiday that requires an absence from the University or prohibits certain activities, students should request an accommodation for their absence in writing to the course instructor and/or the Academic Advising office of their Faculty of Registration. This notice should be made as early as possible, but not later than two weeks prior to the writing of the examination (or one week prior to the writing of the test).

Please visit the Diversity Calendars posted on our university's EDID website for the recognized religious holidays - <https://www.edi.uwo.ca>

Academic Accommodation Policies

Students with disabilities are encouraged to contact Accessible Education, which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found at:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic_Accommodation_disabilities.pdf.

General Academic Policies

The website for Registrar Services is <https://www.registrar.uwo.ca/>.

Use of @uwo.ca email: In accordance with policy, https://www.uwo.ca/univsec/pdf/policies_procedures/section1/mapp113.pdf, the centrally administered e-mail account provided to students will be considered the individual's official university email address. It is the responsibility of the account holder to ensure that emails received from the University at their official university address are attended to in a timely manner.

Requests for Relief (formally known as "appeals")

Policy on Request for Relief from Academic Decision:

https://uwo.ca/univsec/pdf/academic_policies/appeals/requests_for_relief_from_academic_decisions.pdf

Procedures on Request for Relief from Academic Decision (Undergraduate):

https://uwo.ca/univsec/pdf/academic_policies/appeals/undergrad_requests_for_relief_procedure.pdf

Scholastic Offences

Policy on Scholastic Offences:

https://uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_offences.pdf

Procedures on Scholastic Offences (Undergraduate):

https://uwo.ca/univsec/pdf/academic_policies/appeals/undergrad_scholastic_offence_procedure.pdf

Use of Electronic Devices During Assessments

In courses offered by the Faculty of Science, the possession of unauthorized electronic devices during any in-person assessment (such as tests, midterms, and final examinations) is strictly prohibited. This includes, but is not limited to: mobile phones, smart watches, smart glasses, and wireless earbuds or headphones.

Unless explicitly stated otherwise in advance by the instructor, the presence of any such device at your desk, on your person, or within reach during an assessment will be treated as a *scholastic offence*, even if the device is not in use.

Only devices expressly permitted by the instructor (e.g., non-programmable calculators) may be brought into the assessment room. It is your responsibility to review and comply with these expectations.

Use of Generative AI Tools

Unless otherwise stated, the use of generative AI tools (e.g., ChatGPT, Microsoft Copilot, Google Gemini, or similar platforms) is **not permitted** in the completion of any course assessments, including but not limited to: assignments, lab reports, presentations, tests, and final examinations.

Using such tools for content generation, code writing, problem solving, translation, or summarization—when not explicitly allowed—will be treated as a **scholastic offence**.

If the use of generative AI is permitted for a particular assessment, the conditions of use will be specified by the instructor in advance. If no such permission is granted, students must assume that use is prohibited. It is your responsibility to seek clarification before using any AI tools in academic work.

Support Services

Please visit the Science & Basic Medical Sciences Academic Advising webpage for information on adding/dropping courses, academic considerations for absences, requests for relief, exam conflicts, and many other academic-related matters: <https://www.uwo.ca/sci/counselling/>.

Students who are in emotional/mental distress should refer to Mental Health@Western (<https://uwo.ca/health/>) for a complete list of options about how to obtain help.

Western is committed to reducing incidents of gender-based and sexual violence and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced sexual or gender-based violence (either recently or in the past), you will find information about support services for survivors, including emergency contacts at

https://www.uwo.ca/health/student_support/survivor_support/get-help.html.

To connect with a case manager or set up an appointment, please contact [REDACTED].