UNIVERSITY OF CALGARY
HASKAYNE SCHOOL OF BUSINESS

ENTI 674 L01 and L02

Technologies of Innovation

Course Outline Part A – Winter 2025, Q4

Instructor	Mohammad Keyhani
Telephone	403.220.3908
Office	SH 436
Office hours	By appointment only (www.calendly.com/keyhani/)
Website	http://d2l.ucalgary.ca
Lecture location	MTH 445
Lecture times	L01: 9:00am - 11:50am L02: 2:00pm – 4:50pm No additional tutorial sessions are scheduled
Additional Resources	https://entrepreneur-tools.zeef.com https://www.digitvibe.com/

Course Delivery Format

Course content will be delivered face-to-face. In-person attendance is expected. Students should be prepared to pivot to online learning should current government or University protocols change. Please see the following pages for course details and schedules.

Course Description

The primary aim of this course is to improve the ability of students to leverage the latest digital technologies to engage in innovation, entrepreneurship, and problem-solving in various organizational contexts. Students will not only get to understand the leading edge landscape of digital technologies for innovation and entrepreneurship, but also learn to work with them through hands-on exercises.

The course involves lab exercises, an individual prompting report, a midterm quiz, and a group project.

Use of Generative AI	Given that learning generative AI is one of the primary goals of this course, students are encouraged to use ChatGPT and/or other relevant generative AI tools for learning and support in all assignments and even the midterm quiz. However, students must take responsibility for any material that they deliver as it will be considered their work, no matter what tools were used to produce it. Inclusion of fake or non-existent references or citations or other AI hallucinations in your work may be considered academic misconduct.

Course Objectives

Upon completion of the course, students will be able to:

1. Identify, evaluate, and compare available digital technologies that support innovation and entrepreneurship, with a focus on no-code and generative AI tools.
2. Use and work with a variety of tools and technologies as well as combinations of them to support the processes of innovation and entrepreneurship, as well as automate tasks and functions for organizations.
3. Demonstrate professional communication and public presentation skills.
4. Publish media-rich learning material suitable for online distribution.
5. Understand the ways in which digital technology is changing the nature of innovation and entrepreneurship.

Course Workload

Generally, it is understood that students should spend two hours per week outside of class time for every hour of lecture. This means that for each course, students should expect to spend approximately 9 hours per week total on course work and lectures. This may vary by week depending on both the assessment schedule and on students' ability to manage their time.

Grade Scale

The Haskayne School of Business endeavours to ensure consistency of final grades across courses and sections. Variations in distribution will always be considered by the instructor where called for by the performance in each individual class. The student does not have any 'right' to a certain grade, but is responsible for earning grades. The instructor has unfettered discretion to evaluate student performance and assign all grades.

Grade		Percentage Score	Grade Point Value	Description	Notes:
A+	≥	95.0	4.0	Outstanding/exceptional performance	Up to 20% of the class
A	≥	90.0	4.0		
A-	≥	85.0	3.7	Consistent, very high quality work	30-50% of the class
B+	≥	80.0	3.3	Good performance	30-50% of the class
B	≥	75.0	3.0	Basic competence	

B-	≥	70.0	2.7	Marginal performance, defined as having gaps in basic competence	
C+	≥	65.0	2.3	All grades below B- are indicative of failure at the graduate level and cannot be counted toward the course requirements.	Up to 10% of the class
C	≥	60.0	2.0		
C-	≥	55.0	1.7		
D+	≥	52.0	1.3		
D	≥	50.0	1.0		
F	≥	0%	0		

Note: See the "Academic Standing" section of the Faculty of Graduate Studies Calendar regarding grades less than B-.

Due Date	Assessment	Group or Individual	Weight	Course Outcomes Assessed
Throughout	Class Participation	Ind.	10%	1, 2, 3, 4, 5
See course schedule	Lab	Ind.	20%	1, 2
April 10 & April 14, 2025	Group Project	Group	40%	1, 2, 3, 4, 5
March 27, 2025	Midterm Quiz	Ind.	30%	1, 5
	Total		**100%**	

Grade Distribution

Textbook and/or Other Materials

Required readings that will be assessed in quizzes will be determined by the instructor and posted on D2L. Other recommended readings will be posted on D2L as well. There **is no required textbook** for this course, but the following are **recommended book** (parts of which may be listed in required readings):

Simon, P. (2022). Low-Code/No-Code: Citizen Developers and the Surprising Future of Business Applications. Racket Publishing.

Goss, K. (2023). Automate It with Zapier and Generative AI: Harness the power of no- code workflow automation and AI with Zapier to increase business productivity. Packt Publishing.

Phoenix, J., & Taylor, M. (2024). Prompt engineering for generative AI: Future-proof

inputs for reliable AI outputs. O'Reilly Media. https://www.amazon.ca/Prompt-Engineering-Generative-AI-Future-Proof/dp/109815343X/

Statement on the use of generative AI: The use of generative AI tools is required and it is encourage to use it in any shape or form to improve the quality of your work in this course. Paid tools such as Claude.ai or ChatGPT premium are highly recommended. Students are asked never to cite AI tools as that would be an offloading of responsibility (unless it makes sense to do so because for example you are showcasing the capabilities of an AI). Students are asked to follow the "Read and Revise Until You Own (RRUYO)" rule because they will be held responsible for the content as explained here: https://www.digitvibe.com/essence-of-writing/

Note: the final project requires the use of AI-assisted software development tools. If you cannot find a free tool, you can use a trial version of a paid tool to avoid paying.

Class Participation

The class participation grade will be made up of various components including professionalism in working & communicating with your classmates and the instructor, as well as contribution to the classroom discussions, activities and exercises. Evaluation of the quantity and quality of student participation is in the sole discretion of the instructor. You are encouraged to bring name tags or tent cards to every session of class so the instructor can better give you participation marks when you deserve them. Make sure your name tags are readable and include both your first and last name. Class participation grade will also include required online activities such as timely creation and preparation of web and social media accounts and providing feedback to peers on assignments.

Students are strongly advised to have a comprehensive and up-to-date LinkedIn profile.

Note: for this class you will need to sign up for many different web applications. If you do not want to use your personal email for this purpose, it may be a good idea to create a new email address like firstname.lastname.enti647@gmail.com just for this class. Also, you may be asked to create mock social media and web accounts for imaginary people or companies for some class exercises, in which case it is more convenient to avoid using your personal email and use the above-recommended class-specific email.

Assignments

Lab sessions occur during regular class hours and will involve exercises that you will be graded on. You may be asked to partner up with other students for lab exercises but will be graded individually. Lab exercises are to be completed in class but you will typically have until the end of day to submit the deliverables.

Unless indicated otherwise, **all assignments should be handed in electronically to the instructor on the date indicated in the course timetable, by uploading the electronic file to the relevant dropbox section or discussion board section in D2L.** Unless explicitly requested by the instructor or TA, DO NOT send your assignments by email or hand in a printed hard copy.

The passing grade for this course is based on the sum of all components, and no

individual component determines passing or failing.

Group Project

Although some class time is allocated to group projects, please consider that your team will likely need to have meetings outside of class time. Students are expected to participate in class activities and the group project through communication with all

collegial manner. All group members should be present at group presentations.

The details of the group project can be found in the appendix to this course outline.
All deliverables must be submitted as per the assignment instructions (see appendix). No exceptions or extensions will be granted unless alternative arrangements have been confirmed by the instructor, at his/her sole discretion, prior to the due date. It is the student's responsibility to ensure that the assignment has been delivered to the instructor in strict compliance with the assignment instructions.

In the case of conflicts within your group, you are encouraged to try to resolve the conflict internally, although you may bring it up with the instructor as a last resort. **If the instructor finds enough evidence of social loafing or other indications that a group member has fallen short of their group work responsibilities, the instructor has full discretion to reduce the group project grade for that individual as they see fit.**

Midterm Quiz

The course includes one mid-term quiz that is typically administered on D2L. Students will have to complete the quiz in class on the date indicated in the course timetable. Students are responsible for ensuring access to a laptop or tablet on which they can take the online quiz in class. If you need help securing a device, please let the instructor know in advance.
In case of technical difficulties or other reasonably justified reasons that prevent one or more students from taking the exam, the instructor will work with the affected student(s) to find an alternative assessment for this grade component.
Deferral date: contact the instructor if you need to request a deferral of the mid-term quiz.

Activities Outside of Class Time

Students are required to coordinate and work with their groups on the group project outside of class time.

Email Communication

Please specify the course name and section number in the subject line of all emails (e.g., ENTI 674 L01). The instructor may not respond to emails that do not contain this information.
Although email is commonly used by students to communicate with their instructors, it does limit the effectiveness of communication and may not always be the best way to answer student questions. If a student or the instructor feels that communicating via email is not optimal, they may request a telephone call or personal meeting.
team members, attendance at team meetings and execution of the assignment in a

Internet & Electronic Communication Devices	**It is recommended and sometimes required to have a laptop with you in class to participate in class activities requiring access to software or the internet**. However, any general surfing of the Internet, texting, chatting, emailing, tweeting, etc. during lectures that is not directly related to the class discussion is distracting and disrespectful.
Academic Integrity and Rigor	Academic integrity and rigor are critical components of a University degree. Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. The Haskayne School of Business values ethical leadership and personal integrity, and expects its faculty, staff, and students to live these values. In the online environment, certain additional measures will be put in place to help safeguard the integrity of online assessments and the intellectual property of the instructors.
Course Outline Part B	The Course Outline Part B contains more generalized information for Haskayne and the University. You are responsible for reading and understanding all content in both parts of the outline. Part B can be found here

Class Schedule & Topics

Please note that lecture topics and readings are tentative and subject to change. The dates of assessments will not be changed.

Important dates (e.g. Block Week, Lecture start dates, Reading Week, etc.) can be found at the following web site: https://calendar.ucalgary.ca/acadsched

COURSE SCHEDULE		
DATE	**DETAILS**	**Notes**
Session 1: March 13, 2025	Intro and Lecture	Recommended to bring a laptop to class
Session 2: March 14, 2025	**Lab:** Hands-on exercises using a variety of tools	Must bring a laptop to class
Session 3: March 20, 2025	Lecture and in-class exercise	Recommended to bring a laptop to class
Session 4: March 27, 2025	**Mid-term quiz** Lecture on coding with GenAI Final group project kick-off	Must bring a laptop to class
Session 5: April 3, 2025	Supervised work on group project, sharing best practices.	Must bring a laptop to class
Session 6: April 10, 2025	Group Project Presentation Day **11:59pm** Last chance to contribute on discovery forum.	Make sure slides are ready to present. Prevent technical difficulties.
April 11, 2025	**11:59pm** Deadline to post main group project deliverable as well as link to publicly published blog post about the group project on D2L	

Appendix: Details of Assignments

The Discovery Forum

A discussion board on D2L is dedicated to discoveries made by students in the class. Activity on this discussion board accounts for **a large part of your participation grade** in the class. This activity should include all three of the following:

1. **Posting**: post about things you discovered in the world of no-code and generative AI beyond what you learn in class. This can be a new app or tool, a learning resource (book, article, website, discord group, twitter thread, etc.), a prompting technique or template you found online, or something new you discovered yourself about the behavior of generative AI or an interesting way to use a tool. Pretty much anything about technology and tools that students in the class would find useful is eligible as a post. Your posts must include more than just a link and also include your own thoughts on why the material is useful. A minimum of 10 posts is expected from each student over the course of the class.
2. **Voting**: upvote the best posts by others in the forum so that discovering the best material is made easier for others. A minimum of 20 votes is expected from each student over the course of the class.
3. **Commenting**: provide constructive commentary or feedback on posts made by others. A minimum of 10 comments is expected from each student over the course of the class.

You can contribute to the forum up until the last day of class. Note that careless or unprofessional activity on the forum will be penalized, as will activity that is disrespectful or abusive.

Final Project: AI-Assisted Software Development

The final project is a major deliverable worth 40% of your final grade where student teams (as assigned by the program) will develop a software application using modern AI-assisted development tools. This project combines practical development experience with business thinking, allowing you to create working software without needing prior programming experience. The best projects will be those that effectively leverage AI's strengths while maintaining a manageable scope that can be completed within the tight timeframe.

Project Components and Grading

- Application Development & Documentation (20%): Building a working application and documenting it properly on GitHub
- Public Presentation & Reflection (20%): A publicly published blog post or LinkedIn article documenting your journey and showcasing your work

Core Requirements

Your team must build an application that:

- Solves a clear business problem or addresses a market opportunity (you can use AI to ideate)
- Is developed primarily using AI-assisted development tools (such as Cursor.com, v0.dev, Replit agent, and Bolt.New). Use trial versions if you need to.
- Is properly documented on GitHub with AI assistance (including README, setup instructions, and clear documentation)

Technology Recommendations

- A web or mobile application built with html / css / javascript and the React framework is highly recommended as it works well with current AI tools and has excellent support, but other frameworks are acceptable.
- Deployment (making the working app available on the cloud) is optional but encouraged.
- Making your Github repository public is required but exceptions may be allowed with proper justification.

Development Approach

You will use a combination of AI tools to develop your application. The course will cover various tools and approaches, but at minimum your development process should include:

1. Using AI tools like ChatGPT or Claude for initial ideation, prototyping and component development
2. Using a proper IDE like VSCode or Cursor with AI assistance for the main development
3. Leveraging AI for code documentation and GitHub repository setup

Blog Post Requirements

Knowing that your name will be publicly associated with the project is used as a pedagogical tool here because it elevates the stakes and motivates high quality work. The blog post should be 1000-3000 words, published publicly on LinkedIn or a similar platform (not private or password protected), and must include:

- Acknowledgment of the course (Master of Management program at Haskayne School of Business, University of Calgary)
- Clear listing of all team members
- Problem statement and business case
- Overview of the solution and key features, including the tools used in the development process
- Discussion of the development process and how AI tools were used, with examples and screenshots of some of the prompts used.
- An embedded video tutorial showing a narrated screen recording of using the app (ideally no more than 3 minutes).
- Lessons learned and reflections on AI-assisted development

Important Notes

- Teams are encouraged to validate their project idea with the instructor
- The project should be original work specific to this course and not building on work previously done outside of this course by any team member.
- While the presentation is not separately graded, it should effectively demonstrate the working application and your learning journey, and it will be used as a key point of judgement about the quality of your work.
- The most important aspect of your presentation is to convey the value of the work that you did, not to spice up the presentation itself.
- It is encouraged but not required for all group members to participate in the presentation.

Submission Requirements

By the deadline indicated in the course timetable, post to the D2L discussion board:

1. A link to your GitHub repository
2. A link to your published blog post/article