Toronto Metropolitan University

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

Course Outline (F2023-W2024)

ELE70AB: Engineering 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 538, ELE 504, ELE 632, ELE 635, ELE 637, ELE 639, MEC 511
Antirequisites	None
Corerequisites	None
Compulsory Text(s):	1. Fundamentals of Project Management, J. Heagney, 5th edition, AMACOM, 2016. 2. Teamwork and Project Management, Karl A. Smith, 4th edition, McGraw Hill, 2013 - Aportion of the required text from this book is provided under library e-reserve (D2L) forallstudents.
Reference Text(s):	1. Design Concepts for Engineers, M. Horenstein, 3rd 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. 5. Engineering Design Process by Yousef Haik, Sangarappillai Sivaloganathan and, Tamer Shahin 2017
Learning Objectives (Indicators)	At the end of this course, the successful student will be able to: 1. Develop student's ability and technical skills to make decisions in engineering designs using judgement in solving problems with uncertainty and imprecise information, and selecting optimal choice among alternatives applying known constraints identified in the project definition. (**2a**), (**4c**) 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. 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 reality. (**5a**) 6. 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 budge and time line. Applies conflict resolution principles on teamwork. Applies principles of conflict management to resolve team issues. (**6a**) 7. 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. (**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. Demonstrates fluency in using current software for communications appropriate to discipline. Uses graphics to explain, interpret, and assess information. (**7c**)
10. Contributes to teamwork in an equitable and timely manner. (**8a**)
11. 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**)
12. 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**)
13. Designs economic evaluation approaches to support decision making at a system level with real world constraints and demands. (**11a**)
14. 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 in Fall Semester (A) I	2.5 %
Report summarizing activities in Fall Semester (A) I/G	7.5 %
Final Engineering Design Report (B) G	22.5 %
Laboratory	
Milestones and Milestone Compliance Reports (A) I	3.75 %
Project Oral Exam (A) I	5 %
Project Management and Teamwork (B) I	11.25 %
Milestone Compliance Reports (B) I	11.25 %
Milestones and Final Demonstrations (B) I	11.25 %
Project Oral Exam (B) I	15 %
Open-House Participation (B) I	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	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. Note Fall Semester weeks are referred by F1, F2,... etc. and Winter Semester weeks are referred by W1, W2,... etc. Please refer to "Activity Schedule" at the end of the course outline for more detailed schedule for exams, evaluations, and deadlines. ELE 70A (Fall Term) Organization ========== During the Fall Semester, students will select their project topics, study it in detail, and develop design approaches to complete the project. Each student will select a their respective responsibility of the project. They will also order required hardware components and learn required software skills. This semester is divided into four phases. Each student will serve as the Team Manager for each phase. The team will document their progress during each phase. The Team Manager will submit this document (Fall Milestone Compliance Report) at the end of each phase. A template is available for this on D2L. During the announced dates (in the second week, F2) students must select their project topics online. In Week F3, Project Milestones shall be stablished. A seminar on Design Process and Project Management is also tentatively scheduled. Examination on Design Process and Project Management is tentatively scheduled in Week F6. During Weeks F7 to F11, students attend seminars* (& quizzes) that will be announced on the course D2L web site and/or carry out design work and report to their designated FLC. Seminars may be team-taught by the guest speakers or FLCs. Students must submit project milestones in Week F3 and milestones compliance reports in weeks F5, F7, F9, and F11 to their FLC prior to meeting with their FLCs. 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. 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. Fall Oral Exams will be held during the Weeks F12/F13 Fall Report Submission is due on Week F13 The Fall ELE70A report shall consist of and introduction providing motivation and background research, a tentative schematic/block diagram of the proposed system, preliminary design calculations, flowchart and the Gannt Chart covering all major tasks and the critical path. ELE 70B (Winter Term) Organization ========== In the Winter Semester students will implement their designs. This semester is divided into four phases. Each student will serve as the Team Manager for each phase. A key milestone demonstration is due at the end of each phase. Fourth demo is the final demo when, the complete project needs to be demonstrated to the FLC. Milestone - I demonstration is due in the week of W3. Student A will be the Team Manager during

	the weeks W1-W3. Milestone - II demonstration is due in the week of W6. Student B will be the Team Manager during the weeks W4-W6. Milestone - III demonstration is due in the week of W9. Student C will be the Team Manager during the weeks W7-W9. Milestone - IV. This is the final demo. This is due in the week of W12. Student D will be the Team Manager during the weeks W10-W12. Project oral exams and Final report submission is due in week of W13. Other Aspects: ---------- (a) Project Management & Teamwork: 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) Oral Examination, Milestones Compliance Report, Milestones & Final Demonstration: Students are required to demonstrate milestone (and submit milestone compliance report - MCR) during the 4 phases of the project, build a working prototype, and individually show a thorough knowledge of their EDP through an oral examination by their assigned FLC. 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) Open House Presentation: 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: The main body of the report shall be about 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. One unbound copy of your group final Engineering Design report is required to submit to your FLC by the deadline set by Course Coordinator. (e) 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. The final report will be returned to the students with corrections and suggestions for improvement. The students must make the necessary revisions and submit the final version by the deadline set by the Course Coordinator. If this deadline 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 analyzed 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) EDP Report
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The EDP report, an essential course component, is the document 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.

A good EDP report will improve the primary assessment based on the laboratory work. In general, a good EDP report is required to consolidate the laboratory and project development work performed by the students. A poor EDP report will certainly demerit even excellent laboratory performance and will be reflected in the overall course grade.

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

The written EDP reports will be assessed not only on their technical merit, but also on the communication skills of their author 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 & 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

A seminar on the EDP report writing may be scheduled. A few key suggestions are offered:

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 precise 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 earlier into practice in ELE70AB. The objectives of the evaluation process in ELE70AB 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 is divided into four phases of three weeks each:
-Phase 1: Weeks W1, W2 and W3
-Phase 2: Weeks W4, W5 and W6
-Phase 3: Weeks W7, W8 and W9
-Phase 4: Weeks W10, W11, and W12

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. -Each 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 ELE70AB Course D2L. Please check the course site regularly.
Teaching Methods	1. This is design project course. There will be no regular weekly lectures. Faculty Lab Coordinators will mentor the student projects via frequent meetings. The meeting would typically be held during the scheduled hours. 2. There will be occasional special lectures. The schedule of these special lectures will be announced before they happen. These will be delivered in-person during the scheduled class hours at ENG 103. Relevant notes/slides from these seminars and lectures will be posted on D2L. 3. Project Management Exam and Quizzes will also be held in-person.
Other Information	The Timetable shows ELE70A has one-lecture hour per week in the Fall Semester. However, there will be no regular weekly lectures delivered in this. However, there will be few special lectures that will be announces separately. ELE70B has 5 lab hours per week in the Winter semester. Students are expected to meet FLC and/or to be engaged in course related activities during the lecture as well as lab hours of this course during both semesters. Approved Project List ---------- In order to assist students in selecting a suitable project, a list of EDP Topics is posted on D2L. All topics are 4-student projects. The project 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: ELE students can only choose project topics from ELE70AB approved list of projects Once the EDP topics are posted on D2L, students can contact the Faculty Lab Coordinators (FLCs or Supervising Professors) to discuss their project topics and start working on it. Project Cost Equipment, and Laboratories ---------- 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 should be directed to your FLC. Roles of a FLC and FA ---------- This course presents administrators with a major challenge in coordination. Laboratory resources

must be managed to ensure their adequacy, longevity, student safety, and security. Students are to be placed with a FLC who can
advise them.

Role of Faculty Laboratory Coordinator (FLC)

1. Ensure that adequate design components meeting the expectation of ELE EDP is in each project under their supervision.

2. Provide, where feasible, technical and project management advice without unduly removing the challenge from the student.

3. Advise the student, where necessary and possible, in the acquisition of parts, test equipment, and specialized laboratory facilities, as required.

4. Monitor the student's weekly progress.

5. Evaluate the performance of the students (individually and as a group) as per the course evaluation.

Role of Faculty Advisor (FA)

The FA is a faculty member who has voluntarily suggested a project or is formally or informally advising the student. When a FA generates a project, the FA is acknowledged in the Engineering Design description. A FA may or may not be interested in assisting the student beyond the project generation phase. As a courtesy, the student should always discuss the project with the FA when one exists and establish the nature and extent of any advice the FA wishes to provide. Upon project completion, in the Winter Term, it is suggested that the student provide an Engineering Design report copy to the FA if the advisor so wishes. This copy does not have to be bound.

Scope of EDP

The project component ELE 70AB will make significant demands on the student's time. The key to completing all aspects of this course is to carefully define reasonable limits to what is being undertaken and to budget time on a regular basis to minimize last minute rushes. Two-hour lab sessions per week are assigned in Weeks F7 to F13. In these lab sessions, the student has the chance to discuss challenges that arise and log their progress in their project with their FLC. As stated earlier, the intended value of the engineering design project is to provide a major experience in engineering design. Therefore, it is important that the project is thoroughly researched and well under way in ELE 70A during the Fall Term and a plan of actions for the Winter Term course ELE 70B is carefully drawn up. Your FLC may refuse to assist the student who has not made a reasonable effort to solve their problem.

Ultimately, the successful completion of the project is the sole responsibility of the student.

Course Content

Week	Hours	Chapters / Section	Topic, description
F1-F13	1		Electrical Engineering Capstone Design Course Part-A (Fall Semester)
W1-W13	5		Electrical Engineering Capstone Design Course Part-B (Winter Semester)

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

Week	L/T/A	Description
F1	-	Introduction to Course Management and EDP Topics, Seminar on Lab Safety
F2	-	Computer Selection of EDP Topics, Begin Meetings with FLCs
F3	-	Project Milestones Identification and Submission Design Process and Project Management Seminar FLCs Meetings and Design Activities.
F4	-	FLCs Meetings and Design Activities.
F5	-	Fall Milestone Compliance Report - 1 FLCs Meetings and Design Activities,
F6	-	Design Process and Project Management Exam. FLCs Meetings and Design Activities
F7	-	Fall Milestone Compliance Report - 2 FLCs Meetings and Design Activities Seminar* *Note: Weeks F7-F11 are tentatively planned for seminars/quizzes, the actual weeks will be announced subjected to the availability of the guest speakers.
F8	-	FLCs Meetings and Design Activities Seminar
F9	-	Fall Milestone Compliance Report - 3 FLCs Meetings and Design Activities Seminar*
F10	-	FLCs Meetings and Design Activities Seminar*
F11	-	Fall Milestone Compliance Report - 4 FLCs Meetings and Design Activities Seminar*

F12	-	Fall Semester Oral Exam
F13	-	Fall Semester Oral Exam ELE 70A Report Submission Submission of ELE70B plan for all 4 phases
W1	-	Course Introduction, FLC meetings. Selection of Project Manager for Phase I (PM1). Submission of Phase I milestones and deliverables PM1 to the FLC.
W2	-	FLCs Meetings and Design/Implementation Activities
W3	-	Milestone Compliance Report - 1 (MCR-1) submission and deliverables demo. Selection of Project Manager for Phase II (PM2).
W4	-	Submission of Phase II milestones and deliverables by PM2 to the FLC.
W5	-	FLCs Meetings and Design/Implementation Activities. Theory and design sections of report submission
W6	-	Milestone Compliance Report - 2 (MCR-2) submission and deliverables demo. Selection of Project Manager for Phase III (PM3).
W7	-	Submission of Phase III milestones and deliverables by PM3 to the FLC.
W8	-	FLCs Meetings and Design/Implementation Activities
W9	-	Milestone Compliance Report - 3 (MCR-3) submission and deliverables demo. Selection of Project Manager for Phase IV (PM4).
W10	-	Submission of Phase IV milestones and deliverables by PM4 to the FLC.
W11	-	FLCs Meetings and Design/Implementation Activities
W12	-	Milestone Compliance Report - 4 (MCR-4) submission and 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 W12 and/or week W13)

W13	-	Project oral exams and Final report submission.
TDB	-	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 posted on D2L for specific due dates and deadlines for ELE 70B. - The above activity schedule is tentative and if there are any changes, announcements will be made on D2L.

University Policies

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

Important Resources Available at Toronto Metropolitan University

- 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 to speak with a librarian.
- 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.
- 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 radio button on the top right hand side entitled: Academic Consideration Request (ACR) to submit this request.

  For Extenuating Circumstances, Policy 167: Academic Consideration allows for a once per semester ACR request without supporting documentation if the absence is less than 3 days in duration and is not for a final exam/final assessment. Absences more than 3 days in duration and those that involve a final exam/final assessment, require documentation. Students must notify their instructor once a request for academic consideration is submitted. See Senate Policy 167: Academic Consideration.
- 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.
- Information on Copyright for Faculty and students.

Accessibility

- Similar to an accessibility statement, use this section to describe your commitment to making this course accessible to students with disabilities. Improving the accessibility of your course helps minimize the need for accommodation.
- Outline any technologies used in this course and any known accessibility features or barriers (if applicable).
- Describe how a student should contact you if they discover an accessibility barrier with any course materials or technologies.

Academic Accommodation Support

Academic Accommodation Support (AAS) is the university's disability services office. AAS works directly with incoming and returning students looking for help with their academic accommodations. AAS works with any student who requires academic accommodation regardless of program or course load.

- Learn more about Academic Accommodation Support.
- Learn how to register with AAS.

Academic Accommodations (for students with disabilities) and Academic Consideration (for students faced with extenuating circumstances that can include short-term health issues) are governed by two different university policies. Learn more about Academic Accommodations versus Academic Consideration and how to access each.

Wellbeing Support

At Toronto Metropolitan University, 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 3596 or email osvse@torontomu.ca
- **Medical Centre:** call (416) 979-5070 to book an appointment

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.