Toronto Metropolitan University

Department of Electrical, Computer, & Biomedical Engineering
Faculty of Engineering & Architectural Science

Course Outline (F2023-W2024)

COE70AB: Computer Engineering Capstone Design

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Calendar Description	This two-term course provides a training platform for systematic open-ended design process and project management. Student groups apply their acquired knowledge and engineering skills to

	develop and build a design project from concept to working prototype. The lecture component provides advice and information on the design process, project management, reliability, system components, documentation, safety, and program specific aspects. In the laboratory component, once a project topic is assigned, student groups plan, design, source components, build, test/debug, and analyze, under the supervision of a faculty lab coordinator and submit a final design project report.
Prerequisites	COE 528, COE 608, COE 628, MEC 511, MTH 514 and [(COE 501, ELE 632, ELE 635, and ELE 639) or (COE 501, CPS 688, ELE 632, and ELE 635) or (COE 501, ELE 632, ELE 639, and CPS 688) or (COE 691, COE 692, CPS 688, and ELE 532)]
Antirequisites	None
Corequisites	None
Compulsory Text(s):	1. 1. Fundamentals of Project Management, J. Heagney, 5th edition, AMACOM, 2016.2. Teamwork and Project Management, Karl A. Smith, 4th edition, McGraw Hill, 2013 - A portion of the required text from this book is provided under library e-reserve (D2L) for all students.
Reference Text(s):	1. Design Concepts for Engineers, M. Horenstein, 3 rd edition, Prentice Hall, 2006. 2. Engineering Design, R. Eggert, Pearson Prentice Hall, 2005. 3. Fundamentals of Engineering Design, B. Hyman, Prentice Hall, 2003. 4. Design for Electrical and Computer Engineers, J. Salt and R. Rothery, John Wiley & Sons, Inc., 2002.
Learning Objectives (Indicators)	At the end of this course, the successful student will be able to: 1. Develop students' ability and technical skills to make decisions in engineering designs using judgment in solving problems with uncertainty and imprecise information, and selecting optimal choice among alternatives applying known constraints identified in the project definition. (**2a**) 2. Appraises the validity/reliability of data relative to the degrees of error and limitations of theory and measurement. Creates simulated data for pre-analysis. Integrates the calculations of error and uncertainty as integral components of investigations. (**3a**) 3. Integrates the calculations of error and uncertainty as integral components of investigations. Practices critical and continual assessment of experimental data and associated models. Creates predictions of outcomes and experimental uncertainties. Justifies the assumptions given test conditions. Draws on other knowledge to aid the decision-making process. Proposes improvements to investigative procedures and methods. (**3b**) 4. Anticipates the needs of the project, customizes design processes, analyzes progress, and revises plans as necessary. Consistency of produced problem definition with needs statement and reality. Predicts unstated customer and user needs. Defines design parameter uncertainties and their impacts. Gathers information and identifies constraints (e.g. health and safety risks, codes, economic, environmental, cultural, and societal). Generates solutions for more complex design engineering problems/systems. (**4a**), (**4b**) 5. Develop students' ability and technical skills to make decisions in engineering designs using judgment in solving problems with uncertainty and imprecise information, and selecting optimal choice among alternatives applying known constraints identified in the project definition. (**4c**) 6. Designs and develops simple tools (software, hardware) to perform given tasks as required by the project. Evaluates skills and tools to identify their limitations with respect to the project needs. Evaluates results using several skills and tools to determine the one that best explains Ã¢â,¬ËœrealityÃ¢â,¬â„¢. (**5a**) 7. Train students with project management and teamwork skills, which includes leadership, organization, planning, motivation, conflict resolution, design process management,

cooperation and contribution, decomposing project into key tasks, determining tasks interrelationship, and managing project to meet budget and time line. Mentors and accepts mentoring from others in technical and team issues. Demonstrates capacity for technical or team leadership while respecting other's roles. Evaluates team effectiveness and plans for improvements. (**6a**), (**6b**)

8. Demonstrates written and oral communication skill through the ability of constructing effective arguments and drawing conclusions using evidence in discussing design choices, using technical vocabulary, and presenting information clearly and concisely. (**7a**), (**7b**)
9. Contributes to teamwork in an equitable and timely manner. (**8a**)
10. Integrates standards and codes of practice relevant to the discipline into decision-making processes. Knows regulations governing professional practice (e.g. Professional Engineers Act). Adheres to guidelines dictating use of intellectual property and contractual issues. (**8c**)
11. Negotiates project scope, critical assumptions, and deliverables with stakeholders. Systematically decomposes project into key tasks and allocates resources to each task according to project timelines. Understands task inter-relationships and manages project accordingly to meet budget and time deadlines. Allocates tasks to team members and coordinates dynamically as problems or opportunities emerge. Identifies issues related to implementing projects in ways that are sensitive to the needs of all stakeholders. Displays awareness of environmental, safety, economic, social, and other risks associated with the project and ability to respond proactively to minimise these risks. (**11b**)
12. Designs economic evaluation approaches to support decision making at a system level with real world constraints and demands. (**11a**)
13. Build up students' creative thinking and capabilities of conducting research/interconnecting various engineering knowledge to formation of realistic designs. Recognize the need for self-education and developing relationships with experts in the field. (**12b**)

NOTE: *Numbers in parentheses refer to the graduate attributes required by the Canadian Engineering Accreditation Board (CEAB).*

Course Organization	1.0 hours of lecture per week for 13 weeks 5.0 hours of lab per week for 12 weeks 0.0 hours of tutorial per week for 12 weeks
Teaching Assistants	TBA

Course Evaluation

Theory	
Design Process and Project Management Exam (A)	6.25 %
Quizzes (A)	2.5 %
Report summarizing design activities (A)	7.5 %
Final Engineering Design Report (B)	22.5 %
Laboratory	
Milestones and Milestones Compliance Reports (A)	3.75 %
Project Oral Exam (A)	5 %
Project Management and Team Work (B)	11.25 %
Milestone Compliance Reports (B)	11.25 %
Milestones and Final Demonstrations (B)	11.25 %
Project Oral Exam (B)	15 %
Open-House Participation (B)	3.75 %

	TOTAL:	100 %

Note: In order for a student to pass a course, a minimum overall course mark of 50% must be obtained. In addition, for courses that have both **"Theory and Laboratory"** components, the student must pass the Laboratory and Theory portions separately by achieving a minimum of 50% in the combined Laboratory components and 50% in the combined Theory components. Please refer to the **"Course Evaluation"** section above for details on the Theory and Laboratory components (if applicable).

Examinations	IMPORTANT NOTE: COE70A/B is a two-term course. If the course is dropped in either of the terms or receive an "F" grade in the course, the entire course has to be repeated.

Course evaluation will be based on students' performance and design reports. Each project group consists of 4 students. Each student will be evaluated both individually and as a group.

COE 70A (Fall Term)
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Please refer to "Activity Schedule" table at the end of the course outline for the time line for exams, evaluation, and deadlines.
Examination on "Design Process and Project Management" is carried out in Week F6 (tentative).
Students must attend specified seminars (& quizzes).

Students must submit project milestones and milestones compliance reports as per the "Activity Schedule" to their FLC for evaluation prior to meeting with their FLCs.

Project design oral exam will be conducted in weeks F12-F13 (tentative). Students "individually" should demonstrate a thorough knowledge of their EDP through the oral examination by their assigned FLC.

The written report at the end of the Fall term (week F13) will be assessed not only on their technical merit, but also on the communication skills of the authors as exhibited through the reports. The written report will be evaluated as follows:
i) Introduction and Objective
-Statement of the problem, clarification of need and requirements
ii) Approach and Methods
-Relevant literature review, use of suitable engineering concepts and methods
-Alternative design approaches examined and analyzed
iii) Design Analysis and Synthesis
-Design specifications, challenges and methodology
-Use of modern concepts and methods for data gathering, analysis, and synthesis
-Charts on the design process
iv) Technical Writing and General Organization
-English, spelling, conciseness, clarity, cover page, index, sequence of chapters, references, appendices, overall adequacy, and integration of the report

COE 70B (Winter Term)
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Please refer to "Activity Schedule" table at the end of the course outline for the timeline for exams, evaluation, and deadlines.
(a) Project Management & Teamwork (B): The FLC will mark each student in each phase in his/her role as a Manager/Team Leader (Leadership, Conductor of meetings, Organizer/planner/motivator, Conflict resolution) or as a Team Member (Co-operation, Contribution, Conflict resolution). More details on project management are given at the end of this course outline.
(b) Milestones Compliance Report, Milestones & Final Demonstration (B): Students are required to demonstrate milestone compliance (& submit milestone compliance report) during the 4 phases of the project, and build a working prototype. Failure to do so will automatically result in a FAIL grade.
Students who do not keep their FLC advised of their progress on a weekly basis may be refused |

an oral examination because authorship and contribution to the project is questionable.
 (c) Project design oral exam will be conducted in weeks W12-W13 (tentative). Students "individually" should demonstrate a thorough knowledge of their EDP through the oral examination by their assigned FLC.
 (c) Open House Presentation (B): Students are required to participate in an "Open House" exhibition that will be scheduled by the department. Please advise prospective employers of this requirement. At the Open House, students will demonstrate and discuss their project with visitors from the academic community, their peers, and visitors from industry. Participation in this exhibit may result in a grade revision for enhancements or improvements to the project. Students absent from the Open House will have their grade reflect this.
 (d) Final Engineering Design Report (W13)(B): The main body of the report is limited to 40 pages, including text, analysis equations/algorithms diagrams, schematics, tables and references list.
 Additional material (e.g. source code, datasheets, etc.), not subjected to grading, can be inserted in the APPENDIX. Mark reduction will be applied for report exceeding the 40-page limit. One unbound copy of your group final Engineering Design report is required to submit to your FLC by the deadline set by dept/Course Coordinator. A report submitted without prior satisfactory demonstration of your group project will automatically be given a FAIL grade. The format of the report should conform to professional standards and adequately document the design activities. If the project includes software,the source code must be included/uploaded with the report. The final report will be returned to the students during the Open House together with corrections and suggestions for improvement. The students must make the necessary revisions and submit the final version by the deadline set by the department/CC. If the deadline set by the department/CC is not met for Engineering Design Report submission, the student will not be eligible to graduate. All written reports will be assessed not only on their technical merit, but also on the communication skills of the author as exhibited through these reports.

Other Evaluation Information	The EDP grade awarded to a student who has completed all the requirements, including a successful and timely project demonstration and oral examination, is based on an assessment made by their FLC. Though the wide variation in EDP topics, approach, and challenges encountered by the student does not allow a precise marking scheme to be uniformly applied, the factors described below will be weighted by the FLC in determining the student grade. (a) Laboratory Work ===================== All EDPs require that a concept, an idea, bounded by design specifications in the EDP topic description be researched to provide sufficient knowledge to enable a realistic design be fleshed out. This design is implemented in the laboratory. The foundations for the EDP grade rest on the design and implementation process. Unless the design is sound and based on solid engineering, the laboratory time will be inefficiently used and the effort frustrating to all involved including the FLC. Even with a good design, the student will be challenged with implementation and bringing the design to life. The key aspect is the process by which the student tackles the challenges encountered. Is a problem analysed to thoroughly understand its root and a logical decision made as to what options are viable and a strategy devised to confirm the diagnosis and attempt a solution, or is a trial and error quick-fix method employed? How systematic and skilled are the troubleshooting procedures employed; for instance, are results studied carefully or program flow examined etc? Other factors used in evaluating lab performance include time and project management skills. How well did the student meet milestones and GANTT chart schedules, and the consistency with which the project was tackled and ongoing technical documentation? The variations in project topic and approach, student creativity, ingenuity, novelty and complexity of implementation or success in meeting practical implementation challenges are all factors in grading decisions. Although a project that has been demonstrated as meeting or exceeding the initial requirements is fundamental for a good grade, the FLC will consider all the aspects in establishing the final grade. (b) Reports ============== The reports (70A & 70B) are essential and important course components. These are the documents on which anyone not intimately involved with the laboratory work assesses the project. The report should adequately describe the design activities undertaken in the project. Poor EDP reports will certainly demerit even excellent laboratory performance and will be reflected in the

overall course grade.

Report (70A): The report summarizing design activities at the end of 70A will normally contain the following standard sections:
Title Page, Acknowledgements, Certification of Authorship, Table of Contents, Abstract, Introduction & Background, Objectives, Approach and Methods, Design Analysis and Synthesis, Conclusions, Appendices, and References.

Final EDP Report (70B): The Final EDP report (70B) will normally contain the following standard sections:
Title Page, Acknowledgements, Certification of Authorship, Table of Contents, Abstract, Introduction & Background, Objectives, Theory and Design, Documentation including Schematics and Parts Lists, Measurement Procedure, Performance Measurements, Analysis of Performance, Conclusions, Appendices, and References.

Additional Information: Particularly in engineering, it is essential that a project be properly designed. A designer must satisfy the examiner, the FLC, that the program or circuit will perform its tasks to specification under all or at least the usual, variations in the operating or manufacturing environment.

Such issues as component tolerance, voltage variations, maximum and minimum computer cycle times and data throughputs are examples of variables. In other words, the examiner must be convinced that the project is battle-proof and its operation at the demonstration is not an unusual event. Another guide used to assess whether the design is competent is to consider the mass production of this prototype. Could one anticipate a reasonable yield and customer satisfaction? The working prototype performance must be measured to quantify the extent to which it meets the design specifications. The procedure used to measure performance is to be described in sufficient detail that the reader can repeat it. The measured results must be documented in conjunction with appropriate schematics or flow charts. The results should be analysed to ensure that they fit the anticipated performance and if not an explanation is called for. The abstract must accurately précis the entire report contents in half a
page or less. The conclusions should address the project's objectives; to what extent were they met? Where schematics and quotations are taken verbatim from other sources, these sources must be acknowledged to avoid the potentially serious charges of plagiarism. It is recommended that the hardware be photographed with a digital camera along with a photograph of the student author. These photographs are to be included in the final report.

(c) Project Management
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The project teams are required to demonstrate their project management skills by implementing the theory learnt in COE70A into practice in COE70B. The objectives of the evaluation process are as follows:

•Each team member receives fair amount of training in project management, and is required to demonstrate the skills of a project manager.

•A project manager is evaluated for his/her capability of planning and achieving a tangible deliverable that can be demonstrated.

•Each student is also required to demonstrate the behavior of a professional team member.

Following management attributes and skills are used in the evaluation process:

- Project Management Attributes
- Leadership
- Manager of design process
- Motivator
- Organizer/planner

•Skills used to exhibit project management attributes
-Understanding and managing scope of work/deliverables
-Design review meeting, recording of minutes and design discussion
-Timely follow-up
-Learn to identify strengths/weaknesses
-Conflict resolution

-GANTT chart, Critical Path analysis

The winter semester (COE70B) is divided into four phases of three weeks each:
-Phase 1: Week 1, 2 and 3
-Phase 2: Week 4, 5 and 6
-Phase 3: Week 7, 8 and 9
-Phase 4: Week 10, 11, and 12

•One student will act as a manager/team leader within a phase, thus each student will get a chance to play the role of manager/team leader

•The team will select their manager/team leader for each phase at the beginning of the respective phases and provide the names to the FLC

•Each student is marked in each phase in his/her role according to the following metric:

-Manager/Team Leader
--Leadership
--Conductor of meetings
--Organizer/planner/motivator
--Conflict resolution

-Team Member
--Co-operation
--Contribution
--Conflict resolution

Project management evaluation:

-FLC may attend one group meeting in each phase as an observer

-Each project manager is required to submit a tangible deliverable that can be demonstrated in the lab at the end of his/her term, and a plan to achieve that deliverable.

-Student's role is evaluated during the weekly progress meeting, through milestone submissions, milestones compliance reports, and exhibits.

-The group may be requested to provide necessary information/documents that help FLC in evaluating their project management role.

If there are any changes, announcements will be posted in the Course D2L. Please check the course site regularly.

Teaching Methods	1. Lectures will be delivered in-person during the scheduled class hours. 2. Relevant notes/slides from the seminars and lectures will be posted on D2L.
Other Information	Approved Project List --------------------------- In order to assist students in selecting a suitable project, a list of EDP Topics is posted on the Departmental EDP website (http://www.ee.ryerson.ca/capstone/). All topics are 4-student projects. The website description contains a preamble that gives an overview of the project and explains why it is of interest. Partial specifications, objectives, and suggested approach are included. *Note: COE students can only choose project topics from COE70AB approved list of projects. Once the EDP topics are posted on the website, students can contact the professors teaching this course termed the Faculty Lab Coordinators (FLCs) to discuss their project topics available for student selection and the design challenges for those projects. Once they are assigned a topic by the computer selection process, they can then discuss with their assigned FLC to modify their topics subjected to the approval of their respective FLCs.

Course Organization Details (COE70A) [1 hr Lec + 1 hr Lab/Tut]

In Week 3 (tentative) lecture hour, a seminar on Design Process and Project Management is scheduled.

During Week 2, students must select their project topics online. The actual dates of the computer topic selection and the procedure will be announced. If more than one group of students selects a particular project topic, the approval of the selection is based on a random process; those who do not get the approval will re-select another topic.

Once topics are assigned to the groups, the students will start the design activities and meet with their FLCs regularly the following weeks of the course. course. Students must attend specified seminars (& quizzes) and submit project milestones and milestones compliance reports as per the "Activity Schedule" to their FLC for evaluation prior to meeting with their FLCs. During the weeks when in-class seminars/quizzes/exams are scheduled, it is students responsibility to discuss with their FLCs ahead of time and identify alternate meeting times.

In Week 6 (tentative) lecture hours, students must do an examination on the subject of Design Process and Project Management. During Weeks 7 to 11, students attend seminars* (that will be announced on the course D2L web site) and/or carry out design work in a specific location or laboratory and report to their designated FLC. Seminars may be team taught by the guest speakers or FLCs. These seminars will be scheduled and announced on the course D2L website.

*Note: Weeks 7-11 are tentatively planned for seminars/quizzes, the actual weeks will be announced subjected to the availability of the guest speakers.

During Weeks 12/13, students must do their Oral Exam with their designated FLCs and submit their Final Report in Week 13.

Course Organization Details (COE 70B) [5 hrs Lab]
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COE70B is divided into four Phases (I, II, III, and IV). Each phase consists of three weeks. One student will act as a project manager/team leader within a phase, thus each student will have a chance to play the role of manager/team leader. The team will select their manager/team leader for each phase at the beginning of each of the phases and provide the names to the FLC. In each of the phases, students will decide on the project manager/team leader for that Phase. After discussing with the team members the project manager will submit the milestones & deliverables for that Phase to the FLC (please refer to the GANTT chart for due dates). The team will work towards completing the milestones, submit a milestone compliance report, and demonstrate the deliverables for that Phase by the end of the Phase. This cycle repeats until all four phases are completed and the deliverables are demonstrated to the FLC.

In Week 6, the project manager responsible for Phase II will also submit the theory and design sections of the EDP report. During each of the phases (i.e., the 3 weeks period) the respective project managers are responsible for submitting 3 weekly minutes of the meeting and 1 milestone compliance report to the FLC. During the FLC evaluations of deliverables, it will be the project manager's responsibility to explain and discuss with FLC on what was accomplished towards the stated milestone deliverables; what each member accomplished; and to conduct and manage the demo session. The FLC may ask any member of the team for further verification of his/her aspects of the contributions.
In Week 12, individual project contribution summary will be submitted to the FLCs. Individual oral exam are scheduled during the Week 12 and/or 13. The team will submit their final EDP report during Week 13. Following Week 13, the team will present their project during the open house scheduled by the department and will submit the final EDP report to the department and FLC.

Project Cost Equipment, and Laboratories
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Project costs for components and other supplies will be borne by the students. Some specialized components may be provided by the Department. This will be noted in the project description. Students should carefully assess the cost implications of a particular project before making a commitment. Requests for equipment or laboratory usage outside of your scheduled lab hours

Course Content

Week	Hours	Chapters / Section	Topic, description
F1-13+W1-13=26 weeks			Engineering Capstone Design

Laboratory(L)/Tutorials(T)/Activity(A) Schedule

Week	L/T/A	Description
F1	-	Presenters/Evaluators: EDP Coordinator, FLCs, Staff Activities: Course Management, EDP Topics
F2	-	Presenters/Evaluators: EDP Coordinator, FLCs, Staff Activities: Computer Selection of EDP Topics, Lab Safety, Begin Meetings with FLCs
F3	-	Presenters/Evaluators: EDP Coordinator, FLCs, PM Faculty Activities: Design Process and Project Management Seminar/ FLCs Meetings and Design Activities/ Project Milestone Submission
F4	-	Presenters/Evaluators: FLCs Activities: FLCs Meetings and Design Activities
F5	-	Presenters/Evaluators: FLCs Activities: FLCs Meetings and Design Activities/ Milestone Compliance Report (St1)
F6	-	Presenters/Evaluators: EDP Coordinator, FLCs Activities: Design Process and Project Management Exam/ FLCs Meetings and Design Activities

F7	-	Presenters/Evaluators: Guest Speakers, EDP Coordinator,FLCs Activities: Seminar*/ FLCs Meetings and Design Activities/ Milestone Compliance Report (St2). *Note: Weeks 7-11 are tentatively planned for seminars/quizzes, the actual weeks will be announced subjected to the availability of the guest speakers.
F8	-	Presenters/Evaluators: Guest Speakers, EDP Coordinator,FLCs Activities: Seminar/ FLCs Meetings and Design Activities
F9	-	Presenters/Evaluators: Guest Speakers, EDP Coordinator,FLCs Activities: Seminar/ FLCs Meetings and Design Activities/ Milestone Compliance Report (St3)
F10	-	Presenters/Evaluators: Guest Speakers, EDP Coordinator,FLCs Activities: Seminar/ FLCs Meetings and Design Activities
F11	-	Presenters/Evaluators: Guest Speakers, EDP Coordinator,FLCs Activities: Seminar/ FLCs Meetings and Design Activities/ Milestone Compliance Report (St4)
F12	-	Presenters/Evaluators: FLCs Activities: Project Design Oral Exam
F13	-	Presenters/Evaluators: FLCs Activities: Project Design Oral Exam/ Final Report Submission/ Submission of COE70B plan for all 4 phases
W1	-	Presenters/Evaluators: Course Coordinator (CC) Activities: Course Introduction, FLC meetings, Submission of Phase I milestones and deliverables by project manager of Phase I to FLCs.
W2	-	Presenters/Evaluators: FLCs Activities: FLCs Meetings and Design/Implementation Activities
W3	-	Presenters/Evaluators: FLCs Activities: Phase I MCR submission, deliverables demo., and evaluation, Selection of project manager for Phase II

W4	-	Presenters/Evaluators: FLCs Activities: Submission of Phase II milestones and deliverables by project manager of Phase II to FLCs.
W5	-	Presenters/Evaluators: FLCs Activities: FLCs Meetings and Design/Implementation Activities, Theory and design sections of report submission
W6	-	Presenters/Evaluators: FLCs Activities: Phase II MCR submission, deliverables demo., and evaluation, Selection of project manager for Phase III
W7	-	Presenters/Evaluators: FLCs Activities: Submission of Phase III milestones and deliverables by project manager of Phase III to FLCs.
W8	-	Presenters/Evaluators: FLCs Activities: FLCs Meetings and Design/Implementation Activities
W9	-	Presenters/Evaluators: FLCs Activities: Phase III MCR submission, deliverables demo., and evaluation, Selection of project manager for Phase IV
W10	-	Presenters/Evaluators: FLCs Activities: Submission of Phase IV milestones and deliverables by project manager of Phase IV to FLCs.
W11	-	Presenters/Evaluators: FLCs Activities: FLCs Meetings and Design/Implementation Activities
W12	-	Presenters/Evaluators: FLCs Activities: Phase IV MCR submission, deliverables demo., final project demo, and evaluation. Submission of Individual project contribution summary prior to oral exam. (Your FLC may choose to conduct oral exams in week 12 and/or week 13)
W13	-	Presenters/Evaluators: FLCs Activities: Project oral exams and Final report submission

TBD	-	Open House Exhibition/Participation
-	-	Additional IMPORTANT Information: =================================== - Seminars will be arranged and the details will be posted on D2L. During the weeks with in- class activities, please arrange alternate meeting times with your FLCs. - Please refer to the GANTT chart (for 70B) posted on D2L for specific due dates and deadlines for Winter term. - The above activity schedule is tentative and if there are any changes, announcements will be made on D2L.

Policies & Important Information:

Students are reminded that they are required to adhere to all relevant university policies found in their online course shell in D2L and/or on the Senate website

1. In accordance with the Policy on TMU Student E-mail Accounts (Policy 157), Toronto Metropolitan University (TMU) **requires** that any electronic communication by students to TMU faculty or staff be sent from their official university email account;
2. Any changes in the course outline, test dates, marking or evaluation will be discussed in class prior to being implemented;
3. Assignments, projects, reports and other deadline-bound course assessment components handed in past the due date will receive a mark of ZERO, unless otherwise stated. Marking information will be made available at the time when such course assessment components are announced.
4. Familiarize yourself with the tools you will need to use for remote learning. The Continuity of Learning Guide for students includes guides to completing quizzes or exams in D2L or Respondus, using D2L Brightspace, joining online meetings or lectures, and collaborating with the Google Suite.
5. The University has issued a minimum technology requirement for remote learning. Details can be found at: https://torontomu.ca/covid-19/students/minimum-technology-requirements-remote-learning. Please ensure you meet the minimum technology requirements as specified in the above link.
6. Toronto Metropolitan University COVID-19 Information and Updates (available https://www.torontomu.ca/covid-19/students) for Students summarizes the variety of resources available to students during the pandemic.
7. Refer to our **Departmental FAQ** page for information on common questions and issues at the following link: https://www.ecb.torontomu.ca/guides/Student.Academic.FAQ.html.

Missed Classes and/or Evaluations

When possible, students are required to inform their instructors of any situation which arises during the semester which may have an adverse effect upon their academic performance, and must request any consideration and accommodation according to the relevant policies as far in advance as possible. Failure to do so may jeopardize any academic appeals.

1. **Academic Consideration Requests for missed work** (e.g. missing tests, labs, etc) - According to Senate Policy 134, Section 1.2.3, if you miss any exams, quizzes, tests, labs, and/or assignments for health or compassionate reasons you need to inform your instructor(s) (via email whenever possible) in advance when you will be missing an exam, test or assignment deadline. When circumstances do not permit this, you must inform the instructor(s) as soon as reasonably possible". *In the case of illness, a Toronto Metropolitan Student Health Certificate, or a letter on letterhead from an appropriate regulated health professional with the student declaration portion of the Student Health Certificate attached. For reasons other than illness, proper documentation is also required (e.g. death certificate, police report, TTC report).* ***ALL supporting documentation for illness or compassionate grounds MUST be submitted within three (3) working days of the missed work.***" **NOTE: You are required to**

submit all of your pertinent documentation through the University's online Academic Consideration Request system at the following link: prod.apps.ccs.torontomu.ca/senateapps.

2. ***Religious, Aboriginal and Spiritual observance*** - If a student needs accommodation because of religious, Aboriginal or spiritual observance, they must submit a Request for Accommodation of Student Religious, Aboriginal and Spiritual Observance AND an Academic Consideration Request form within the first 2 weeks of the class or, for a final examination, within 2 weeks of the posting of the examination schedule. If the requested absence occurs within the first 2 weeks of classes, or the dates are not known well in advance as they are linked to other conditions, these forms should be submitted with as much lead time as possible in advance of the absence. Both documents are available at www.torontomu.ca/senate/forms/relobservforminstr.pdf. **If you are a full-time or part-time degree student, then you submit the forms to your own program department or school;**

3. ***Academic Accommodation Support*** - Before the first graded work is due, students registered with the Academic Accommodation Support office (AAS - prod.apps.ccs.torontomu.ca/senateapps) should provide their instructors with an Academic Accommodation letter that describes their academic accommodation plan.

Virtual Proctoring Information (if used in this course)

Online exam(s) within this course may use a virtual proctoring system. Please note that your completion of any such virtually proctored exam may be recorded via the virtual platform and subsequently reviewed by your instructor. The virtual proctoring system provides recording of flags where possible indications of suspicious behaviour are identified only. Recordings will be held for a limited period of time in order to ensure academic integrity is maintained and then will be deleted.

Access to a computer that can support remote recording is your responsibility as a student. The computer should have the latest operating system, at a minimum Windows (10, 8, 7) or Mac (OS X 10.10 or higher) and web browser Google Chrome or Mozilla Firefox. You will need to ensure that you can complete the exam using a reliable computer with a webcam and microphone available, as well as a typical high-speed internet connection. Please note that you will be required to show your Toronto Metropolitan University OneCard prior to beginning to write the exam. In cases where you do not have a Toronto Metropolitan University OneCard, government issued ID is permitted.

Information will be provided prior to the exam date by your instructor who may provide an opportunity to test your set-up or provide additional information about online proctoring. Since videos of you and your environment will be recorded while writing the exam, please consider preparing the background (room / walls) so that personal details are not visible, or move to a room that you are comfortable showing on camera.

Academic Integrity

Toronto Metropolitan University's Policy 60 (the Academic Integrity policy) applies to all students at the University. Forms of academic misconduct include plagiarism, cheating, supplying false information to the University, and other acts. The most common form of academic misconduct is plagiarism - a serious academic offence, with potentially severe penalties and other consequences. It is expected, therefore, that all examinations and work submitted for evaluation and course credit will be the product of each student's individual effort (or an authorized group of students). Submitting the same work for credit to more than one course, without instructor approval, can also be considered a form of plagiarism.

Suspicions of academic misconduct may be referred to the Academic Integrity Office (AIO). Students who are found to have committed academic misconduct will have a Disciplinary Notation (DN) placed on their academic record (not on their transcript) and will normally be assigned one or more of the following penalties:

1. A grade reduction for the work, ranging up to an including a zero on the work (minimum penalty for graduate work is a zero on the work);
2. A grade reduction in the course greater than a zero on the work. (Note that this penalty can only be applied to course components worth 10% or less, and any additional penalty cannot exceed 10% of the final course grade. Students must be given prior notice that such a penalty will be assigned (e.g. in the course outline or on the assignment handout);
3. An F in the course;
4. More serious penalties up to and including expulsion from the University.

The unauthorized use of intellectual property of others, including your professor, for distribution, sale, or profit is expressly prohibited, in accordance with Policy 60 (Sections 2.8 and 2.10). Intellectual property includes, but is not limited to:

1. Slides
2. Lecture notes
3. Presentation materials used in and outside of class
4. Lab manuals
5. Course packs
6. Exams

For more detailed information on these issues, please refer to the [Academic Integrity policy](https://www.torontomu.ca/senate/policies/pol60.pdf)(https://www.torontomu.ca/senate/policies/pol60.pdf) and to the Academic Integrity Office website (https://www.torontomu.ca/academicintegrity).

Academic Accommodation Support

Toronto Metropolitan University acknowledges that students have diverse learning styles and a variety of academic needs. If you have a diagnosed disability that impacts your academic experience, connect with Academic Accommodation Support (AAS). Visit the [AAS website](#) or contact aasadmin@torontomu.ca for more information.

Note: All communication with AAS is voluntary and confidential, and will not appear on your transcript.

Important Resources Available at Toronto Metropolitan University

1. [The Library](#) provides research [workshops](#) and individual assistance. If the University is open, there is a Research Help desk on the second floor of the library, or students can use the Library's virtual research help service at https://library.torontomu.ca/ask to speak with a librarian.

2. [Student Life and Learning Support](#) offers group-based and individual help with writing, math, study skills, and transition support, as well as [resources and checklists to support students as online learners](#).

3. You can submit an [Academic Consideration Request](#) when an extenuating circumstance has occurred that has significantly impacted your ability to fulfill an academic requirement. You may always visit the [Senate website](#) and select the blue radial button on the top right hand side entitled: Academic Consideration Request (ACR) to submit this request).

   Please note that the Provost/Vice President Academic and Deans approved a COVID-19 statement for Fall 2022 related to academic consideration. This statement will be built into the Online Academic Consideration System and will also be on the [Senate website (www.torontomu.ca/senate)](#) in time for the Fall term:

   Policy 167: Academic Consideration for Fall 2022 due to COVID-19: Students who miss an assessment due to cold or flu-like symptoms, or due to self-isolation, are required to provide a health certificate. All absences must follow Senate [Policy 167: Academic Consideration](#).

   Also NOTE: Policy 167: Academic Consideration does allow for a once per term academic consideration request without supporting documentation if the absence is less than 3 days in duration and is **not for a final exam/final assessment**. If the absence is more than 3 days in duration and/or is for a final exam/final assessment, documentation is required. For more information please see Senate [Policy 167: Academic Consideration](#).

4. [TMU COVID-19 Information and Updates for Students](#) summarizes the variety of resources available to students during the pandemic.

5. [TMU COVID-19 Vaccination Policy](#).

6. If taking a remote course, familiarize yourself with the tools you will need to use for remote learning. The Remote Learning guide for students includes guides to completing quizzes or exams in D2L Brightspace, with or without [Respondus LockDown Browser and Monitor, using D2L Brightspace,](#) joining online meetings or lectures, and collaborating with the Google Suite.

7. Information on Copyright for [students](#).

8. At Toronto Metropolitan University (TMU), we recognize that things can come up throughout the term that may interfere with a student's ability to succeed in their coursework. These circumstances are outside of one's control and can have a serious impact on physical and mental well-being. Seeking help can be a challenge, especially in those times of crisis.

   If you are experiencing a mental health crisis, please call 911 and go to the nearest hospital emergency room. You can also access these outside resources at anytime:
   - **Distress Line:** 24/7 line for if you are in crisis, feeling suicidal or in need of emotional support (phone: 416-408-4357)
   - **Good2Talk:** 24/7 hour line for postsecondary students (phone: 1-866-925-5454)
   - **Keep.meSAFE:** 24/7 access to confidential support through counsellors via My SSP app or 1-844-451-9700

   If non-crisis support is needed, you can access these campus resources:

   - Centre for Student Development and Counselling: 416-979-5195 or email csdc@torontomu.ca
   - Consent Comes First - Office of Sexual Violence Support and Education: 416-919-5000 ext: 553596 or email osvse@torontomu.ca

   We encourage all Toronto Metropolitan University community members to access available resources to ensure support is reachable. You can find more resources available through the Toronto Metropolitan University Mental Health and Wellbeing website.