

**Western University**  
**FACULTY of ENGINEERING**  
**Thompson Centre for Engineering Leadership and Innovation**  
**ELI 3000 – MANAGING INNOVATION PROCESS**

**Course Outline Fall 2024**

<b>LECTURE:</b>	
<b>LAB or TUTORIAL:</b>	N/A
<b>OFFICE HOURS:</b>	Scheduled upon request
<b>ANTIREQUISITE(s):</b>	N/A
<b>PREREQUISITE(s):</b>	3 <sup>rd</sup> year standing in Engineering, or permission from instructor.
<b>CEAB Academic Units:</b>	Complimentary Studies (Elective Course) = 100% or 39 AUs
<b>TEXT / Course Resources / References</b>	Case studies will be purchased from Ivey Publishing throughout the term
<b>DESCRIPTION</b>	
This course provides students with the opportunity to explore the interplay between innovative design and commercial success. Students will apply a human-centered design approach to understand why technologies succeed/fail, and to investigate how design iteration can lead to innovation when used as a tool to elicit and test a customer’s unspoken needs.	

**General Learning Objectives (CEAB Graduate Attributes)**

Knowledge Base	Engineering Tools		Impact on Society	I
Problem Analysis	Individual & Teamwork	D	Ethics and Equity	
Investigation	Communication	A	Economics and Project Mgmt.	D
Design	Professionalism		Life-Long Learning	A

Rating: I – The instructor will introduce the topic at the level required. It is not necessary for the student to have seen the material before.

D – There may be a reminder or review, but the student is expected to have seen and been tested on the material before taking the course.

A – It is expected that the student can apply the knowledge without prompting (e. g. no review).

<b>Learning Outcomes</b>	<b>(CAEB) Graduate Attribute Measurements</b>	<b>Assessment Associated with Measure</b>
<b>A: Innovation Process</b> Following this section, students should be confident that they can: <ol style="list-style-type: none"> <li>i. identify the differences between invention and innovation</li> <li>ii. describe the major stages of the innovation process</li> <li>iii. initiate an innovative design cycle</li> </ol>	CS1	Reading Quizzes
<b>B: The Human-Centered Design Thinking Approach</b> Following this section, students should be confident that they can:		

<ul style="list-style-type: none"> <li>i. apply human-centered design thinking techniques to identify and define unmet needs</li> <li>ii. interview a current/potential customer to elicit insights</li> <li>iii. identify non-obvious users who may impact the adoption of their technologies</li> <li>iv. design empathy experiments to better understand customer perspectives</li> </ul>		
<p><b>C: Understanding Your Customer</b></p> <p>Following this section, students should be confident that they can:</p> <ul style="list-style-type: none"> <li>i. articulate the profile of a potential customer and their unique needs</li> <li>ii. identify the emotions (visceral, behavioural and reflective) evoked by design</li> <li>iii. identify ways to integrate customer interactions into the design process</li> </ul>	LL1, ITW3	Individual Interview Reflection
<p><b>D: Prototyping for Design Feedback</b></p> <p>Following this section, students should be confident that they can:</p> <ul style="list-style-type: none"> <li>i. participate in or lead an ideation session</li> <li>ii. develop rapid prototypes and tests to capture customer feedback in response to design hypotheses/assumptions</li> </ul>		

## Assessment

Name	% Worth	Due Date	Learning Outcomes
<b>Class Contribution</b>	18.8%	Ongoing	A-D
<b>Reading Quizzes</b>	4.7%	Weeks 2 & 3	A & B
<b>Course Project (Team deliverables)</b>	47%		
Interview Insights Presentation		Week 4	B(i-iii) & C
Problem Map + Stakeholders Report		Week 6	B(i,iii) & C
Concept + Hypotheses Report		Week 10	A(iii), B(i) & C(iii)
Feedback + Improvements Presentation		Week 12	A(iii), B(i), C & D
<b>Course Project (Individual deliverables)</b>	29.5%		
Interview Reflection		Week 4	B(i-iii) & C
3-Panel Storyboard + Peer Evaluation		Week 9	

## EXTRA COURSE INFORMATION

### I. Attendance

Any student who misses more than 25% (or 3 classes) will be reported to the Dean (after due warning has been given). On the recommendation of the department, and with the permission of the Dean, the student will be assigned a failing grade in the course.

### II. Missed/Late Accommodation Policy

1. Students missing a test/assignment/lab or examination you will report the absence by submitting Academic Consideration Request form through [STUDENT ABSENCE PORTAL](#).
2. **Documentation must be provided as soon as possible.**

### III. Academic Consideration For Course Components, Flexible Deadlines & Late Penalties

- a. Quizzes

This course has quizzes that assess students' comprehension from course reading materials prior to classes in which those materials are discussed. The quizzes may only be completed once; however, flexibility is built into their submission by allowing the quizzes to be submitted any time within the week preceding the in-class discussion. Accordingly, requests for academic considerations for the quizzes' final deadline will not be granted.

b. *In-Class Contribution*

This course has marks associated with in-class contribution activities. There are 8 weeks in which in class contribution is assessed, as well as a single submission in week 1 to familiarize students with the Gradescope submission process. The top 7/9 of these marks will count towards your final grade. Academic consideration will not be granted for missed in-class contribution activities. If students miss 2/9 of the grades, the remaining 7 will be used in the calculation of the final grade. If students miss greater than 2, they will receive a grade of zero on each that was missed.

c. *Course Project Deliverables*

In lieu of a final exam and midterm, the course project has been designated as requiring supporting documentation to receive academic accommodation. This means that supporting documentation will be required if students are to be unable to attend the project-related in-class presentations, as well as the in-class individual ideation workshop and the running of the final façade experiments.

To provide students with flexibility, where possible this course employs flexible deadlines for project reports and reflections. The deliverable deadlines can be found on the course OWL site. For each report/reflection, students are expected to submit the deliverable by the deadline listed. Should illness or extenuating circumstances arise, students are permitted to submit their deliverables up to 48 hours past the deadline without academic penalty. Should students submit their deliverables between 48 and 72 hours past the deadline, a flat late penalty of 20% will be subtracted from the assessed grade. Submissions will not be accepted beyond 72 hours past the deadline.

Also, please note that the Individual 3-Panel Storyboard deliverable, and the subsequent Peer-Evaluations students must complete are open for submission and evaluation for multiple days, providing flexibility. Due to the sequential nature of peer-evaluation, these final deadlines are not subject to further accommodation.

As flexible deadlines are used in this course, requests for academic consideration will not be granted. If you have a long-term academic consideration or an accommodation for disability that allows greater flexibility than provided here, please reach out to your instructor at least one week prior to the posted deadline.

*Further considerations:*

1. The Academic Consideration Request Form is available through the STUDENT ABSENCE PORTAL.
2. Requests for academic consideration must include the following components:
  - a. Indication of the course(s) and assessment(s) affected by the request
  - b. Medical note, and
  - c. Additional supporting documentation as relevant
3. Requests for academic consideration without a medical note or other supporting documentation may be accepted once per term, per course.

Undocumented absences cannot be used for examinations scheduled by the Office of the Registrar during official examination periods (including take-home final exams and December mid-year exams for full courses) and practical laboratory and performance tests typically scheduled in the last week of the term. Undocumented absences also cannot be used for the "designated assessment" in each course. When flexibility in assessment exists and is clearly stated on the course outline, both undocumented absences and academic consideration requests with documentation may be denied.

#### **IV. Re-grade Request Policy**

Students are expected to be diligent about reviewing their marks promptly following their release. Accordingly, all re-grade requests must be submitted using the [re-grade request tool on Gradescope](#) within 1-week of the grades being released. All re-grade requests must include the rationale for mark changes and must refer to specific elements of the student's work and rubric to justify the request. Note that re-grading can result in marks increasing or decreasing based on re-evaluation.

#### V. **Medical Accommodation**

1. Requests for Academic Consideration Request Form through [STUDENT ABSENCE PORTAL](#).
2. Requests for academic consideration must include the following components:
  - a. Medical note
  - b. Indication of the course(s) and assessment(s) affected by the request
  - c. Supporting documentation as relevant
  - d. Self-attestation signed by the student (*Not applicable in this course due to flexibility procedures outlined above*)
3. **Students must request academic consideration as soon as possible and no later than 48 hours after the missed assessment's due date (note: this is the initial due date, not the end of the grace-window, if such a window is applied).**
4. Once the request and supporting documents have been received and reviewed, appropriate academic consideration, if granted, shall be determined by the instructor in consultation with the academic advisor, in a manner consistent with the course outline. Academic consideration may include extension of deadlines, waiver of attendance requirements for classes/labs/tutorials, or re-weighting of course requirements. Some forms of academic consideration, such as arranging Special Examinations, assigning a grade of Incomplete, or granting late withdrawals without academic penalty, may only be granted by the Academic Advising office of the Faculty of Registration.
5. An instructor may deny academic consideration for any assessment that is not required in the calculation of the final grade (e.g., "8 of 10 quizzes"). Assessment flexibility is indicated in section III above).
6. An instructor may deny academic consideration relating to the timeframe submission of work where there is already flexibility in the submission timeframe (e.g., 48-hour submission window). This assessment flexibility is indicated in section III above.

#### VI. **Religious Accommodation**

When scheduling unavoidably conflicts with religious holidays, which (a) require an absence from the University or (b) prohibit or require certain activities (i.e., activities that would make it impossible for the student to satisfy the academic requirements scheduled on the day(s) involved), no student will be penalized for absence because of religious reasons, and alternative means will be sought for satisfying the academic requirements involved. If a suitable arrangement cannot be worked out between the student and instructor involved, they should consult the appropriate Department Chair and, if necessary, the student's Dean.

It is the responsibility of such students to inform themselves concerning the work done in classes from which they are absent and to take appropriate action.

#### VII. **Academic Integrity**

In the Faculty of Engineering, we encourage students to create a culture of honesty, trust, fairness, respect, responsibility, and courage, befitting the professional degree you are pursuing.

Please visit [Academic Integrity Western Engineering](#) for more information

#### VIII. **Academic Offences & Plagiarism**

Plagiarism means using another's work without giving credit. The university has rules against plagiarism and other scholastic offences. Western Engineering has a zero-tolerance policy on plagiarism. The minimum penalty is zero on the course work and a repeat offence will earn you zero on the course. A third offence may lead to expulsion from the university.

[Scholastic Discipline for Undergraduate Students & Cheating, Plagiarism and Unauthorized Collaboration: What Students Need to Know](#)

Students must write their reports, essays and assignments in their own words. Whenever students take an idea or a passage from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. University policy states that cheating, including plagiarism, is a scholastic offence. The commission of a scholastic offence is attended by academic penalties, which might include expulsion from the program. If you are caught cheating, there will be no second warning.

All required papers may be subject to submission for textual similarity review to commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted will be included as source documents on the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between the University of Western Ontario and Turnitin.com (<http://www.turnitin.com>). Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, in the relevant section of the Academic Handbook:

[http://www.uwo.ca/univsec/pdf/academic\\_policies/appeals/scholastic\\_discipline\\_undergrad.pdf](http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf)

#### **IX. Faculty of Engineering AI Policy**

The use of generative Artificial intelligence (GenAI) tools won't be discouraged in the Faculty of Engineering. As we pride ourselves on building the future we can't hide from the use of GenAI tools to contribute to the understanding of the course materials. However, the use of GenAI tools in any assignment or contribution during the course will have to be disclosed, as a resource.

GenAI tools use won't be permitted in any type of examination or other assessments where the faculty have prohibited their use. If use of GenAI tools is detected by the instructor in these instances, academic offences penalties might be imposed against the student.

GenAI content are not permitted to be used for creating content that is submitted for marks in this course unless specifically designated as acceptable by the instructor in writing, in which case, the submission should be accompanied by an explanation of how AI was used, and the student should be prepared to provide evidence to support which components of the submission are original contributions.

#### **X. Use of Electronic Devices**

Students may use laptops, tablet computers, or smart phones (vibrate mode only) during class for course related activities. Non-emergency phone calls or text during class are not permitted. Electronic devices may be used during the final project presentation if part of the presentation itself.

#### **XI. Internet and Electronic Mail**

Students are responsible for regularly checking their Western e-mail and the course web site (<https://owl.uwo.ca/portal/>) and making themselves aware of any information that is posted about the course.

#### **XII. Use of English Policy**

In accordance with Senate and Faculty Policy, students may be penalized up to 10% of the marks on all assignments, tests, and examinations for improper use of English. Additionally, poorly written

work except for the final examination may be returned without grading. If resubmission of the work is permitted, it may be graded with marks deducted for poor English and/or late submission.

### **XIII. Accessibility**

Western is committed to achieving barrier free accessibility for persons with disabilities studying, visiting and working at Western. As part of this commitment, there are a variety of services, groups and committees on campus devoted to promoting accessibility and to ensuring that individuals have equitable access to services and facilities. To help provide the best experience to all members of the campus community, please visit the [Accessibility Western University](#) for information on accessibility-related resources available at Western.

Students with disabilities may arrange for academic accommodation at Western. For a more detailed explanation, please visit [Academic Support & Engagement -Academic Accommodation](#).

### **XIV. Inclusivity, Diversity, and Respect**

The Faculty of Engineering at Western University is committed to creating equitable and inclusive learning environments that value diverse perspectives and experiences. We recognize that university courses often marginalize students based on social identity characteristics such as, but not limited to, Indigeneity, race, ethnicity, nationality, ability, gender identity, gender expression, sexuality, age, language, religion, and socioeconomic status. Understanding this, we strive to facilitate equitable experiences and inclusion within the classroom by respecting and integrating multiple ways of knowing, being, and doing. Please visit the [Office of Equity, Diversity and Inclusion](#).

### **XV. Health and Well-Being**

- [Health & Wellness Services – Students](#) - Offers appointment-based medical clinic for all registered part-time and full-time students.
- [Mental Health Support](#) - Provides professional and confidential services, free of charge, to students needing assistance to meet their personal, social and academic goals. Services include consultation, referral, groups and workshops, as well as brief, change-oriented psychotherapy.
- [Crisis Support](#) - For immediate assistance, please visit Thames Hall Room 2170 or call 519-661-3030. The crisis clinic operates between 11:00 am - 4:30 pm. For after-hours crisis support, click [here](#).
- [Gender-Based Violence and Survivor Support](#) - 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 gender-based or sexual violence (either recently or in the past), you will find information about support services for survivors, including emergency contacts, [here](#). To connect with a case manager or set up an appointment, please contact [support@uwo.ca](mailto:support@uwo.ca).

### **Important Contacts**

<a href="#">Engineering Undergraduate Services</a>	SEB 2097	519-661-2130	<a href="mailto:engugrad@uwo.ca">engugrad@uwo.ca</a>
<a href="#">Civil &amp; Environmental Engineering</a>	SEB 3005	519-661-2139	<a href="mailto:civil@uwo.ca">civil@uwo.ca</a>
<a href="#">Office of the Registrar/Student Central</a>	WSSB 1120	519-661-2100	

### **Important Links**

- [WESTERN ACADEMIC CALENDAR](#)
- [ACADEMIC RIGHTS AND RESPONSIBILITIES](#)
- [ENGINEERING PROGRESSION REQUIREMENTS AND ACADEMIC REGULATIONS](#)
- [UNIVERSITY STUDENTS' COUNCIL \(USC\) - SERVICES](#)
- [IMPORTANT DATES AND DEADLINES](#)
- [ACADEMIC CONSIDERATION FOR MEDICAL ILLNESS - UNDERGRADUATE STUDENTS](#)

- [ACCOMMODATIONS FOR RELIGIOUS HOLIDAYS](#)
- [SCHEDULING OF ASSIGNMENTS, TESTS, AND EXAMINATIONS](#)
- [STUDENT FORMS](#)
- [OFFICE OF THE REGISTRAR](#)
- [RETENTION OF ELECTRONIC VERSION OF COURSE OUTLINES \(SYLLABI\)](#)
- [ACADEMIC APPEALS](#)
- [STUDENT ABSENCE PORTAL](#)