



Technology Innovation Management



Institute of Technology Entrepreneurship and Commercialization

TIMG 5103 F PROJECT BASED LEARNING

Fall 2022 (September 7 to December 15, 2022)

TIME, PLACE AND DELIVERY MODE

Thursdays, 6:05 p.m. – 9:00 p.m. Eastern Time (Ottawa time)

In person: Nicol Building 5010

Online: https://carleton-ca.zoom.us/j/94662270936

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 is a first of its kind course designed to develop project and research competences in TIM students. The course has two components:

- 1. the preparation of a successful TIM Project proposal
- 2. the completion of a short duration project referred to as "Mini Project".

This course supports students registered in their third term of the TIM program to prepare their TIM Project proposal by successfully delivering their Gate 0 (G0) presentations, completing their TIM Supervisor Assignment agreement forms on-time, and writing the first draft of the first two chapters of their TIM Project Report (Introduction and Literature Review).

The secondary purpose of this course is to develop the competences TIM students require to create value for clients by formulating and meeting the specifications of Mini Projects.







COURSE DESCRIPTION

TIMG 5103F Advanced Topics in Technology Innovation Management [0.5 credits]

Project Based Learning

This course provides TIM students (1) an environment where TIM students in their 3rd term can do research to add value to identifiable real-world clients and (2) an environment to develop TIM Project proposals. The client may be a large firm, a small- or medium-sized company, an entrepreneur, or a Carleton department, faculty, research organization, or support group. Project proposals will follow the established TIM Gate Process for student research. You will present your TIM Project proposal developed in TIMG 5103F at the TIM Gate 0 Review.

TARGET AUDIENCE

TIMG 5103F Project Based Learning is for students registered in one of the project options (M.Eng., M. Ent., and M.A.B.A.) who are in their third term. Thesis students 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: <u>https://brightspace.carleton.ca/d2l/home</u>. The homepage displays recent announcements, a calendar of deliverables, and a visual table of contents containing a section for student success, a section for weekly class content and deliverables, and a section for communication pathways. To access the Brightspace, go to the link, submit your credentials, and select TIMG5103F Project Based Learning Fall 2022.

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 deliverables on time (individual and group). Each student is ultimately responsible for the submission of their own deliverable and the assessments they receive. Group work will be done but 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.

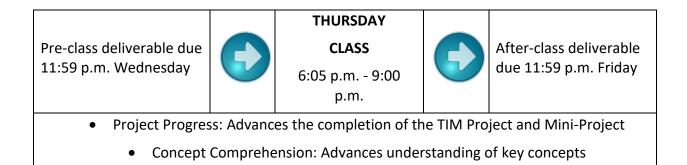


Figure 1 – Consistent pattern of learning activities prior to, during, and after class time.

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 group discussions, project work, lectures, student presentations, Q&A sessions, and learning reflections.

Students have the option to join class sessions in person in room 5010, Nicol Building, or online via: <u>https://carleton-ca.zoom.us/j/94662270936</u>. 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.

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 deliverable ahead of each class. Students will engage with the material on their own time and at their own pace, while meeting expected deliverable deadlines. By completing the readings and videos, and completing the pre-class deliverables, students will arrive to class prepared to engage in higher-order learning activities.







After-class – Students receive instructions on the deliverables they need to submit after the synchronous classes. The after-class deliverables build on the pre-class deliverables and the inclass learning activities. Students will complete the after-class deliverables on their own time and at their own pace, while meeting expected deliverable 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 assigned deliverables, 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 "Communication Pathways" section. Link to Ask the Instructor discussion forum.

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 <u>https://carleton-</u> <u>ca.zoom.us/i/94662270936</u>, or in person at the LTW Boardroom (5064 Nicol Building). Students should let the instructor know about emergencies without delay.

RULES OF CONDUCT

Engagement

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

Students will engage with the course individually and as part of groups. There are three types of groups students will engage with: "Learning Groups", "Mini Project Teams", and "TIM Project Groups". The instructor assigns students into Learning Groups and TIM Project. Students organize themselves into Mini Project Teams.

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

Expectations

The instructor expects students to:

• Submit deliverables that meet specifications on time







- Be prepared for each class and fully participate in all classes ٠
- Show up to class on time •

School o

- Deliver professional-quality work (i.e., work that is organized, clear, influential, 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)
- Work respectfully and collaboratively with others ٠
- Interact with peers and the instructor to produce new knowledge ٠
- Respond to emails reliably and promptly ٠
- Complete individual work independently ٠
- Deliver excellent presentations. An excellent presentation is clear, concise, insightful, • and completed within the allotted time
- Take initiative to complete tasks that contribute to the needs of Mini Project Team ٠
- Arrive prepared to team meetings
- Work through adversity and disagreement while maintaining a positive and respectful mindset (towards others and oneself)
- Deal with uncertainty productively ٠
- Manage time by scheduling course deliverable due dates and requisite study time into ٠ their personal calendar
- Not permit (i.e., not allow) or engage in freeloading for team projects or group work

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:	Deliverables
Exceed or meet specifications	All deliverables
Prepare a proposal for a TIM project	Gate 0 slide deck
Prepare first draft of chapters 1 and 2 of the TIM Project Report	First draft of the TIM Project Report
Formulate and implement a Mini Project	Mini Project slide deck and presentation
Communicate with skill	Gate 0 presentation to TIM faculty and a Mini Project presentation to your peers
Take responsibility for your education	Project Progress, Concept Comprehension







TIM PROJECT

The TIM Project is a research project that requires a TIM student to conduct research to add value to a client. It is part of what makes TIM unique and is a requirement to qualify for a graduate degree. The TIM Project is an 80+ page document. A TIM faculty member grades the document using TIM standards for graduate students. To produce a TIM Project report, a TIM student can leverage what the client provides.

The TIM program will assign a supervisor for each TIM Project that is successful at the GO event this Fall. The course instructor advises the formulation of the GO slide deck and presentation. Students can work with other advisors as well.

ASSIGNMENTS

This course has 26 deliverables. A deliverable is a micro output from actions undertaken for the purpose of learning.

You can:	Deliverables	Individual (I) or Group (G)	Number of submissions
Prepare a proposal for a TIM project	Gate 0 slide decks, (versions 1, 2 and Official)	I	3
Communicate with skill	G0 presentations (two dry run presentations to peers and one Official presentation to TIM faculty at a Gate 0 review)	I	3
Prepare first draft of chapters 1 and 2 of the TIM Project Report	TIM Project Proposal (shell for TIM Project Report, Abstract, Table of Contents, Introduction and Literature Review chapters, and List of References – first draft)	I	1
Work with TIM faculty to complete a Supervisor Assignment form	Supervisor Assignment form approved by the TIM Office	I	1
Formulate and implement a Mini Project working in a group	Mini Project slide deck (versions 1 and 2)	G	2
Communicate with skills working in a group	Mini Project presentation (versions 1 and 2)	G	2







Take responsibility for your education	Project Progress	I	4
Take responsibility for your education	Project Progress+	G	4
Take responsibility for your education	Concept Comprehension	I	3
Take responsibility for your education	Concept Comprehension+	G	3
			26

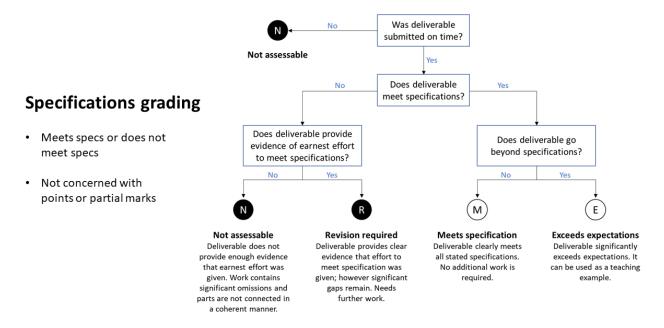
ASSESSMENT

This course uses the specification grading system¹ to assess students' deliverables and determine final grades. Specification grading allows students to choose the grade they wish to earn based on the amount of effort they wish to put in.

Students receive clear specifications that their deliverables must meet, and the instructor evaluates whether the deliverables that students submit meet the stated specifications. The specification grading system is not concerned with points, partial credits, or course pass or fail. A deliverable that a student submits either meets specifications or it does not.

A deliverable that meets specifications receives an "M" (meets specification) or an "E" (exceeds expectations). A deliverable that does not meet specifications receives an "N" (not assessable) or an "R" (revision required).

To assess deliverables, the instructor uses the NRME scale shown below.









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

DELIVERABLE ASSESSMENT ADJUSTMENTS

You can adjust a deliverable's assessment in two ways. You can use an "E" to offset an "R" (i.e., the "R" becomes an "M", and the "E" becomes an "M"), or you can spend a token to bump an "R" to an "M".

A deliverable that is not submitted or does not come close to following instructions receives an "N". To adjust an "N", a student spends a token to receive a 48-hour extension and submits a deliverable that meets specification within the 48-hour extension.

YOUR LETTER GRADE

Your letter grade will be determined by first identifying your base grade and then applying base grade adjustments.

Base grade

The base grade is determined by the number of deliverables assessed as "M" or "E". An "R" or an "N" do not count as completing a deliverable to specifications.

Deliverable type	Deliverable count
Gate 0 slide deck	3
Gate 0 presentation	3
TIM Project Proposal	1
Supervisor Assignment form	1
Mini Project slide deck	2
Mini Project presentation	2
Concept Comprehension	3
Concept Comprehension+	3
Project Progress	4
Project Progress+	4
	26

Below shows how your base grade will be determined.

To earn an "A", credit for 26 deliverables is required.

To earn a "B", credit for 20-25 deliverables is required.

Credit for less than 20 deliverables in this course will earn a "C".





Each column in the table shows the number of deliverables that must meet specifications to earn a given course base grade. For your base grade to be an A, you must meet specifications (i.e., earn an "M" - Meets specification or an "E" - Exceptional) on <u>all 26</u> deliverables.

Note that a "C" is a failing grade for graduate students. Meeting specifications on less than 18 deliverables results in a "C".

Base grade adjustments

To determine your final grade, your base grade will be adjusted using the tokens and "E" assessments that you earn as follows:

- If you have three Es, three unused tokens, or a combination of three "E" grades and tokens remaining at the end of the term, a plus will be added to your letter grade (e.g., A to A+, B to B+).
- 2. If you have no tokens remaining at the end of the course, a minus ("-") will be added to your letter grade.
- 3. After assessment adjustments, if you end the term with 5 or more missed deliverables, including two or more "N" grades, a minus ("-") will be added to your letter grade, regardless of tokens remaining.

Class 1. Course Overview				
G0 Presentations, TIM Project Proposals, S	G0 Presentations, TIM Project Proposals, Supervisor Assignments, and Mini Projects			
Class 2.	Class 3.			
Project Progress 1	Concept Comprehension 1			
Class 4.	Class 5.			
Project Progress 2 Concept Comprehension 2				
Class 6.	Class 7.			
G0 and Mini Project Presentations	G0 and Mini Project Presentations			
Break Week				
Class 8. Class 9.				
Project Progress 3	G0 Presentations			

OVERVIEW OF 13 CLASSES







Class 10.	Class 11.	
G0 Presentations	Concept Comprehension 3	
Class 12.	Class 13.	
Project Progress 4	Mini Project Presentations	
Examination Week		





COURSE SCHEDULE

Note that the TIM faculty (Professors Muegge, Tanev, Weiss, Westerlund and Bailetti) will deliver a "G0 workshop" during class in week 2 (Thursday, September 15).

The schedule for TIMG 5103 F Project Based Learning is below.

Week #	Class date	Week type	Pre-class deliverable	Class activity	Post-class deliverable
1	September 8	Course overview		Breakout: G0 Slides 1&2	
2	September 15	Project progress	Progress 1: G0 Slides 1-4	Breakout: G0 Slides 1-4 TIM Faculty workshop	Progress+ 1: G0 Slides 1-4
3	September 22	Concept comprehension	Concept 1: G0 Slides 5&9	Breakout: G0 Slides 5&9 Breakout: Mini project plan	Concept+ 1: G0 Slides 5&9
4	September 29	Project progress	Progress 2: G0 Slides 6-8	Breakout: G0 Slides 6-8	Progress+ 2: G0 Slides 6-8
5	October 6	Concept comprehension	Concept 2: Mini Project plan update 1	Breakout: Mini Project plan update 1 Breakout: Checklist for G0 Slides 1-9	Concept+ 2: Mini Project plan update 1
6	October 13	Presentations	G0 slide deck 1 Mini Project slide deck 1	G0 presentation 1* Mini Project presentation 1*	
7	October 20	Presentations		G0 presentation 1* Mini Project presentation 1*	
Break week	October 24 - 28	-			
8	November 3	Project progress	Progress 3:	Breakout: How to improve TIM	Progress+ 3: How to improve



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			TIM Project Proposal version 1	Project Proposal version 2	TIM Project Proposal version 2
9	November 10	Presentations	G0 slide deck 2	G0 presentation 2*	
10	November 17	Presentations		G0 presentation 2*	
TBA	TBA by TIM Office	Official TIM Gate 0 Reviews	Official G0 slide deck	Official G0 presentation	TIM faculty's feedback
11	November 24	Concept comprehension	Concept 3: Mini Project update 2	Breakout: Mini Project update 2	Concept+ 3: Mini Project update 2
12	December 1	Project progress	Progress 4: Supervisor Assignment	Breakout: Supervisor Assignments Breakout: Inventory of ways to improve G1 presentations	Progress+ 4: Supervisor Assignment
13	December 8	Presentations	Mini Project slide deck 2	Mini Project: Presentation 2 and deliverables produced Breakout: Inventory of ways to improve TIM Project	
14	-	Finals due December 15 before 11:59 PM	TIM Project Proposal version 2 Supervisor Assignment form		

Deadline for Supervisor Assignment form. TIM students need to complete the Supervisor Assignment 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 form by December 15. You will not be able to register in a 1.0 credit project course, TIMG 5901 M.Eng. Project, TIMG 5905 M.







Ent. Project or TIMG 5907 M.A.B.A Project next term without an approved Supervisor Assignment 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. These documents complement this course outline by going into greater detail and providing actionable advice and tools.

Students should carefully review all content in Brightspace, and the documents shared in the "Stuff for success" section of Brightspace.

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 are expected to 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 are required to act accordingly.

	What is expected	What is unacceptable
Course deliverables	 Original work High-quality work delivered on-time for public examination 	 Plagiarized work 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



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Source of information	 Reputable scholarly journals 	 Low quality journals, personal opinions and stories
Mode in which knowledge and skills are acquired	 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 good job at any of them.
Environment	 Relevant, substantive, fun, positive, 24x7 experiential learning 	 Worthless, trivial, theatre, boring, negative, 3 hrs/week listening

Group work and free loaders

There is zero tolerance for free loaders in the TIM program. A freeloader refers to an individual who takes advantage of group members' efforts without contributing much to return. Free loaders are not welcome anywhere, and this course is no exception.

Group work is an important component of this course. Group conflicts are to be dealt with by the group in a way that is fair, respectful, and fast.

The best way to deal with free loaders is to not include their names in the first page of the group assignments. If a student's name does not appear in an assignment submitted by his or her group, the student must submit his or her own assignment. If a student fails to submit an assignment with his/her name on the first page, the student will receive zero for the assignment.

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, that 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 <u>timprogram@CUNET.Carleton.ca</u> or visit: students.carleton.ca/course-outline

HAVE A GREAT FALL TERM LEARNING!