Institute of Technology Entrepreneurship and Commercialization

TIMG 5110A PROJECT BASED LEARNING

Fall 2024 (September 4 to December 20, 2024)

TIME, PLACE AND DELIVERY MODE

Tuesdays, 2:35 p.m. – 5:25 p.m. Eastern Time (Ottawa time)

In person: Nicol Building 4030

Online: https://carleton-ca.zoom.us/j/94662270936 and the passcode: 5110F.

All course participants must use Carleton email accounts.

Delivery mode: HyFlex, students can attend in person, online or a combination of in person and online.

INSTRUCTOR

Professor Tony Bailetti

tony.bailetti@carleton.ca

Office: Nicol Building 5027

ABOUT THE COURSE

This course helps TIM students prepare:

1. The first draft of the TIM project proposal, including preliminary pages, abstract, Chapter 1 (Introduction), Chapter 2 (Literature Review), the list of references, and the basic components and organization of the TIM project (TIM project shell).

2. A G0 slide deck and presentations to secure a faculty supervisor.

3. A Supervisor Assignment Request (SAR) form for supervisor and TIM program approval.

COURSE DESCRIPTION

TIMG 5110 [0.5 credits]

Project-based Learning

Provides an environment where TIM students in their second or third term can develop TIM Project proposals. The client may be a company (large or small), an entrepreneur, a not-for-profit, or a Carleton group. Projects will follow the TIM Gate process for student research.

TARGET AUDIENCE

TIMG 5110 Project-based Learning is for TIM students in their second or third term who are registered in one of the project options:

- Master of Applied Business Analytics - Technology Innovation Management
- Master of Digital Transformation and Entrepreneurship - Technology Innovation Management
- M.Eng. Technology Innovation Management
- Master of Entrepreneurship - Technology Innovation Management
- Master of Entrepreneurship - Technology Innovation Management with Collaborative Specialization in Accessibility

Thesis students in the M.Sc. Technology Innovation Management can also register for the course. However, the course focuses on students who will produce TIM projects.

LEARNING SPACE

Course participants will engage in a learning space that includes synchronous and asynchronous learning activities.

All course content, instructions, links, and submission portals are available on Brightspace here: https://brightspace.carleton.ca/d2l/home. To access the course, go to the link, submit your credentials, and select TIMG5110A Project Based Learning Fall 2024.

Instructions for synchronous and asynchronous learning activities are available for each class inside the course's Brightspace page. Students must review these instructions in advance and complete activities and assignments on time. Each student is responsible for the submission of their own assignment and the assessments they receive. Students will work in groups during class; however, each student controls their own submissions.

All classes follow a consistent pattern of learning activities to complete prior to, during, and after class time. Figure 1 illustrates the pattern of the course. The pattern incentivizes consistent effort from students (effort is correlated to learning) and ensures active class discussions and applications of course concepts rather than passive listening and low student engagement.

Pre-class assignment due 11:59 p.m. Monday		**In-class assignment** **Tuesday class** 2:35 p.m. – 5:30 p.m.		**After-class assignment** due 11:59 p.m. Friday
- The first draft of TIM project proposal's preliminary pages, abstract, chapter 1. Introduction and chapter 2. Literature Review, and the list of references - A G0 slide deck and a G0 presentation that secures a faculty supervisor				

- A Supervisor Assignment Request form to which the supervisor agrees, and the TIM program approves

Figure 1 – Consistent pattern of learning activities prior to, during, and after class time.

Synchronous portion – class sessions

Class sessions are the *synchronous* portion of our learning space where all of us, from anywhere in the world, come together at the same time to interact.

Class sessions will include combinations of lectures, group discussions in breakout rooms, student presentations, Q&A sessions, and learning reflections.

Students have the option to join class sessions in person in room 4030, Nicol Building, or online via: https://carleton-ca.zoom.us/j/94662270936. The classroom has a camera, speakers, and television screens to bridge the online and offline worlds productively.

Students should engage in class regardless of in-person or online attendance.

We will not video the classes.

Asynchronous portion – outside class sessions

The *asynchronous* portion of our learning space involves work done by students on their own time (i.e., activities completed outside of class).

Pre-class – Students receive a combination of readings and videos to consume and instructions to complete a pre-class assignment ahead of each class. Students will engage with the material on their own time and at their own pace, while meeting expected assignment deadlines. By completing the readings and videos, and completing the pre-class assignments, students will arrive to class prepared to engage in higher-order learning activities.

After-class – Students receive instructions on the assignments they need to submit after the synchronous classes. The after-class assignments build on the pre-class assignments and the in-class learning activities. Students will complete the after-class assignments on their own time and at their own pace, while meeting expected assignment deadlines.

COURSE-RELATED QUESTIONS AND OFFICE HOURS

Course-related questions – Students should post all questions about the course, including questions about course content, procedures, and assignments, to the discussion forum on Brightspace titled "Ask the Instructor." Students that send course related questions to the instructor's email will receive a reply asking the student to post their questions to the Ask the Instructor discussion forum.

The Ask the Instructor discussion forum is available in the course's Brightspace page inside the "About the Course" section.

Response time: please allow 24-48 hours for responses to questions posted during the work week. The instructor will answer the questions posted on the weekend on Mondays.

Office hours – The instructor is available via email any time. Use email to inform the instructor of emergencies, request in-person or virtual appointments, and for other non-course-related subject matter. Email is the preferred mode as it keeps a record of the student-instructor exchanges. Students meet the instructor using the Zoom link https://carleton-ca.zoom.us/j/94662270936, or in person at the LTW Boardroom (5064 Nicol Building). Students should let the instructor, and the TIM Office know about emergencies without delay.

RULES OF CONDUCT

Engagement

Student engagement with the course material and their peers is important for learning. Students' success depends on the extent and intensity of their engagement.

Engagement with course material means:

- Active participation: Students are actively involved in interacting with the content of the course, such as through reading assignments, participating in discussions, completing exercises, and applying concepts to practical scenarios.
- Critical thinking: They analyze, question, and critically evaluate the material, rather than passively receiving information.
- Application: Students use the knowledge they gain to solve problems, conduct experiments, or create projects, demonstrating their understanding and integration of the material.

Engagement with peers means:

- Collaboration: Students work together on assignments or class discussions, sharing insights, and learning from each other's perspectives.
- Feedback and support: They provide and receive constructive feedback on each other's work, and offer support and encouragement, fostering a collaborative learning environment.
- Communication: Engaging in meaningful conversations and interactions with classmates, both inside and outside of the classroom, to deepen their understanding and build a sense of community.

Groups

Students will engage with the course material individually and as part of groups. There are two types of groups students will engage with: "Learning Groups", and "Domain Groups". The instructor assigns students into Learning Groups and Domain Groups. Students can request to be transferred from one group to another.

Each student is to interact with members of their groups actively and respectfully to complete assignments and assimilate the content covered in the course.

Expectations

	The instructor expects students to:
Academic integrity and participation	• Deliver excellent presentations. An excellent presentation is clear, concise, insightful, and completed within the allotted time • Submit assignments that meet specifications on time • Deliver professional-quality work (i.e., your work is clear, influential, organized, and free of spelling errors, poor grammar, inconsistent formatting, and other mistakes) • Comply with the university's academic integrity standards (e.g., will not plagiarize) • Interact with peers and the instructor to produce new knowledge
Teamwork and communication	• Arrive prepared to team meetings • Not permit (i.e., not allow) or engage in freeloading for team projects or group work • Work through adversity and disagreement while maintaining a positive and respectful mindset (towards others and oneself) • Deal with uncertainty productively • Respond to emails reliably and promptly • Work respectfully and collaboratively with others
Classroom etiquette	• Be prepared for each class and fully participate in all classes • Show up to class on time • Manage time by scheduling course assignment due dates and requisite study time into their personal calendar

COURSE LEVEL LEARNING OUTCOMES

A learning outcome is what you will be able to do after completing this course.

The table below provides the learning outcomes at the course level.

You can:	Assignments

Execute – do what you are required to do	Exceed or meet specifications on all assignments
Synthesize – figure out what is important	Gate 0 slide deck
Recommend – determine what should be done	Supervisor Assignment Request
Generate – create something from nothing	TIM Project Report Start
Communicate – deliver high-quality presentations	Gate 0 presentations to TIM faculty

TIM PROJECT

The TIM project is a project that has a research component which is essential to create value for an identifiable client. It is part of what makes the TIM program distinct and is a requirement to qualify for a graduate degree.

To produce the research component of a TIM project, a TIM student,

- Reviews the scholarly literature to identify the "conceptual things" that will guide the research work – these things include theories, frameworks, processes, and tools
- Applies findings and insights gained from the literature to shape two to four project deliverables and the method used to produce them
- Identifies what is known and not known about what is required to deliver the research's objective
- Collects and analyzes data to complement the lessons and insights gained from examining the scholarly literature
- Provides a detailed analysis of how the lessons learned producing the project assignments could enhance the practical application of the adopted research theories, frameworks, insights and tools in other TIM projects and application contexts

The TIM Project Report is an 80+ page document. A TIM faculty member grades the document using the TIM Program Guidelines to Assign Grades to Projects. To produce a TIM Project Report, a TIM student can leverage what the client provides and interact with AI tools (e.g., ChatGPT-4o; Perplexity) as much as possible. .

The course instructor advises the formulation of the G0 slide deck and presentation. Students can collaborate with other faculty members as well.

The TIM program will assign a supervisor for each TIM Project after receiving a Supervisor Assignment Request form signed by the supervisor and the student.

ASSIGNMENTS

This course has 17 assignments that will be graded and several assignments that are not graded. The non-graded assignments do not require students to upload files for grading.

You can:	Assignments	Graded assignments	Grading approach
Prepare *TIM Project Report Start*	TIM Project Report (first draft of: shell for TIM Project Report, Abstract, Table of Contents, Introduction and Literature Review chapters, and List of References)	1	TIM Program Guidelines to Assign Grades to Projects
Prepare a slide deck to propose a TIM project	Gate 0 slide decks, (versions 1, 2 and Final)	3	Specifications Grading
Communicate with skill	G0 presentations (two dry run presentations to peers and one or more presentation to TIM faculty at an Official Gate 0 review)	1	Specifications Grading
Work with TIM faculty to complete a Supervisor Assignment Request form	Supervisor Assignment Request form approved by the TIM Office	1	Specifications Grading
Take responsibility for your education	Pre-class assignments	5	Specifications Grading
Continuous improvement	After-class assignments	6	Specifications Grading
		17	

ASSESSMENT

This course uses the *TIM Program Guidelines to Assign Grades to TIM Projects* to grade the TIM Project Report Start assignment and the specification grading system[1] to grade 16 of the 17 other graded assignments.

Specifications grading allows students to choose their desired grade based on the effort they put in. Students receive clear specifications for their assignments, and the instructor evaluates whether the submissions meet these specifications. The system does not use points, partial credits, or a pass/fail approach. Assignments either meet the specifications or they do not.

The specification grading system is as follows:

Grade 2: The assignment meets all specifications. No additional work is required.

Grade 1: The assignment does not meet specifications but shows effort to meet them. Further work is required.

Grade 0: The assignment:

- Was not submitted on time.
- Does not show clear evidence of effort.
- Contains significant omissions, lacks logical flow, has poorly expressed ideas, or has errors in spelling, grammar, and capitalization.

1 – See Nilson, L.B., 2015. Specifications grading: Restoring rigor, motivating students, and saving faculty time. Stylus Publishing, LLC.

YOUR FINAL LETTER GRADE

Your final letter grade is determined by a formula that combines your TIM Project Report grade and the number of assignments completed with a grade of "2."

The table below shows how your TIM Project Report grade is adjusted based on the number of "2" grades received. For example, if you receive an "A-" on your TIM Project Report Start and complete 12 assignments with a grade of "2," your final letter grade will be a B.

Number of assignments with a "2"	Letter grade assigned to TIM Project Report Start					
	A+	A	A-	B+	B	B-
15 or 16	A+	A	A-	B+	B	B-
13-14	A	A-	B+	B	B-	F, IP, WDN
11-12	A-	B+	B	B-	F, IP, WDN	F, IP, WDN
9-10	B+	B	B-	F, IP, WDN	F, IP, WDN	F, IP, WDN

7-8	B	B-	F, IP, WDN	F, IP, WDN	F, IP, WDN	F, IP, WDN
5-6	B-	F, IP, WDN	F, IP, WDN	F, IP, WDN	F, IP, WDN	F, IP, WDN

COURSE SCHEDULE

Note that the TIM faculty (Professors Fain, Hudson, Muegge, Tanev, Weiss, Westerlund, and Bailetti) will deliver presentations on the TIM projects they are interested in supervising during class in week 2 (Tuesday, September 17).

The schedule for TIMG 5110 Project Based Learning and the method that will be used to grade the assignments is below.

Class #	Class date	Topic	Pre-class assignment	After class assignment
1	Sep 10	Course overview and client problem (Slide 4. Problem)		
2	Sep 17	Slide 4. Problem and gap	Specifications Grading	
3	Sep 24	Slides 4. Problem and gap, 5. Literature review, 9. References	Specifications grading	
4	Oct 1	Slides 1. Title, 2. Objectives and deliverables, 3. Relevance to the client company, 4, Problem and gap, 5. Literature review and 9. References	Specifications Grading	
5	Oct 8	Slides 6. Research method, 7. Data acquisition, and 8. Data analysis	Specifications Grading	
6	Oct 15	Slides 1 – 9 – Narrative Quality Requirements	Specifications Grading	Specifications Grading
Break	Oct 21-Oct 25			
7	Oct 29	G0 presentations dry run 1 part 1	Specifications Grading	Specifications Grading

8	Nov 5	G0 presentations dry run 1 part 2		Specifications Grading
9	Nov 12	G0 presentations dry run 1 part 3		Specifications Grading
10	Nov 19	G0 presentations dry run 2 part 1	Specifications Grading	Specifications Grading
11	Nov 26	G0 presentations dry run 2 part 2		Specifications Grading
12	Dec 3	G0 presentations dry run 2 part 3		Specifications Grading
13	Dec 6	TIM Project Report Start, Supervisor Assignment Request (SAR), and G0 slide deck that conforms to signed SAR		
	Dec 9	Gate 0 for students without supervisors		
	Dec 20	**Final Assignments**		
		TIM Project Report Start that conforms to Carleton's accepted standards:	TIM Program Guidelines to Assign Grades to TIM Projects	
		o Preliminary pages		
		o Chapter 1. Introduction		
		o Chapter 2. Literature Review		
		o Shell for Chapters 3-6		
		o References		
		o Appendices		
		G0 slide deck revised to conform to signed SAR	Specifications Grading	
		Approved Supervisor Assignment Request (SAR)	Specifications Grading	

SUPERVISOR ASSIGNMENT REQUEST FORM

TIM students need to complete the Supervisor Assignment Request form with their supervisors after the G0 presentations. A TIM student and her/his supervisor sign the form and submit it to the TIM Academic Director for approval. The TIM Director must approve your Supervisor Assignment Request form by a given date. You will not be able to remain registered in a 1.0 credit project course without an approved Supervisor Assignment Request form.

ADDITIONAL RESOURCES

Within the course's Brightspace there are documents providing detailed explanation of how the course works, what actions you can take to ensure your success, and learning resources you can use to do better in the course. You will also find the G0 slide decks produced by all course participants. These documents complement this course outline by going into greater detail and providing actionable advice and tools.

Within "TIM Gate Process," a resource in Brightspace you can access previous approved Supervisor Assignment Requests and G1 slide decks. To access "TIM Gate Process," login to Brightspace using your credentials, navigate to Resources and then select "TIM Gate Process."

Students should carefully review all content in TIMG 51101 as well as the TIM Gate Process.

Students are encouraged to master the application of the following:

ChatGPT-4 OMNI (ChatGPT-4o)	https://chatgpt.com	An advanced AI language model by OpenAI, ChatGPT-4o provides comprehensive conversational abilities, aiding in tasks such as content creation, research, and interactive learning.
Perplexity.ai	https://www.perplexity.ai	An AI-powered search engine that delivers precise answers to complex queries by analyzing and summarizing information from a wide range of sources.
Google Scholar	https://scholar.google.com	Freely accessible search engine that indexes scholarly articles, theses, books, conference papers, and patents across various disciplines, providing access to academic research and citations.
Futurepedia.io	https://www.futurepedia.io	A directory of more than 5,500 AI tools and resources, offering information on the latest advancements and applications of artificial intelligence in various fields.
MS PowerPoint	https://www.microsoft.com/en-us/microsoft-365/powerpoint	Presentation software that allows you to create clean and impactful slideshows.

MS Word	https://www.microsoft.com	A widely used word processing software that facilitates document creation, editing, and formatting, and includes features for collaboration and integration with other Microsoft Office applications.
Zoom	https://www.zoom.com	Video conferencing application to bring teams together.
Zotero or Mendeley	https://www.zotero.org/ https://www.mendeley.com/	Reference management systems that help you search, organize, cite and share your research papers.

To master AI tools such as ChatGPT-4 OMNI (ChatGPT-4o) and Perplexity.ai, we recommend that:

- You use the AI tools for everything, except plagiarize and break ethical rules
- You are always the human in the AI-Human loop
- Consider that the AI you are using now to be the worse AI you will ever use
- Tell the AI tool the persona you wish it to be

The recommendations above were adapted from the principles provide by Mollick, 2024, pp. 48-62.

See – Mollick, E., 2024. Co-intelligence: Living and working with AI.

TIM BRAND, VALUES, GROUP WORK, PLAGIARISM, AND ISSUE TRACKING

Brand

The brand of the TIM program is an asset that is valuable. All TIM students and course participants work hard to protect and enhance both their own brand and the TIM brand.

Course participants should use Carleton email accounts.

TIM Values

The table below identifies our expectations (what we value) and what is not acceptable in our value system. Individuals registered in this course must act accordingly.

	What the instructor expects	What the instructor finds unacceptable
Course assignments	- Original work	- Plagiarized work

	• High-quality work delivered on-time for public examination	• Low-quality work delivered late with excuses
Focus	• Co-create innovation to make a difference in our university, disciplines, and communities	• Knowledge that fills menial gaps and has little or no impact on communities, our region, country, or world
Source of information	• Reputable scholarly journals	• Low quality journals, individual opinions, and stories
Mode in which students acquire knowledge and skills	• Independent and critical thinking • Application of new knowledge to gain insights on how to launch and grow technology companies	• Memorization and regurgitation of information • Application of superficial opinions, stories, management fads, generalities
Challenge	• Trying new things, destroying boundaries, and being deep thinkers	• Over-extending yourself by taking on so many things that you no longer have the capacity to do a respectable job at any of them.
Environment	• Relevant, substantive, fun, positive, 24x7 experiential learning	• Worthless, trivial, theatre, boring, negative, 3 hrs/week listening

Plagiarism

Plagiarism, including copying and handing in for credit someone else's work, is a serious instructional offence that will not be tolerated. Please refer to the section on instructional offenses in the Carleton Graduate Calendar for additional information. Plagiarism is against the TIM culture. A case of plagiarism will be referred to the Dean of the Faculty of Graduate and Postdoctoral Affairs (FGPA). The instructor will not deal with the matter directly. Carleton University has a clear process to deal with allegations of plagiarism.

Issue tracking and technical support

Students should alert the instructor of any content or technical issues you encounter in this course.

INFORMATION ON ACADEMIC ACCOMMODATIONS

Requests for Academic Accommodation

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

Pregnancy obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website:

carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Religious obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website:

carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Academic Accommodations for Students with Disabilities

If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. carleton.ca/pmc

Survivors of Sexual Violence

As a community, Carleton University is committed to maintaining a positive learning, working

and living environment where sexual violence will not be tolerated, and survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: carleton.ca/sexual-violence-support

Accommodation for Student Activities

Carleton University recognizes the substantial benefits, both to the individual student and for the university, which result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.

https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf

Course Sharing Websites

Materials created for this course (including presentations and posted notes, labs, case studies, assignments, and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s).

Other information

For more information on academic accommodation, please contact the departmental administrator timprogram@CUNET.Carleton.ca or visit: students.carleton.ca/course-outline

HAVE A GREAT FALL TERM LEARNING!