

(C)ITM 305 - Systems Analysis and Design

COURSE OUTLINE FOR 2026-2027

Semester, Section
Classroom, Class Time

Prerequisite(s): ITM 100 or ITM102 or in the 2 Year Business Technology Management Ontario College Diploma Graduate Program

Faculty/Contract Lecturer Information

- **Faculty/Contract Lecturer Name:**
- **Office Location:**
- **Office Hours:**
- **Phone:** (416) 979 – 5000, ext.
- **Course Website:** my.torontomu.ca (for courses using D2L)
- **Email Address:** youremail@torontomu.ca

Mode of Course Delivery : In-person (Lecture)

[Academic Program Advising Contacts](#)

Chair/Director for this Course: Sameh Al Natour

Email Policy

Students are expected to monitor and retrieve messages and information sent through D2L and TMU email on a frequent and consistent basis. 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. Communications sent from other accounts may be disregarded.

Course Description

The course covers the key concepts, techniques, and methodologies relevant to the process of developing information systems (IS). The course focuses on the development of requirements, analysis, and design models of the system to be. The specifications of these models are done using the Unified Modeling Language (UML). In addition, the course provides a contextual coverage of the system development life cycle and select concepts of IS construction, deployment and project management respectively.

Course Details

Teaching Methods

If you are registered in an in-person or a virtual classroom, instruction will take place at scheduled hours, following the approach outlined in D2L Brightspace. If you are registered in a Chang School Distance Education course, please follow the schedule, course outline and learning modules as outlined in D2L Brightspace.

Note: All assessments in this course, regardless of its delivery format, will be held inperson on campus. This applies to in-person, virtual, and online courses, including sections/courses delivered through the Chang School.

Course Materials

Textbook and Other Learning Materials:

Lecture:

Title: Systems Analysis and Design in a Changing World (7th Edition)

Author(s): John W. Satzinger, Robert B. Jackson, Stephen D. Burd

Publisher: Cengage Learning

ISBN: 978-1305117204

Price: \$232.95, E-book: \$81.50

Ebook: <https://www.cengage.ca/shop/isbn/9781337001168>

Course Learning Outcomes

To acquire knowledge of and competency in the major techniques used in the analysis and design of the business information systems. Specifically, to acquire a competency in developing UML diagrams to facilitate the documentation of the analysis and design requirements to meet development requirements.

Upon completion of the course, the student is expected to be able to:

1. Explain the fundamentals of IS development life cycle and methodologies.
2. Explain the key elements of requirements' elicitation, gathering and specification.
3. Create models of system functional behavior.
4. Create structural analysis models of information systems.
5. Create behavioral analysis models of information systems.
6. Explain the fundamentals of system design
7. Explain the Object Oriented Design concepts
8. Create Use Case Realization diagrams

Academic Integrity

Academic integrity is integral to your learning, the credibility of your degree or certification, and the integrity of the university as a whole. [Senate Policy 60: Academic Integrity](#) defines academic misconduct, provides a non-exhaustive list of examples of behaviours that may be considered as academic misconduct, and explains how academic misconduct concerns are evaluated and decided. The entirety of the policy applies in this course. As well, please note that submitting work created in whole or in part by artificial intelligence tools unless expressly permitted by the faculty/contract lecturer, is considered a violation of Policy 60.

Generative AI Course Policy

Use of Generative AI (e.g. ChatGPT, Grammarly, Perplexity, DeepL Translator) to develop or assist with any ideas or material submitted for coursework is expressly prohibited in this course. Use of Generative AI in this manner will be considered a breach of Policy 60.

Copyright

The course materials provided to you are copyrighted, and may not be shared without my express written permission. Do not share these materials (e.g. course outline, lecture slides, assignment instructions) with others and do not post them on the internet during the course, or at any time after. If you do so, Policy 60 will apply.

Academic Integrity Resources

To learn more about Policy 60 and how to avoid academic misconduct, please review and take advantage of these resources:

- Policy 60: Academic Integrity: www.torontomu.ca/senate/policies/academicintegrity-policy-60/
- Academic Integrity Office website: www.torontomu.ca/academicintegrity
- “Academic Integrity in Space” game: <https://games.de.torontomu.ca/aio/#/>
- “Academic Integrity in Cyberspace!” game: <https://www.torontomu.ca/aic/#/>
- Student Life and Learning Support: www.torontomu.ca/student-life-andlearning/learning-support

If you are a student registered with Academic Accommodation Support (AAS):

Please inform your faculty/contract lecturer if you have test accommodation needs that include the use of assistive technology (including text-to-speech, dictation, or literacy software). Some software may require additional configurations by the faculty/contract lecturer, so it is important you inform them in advance and leverage the sample quiz to ensure the tools are compatible with the Brightspace Quiz in LockDown Browser.

However, not all Assistive Technology tools approved by AAS work well with Respondus' software; if your experience of the sample quiz does not function as expected, please notify your faculty/contract lecturer and/or Accommodation Facilitator.

Digital Learning Tools used in this course

None.

Topics and Course Schedule

Week	Topic	Readings
1	Fundamentals of Information Systems Development Life Cycle and Development Approaches and Methodologies - Describe the purpose of Systems Analysis and Design - Explain the Systems Development Life Cycle - Explain the Methodologies for the six core processes	Chapter 1/10
2	Requirement Gathering & Specification - Describe the activities of Systems Analysis - Explain the difference between function and nonfunctional requirements - Identify and understand different kinds of stakeholders - Describe and understand information gathering techniques - Describe the role of models and UML in Systems Analysis	Chapter 2
3	Use Case Modeling with Use Case Diagrams - Describe role of Use Stories and Use Case - Apply Event Decomposition to identify Use Cases - Understand Use Case Notation - Implement Use Case Diagrams by actor and subsystem	Chapter 3
4	Use Case Specification & Documentation - Implement fully developed Use Case descriptions - Explain how use case descriptions and UML diagrams work together to define functional requirements Activity Diagrams - Describe the role of Activity Diagrams - Understand Activity Diagram Notation Implement Activity Diagrams	Chapter 5
5	Domain Class Diagrams - Explain the concept of “things” in the problem domain - Identify and analyze domain classes - Create a Domain Model Class Diagram	Chapter 4

6	Midterm Exam (hour 1) Foundations of System Design (hour 2) • Describe the activities of Systems Design • Identify the documents and models used in Systems Design • Explain each major design activity	Chapter 6
7	System Sequence Diagrams • Describe the role of System Sequence Diagrams • Understand System Sequence Notation • Implement System Sequence Diagrams	Chapter 5
8	Object Oriented Design Fundamentals • Explain the purpose and objectives of object-oriented design • Develop Design Class Diagrams • Explain the important fundamentals of object-oriented design	Chapter 12
9	Overview of Use Case Realizations – Single Layer • Develop Sequence Diagrams for Use Case Realization • Understand Relationship to SSD and Class Diagrams	Chapter 13
10	Overview of Use Case Realizations – Multi Layer • Explain the different types of objects and layers in a design • Understand the User Interface layer • Understand the Data Access Layer • Understand Packaging Diagrams	Chapter 13 (Cont'd)
11	Defining the System Architecture • Explain architectural concepts that influence System Design • Describe a systems environment	Chapter 7
12	Agile Approaches and Course Review • Explain the concepts behind Agile • Review the different Agile techniques employed in industry • Course Review	

Evaluation

The grade for this course is composed of the mark received for each of the following components:

Evaluation Component	Due Date	Percentage of Final Grade	Anticipated Return Date
Lab/Homework	1-10	10%	2-11
Midterm Exam	6	25%	7
Project Phase I	7	15%	9
Project Phase II	11	10%	Exam Week
Final Exam	TBA	40%	TBD
Final Grade		100%	

Note: Students must achieve a course grade of at least 50% to pass this course. At least 20% of the grade based on individual work will be returned to students prior to the last date to drop a course in good academic standing. For Fall 2026 this must be before Friday, November 20, 2026 and for Winter 2027 before Friday, April 2, 2027.

University Policies

Students must be 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

- **Addressing Academic Concerns:** Students are expected to address any questions or concerns through open and timely communication with the course faculty/contract lecturer, as soon as they arise. If a concern cannot be resolved through this initial communication or if additional support is required, students are encouraged to reach out to their program advisor or the chair/director of the teaching department for further guidance. These individuals can help provide

clarity, facilitate next steps, and ensure that matters are reviewed in a fair and appropriate manner.

- [The University Libraries](#) provide research [workshops](#) and individual consultation appointments. There is a drop-in Research Help desk on the second floor of the library, and students can use the [Library's virtual research help service](#) to speak with a librarian, or [book an appointment](#) to meet in person or online.
- [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, always require documentation. Students must notify their faculty/contract lecturer once a request for academic consideration is submitted. See Senate [Policy 167: Academic Consideration](#).

Longer absences are not addressed through Policy 167 and should be discussed with your Chair/Director/Program to be advised on next steps.

- [FAQs Academic Considerations and Appeals](#)
- Information on Copyright:
 - [Copyright FAQs for Faculty/Contract Lecturers](#)
 - [Copyright FAQs for Students](#)
- Information on Academic Integrity:
 - [Academic Integrity for Faculty/Contract Lecturers](#)
 - [Academic Integrity for Students](#)

Accessibility

- At Toronto Metropolitan University, we are committed to ensuring that all courses are accessible to everyone and to removing barriers that may prevent some individuals from enrolling in courses.
- All technologies and tools used in this course are accessible.
- Students who discover an accessibility barrier with any of the course materials or technologies should contact their faculty/contract lecturer.
- As outlined in [Policy 159: Academic Accommodation of Students with Disabilities](#), students are required to proactively consult with AAS, the faculty/contract lecturer, Department or Faculty, as soon as feasible, including prior to enrolling in a course or program, on any concerns they may have about their ability to meet the essential academic requirements of a course/program.

Academic Accommodation Support

[Academic Accommodation Support](#) (AAS) is the university's accessibility services office, supporting students with disabilities. AAS works with students, faculty, and staff to create inclusive learning environments, reduce barriers, and promote accessibility across the university.

If you have (or suspect you may have) a disability, AAS can provide consultation, guide you through registration, develop accommodation plans where appropriate, and connect you with supports and services. For information about eligibility, documentation requirements, registration, deadlines, and available services, visit [AAS](#).

Academic Accommodations (for students with disabilities) and Academic Consideration (for short-term extenuating circumstances) are governed by **different university policies**. [Learn more about each process](#) and how to access support. Students registered with AAS may request academic consideration (related or unrelated to their disability) if they experience extenuating circumstances that impact their ability to meet their shorter term academic obligations. This includes short term physical or mental health issues that are sudden/acute (e.g, the flu), unexpected illness or injury, hospitalization or treatment, and significant aggravation of a pre-existing condition. Please see [Policy 167: Academic Consideration](#) for more information and details.

Please note that there is no accommodation for missing/rescheduling or reweighting of tests - this is considered an alternate arrangement. Any student who misses a test/exam will be directed to submit an ACR to explore if possible alternate arrangements under [Policy 167: Academic Consideration](#) can apply .

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)
- **[GuardMe Student Support Program \(GMSSP\)](#):** 24/7 access to confidential support through counsellors via the [Student Support 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's Wellbeing Central](#) website.