

(C)ITM 706 - Enterprise Architecture

COURSE OUTLINE FOR 2026-2027

Semester, Section
Classroom, Class Time

Prerequisite(s): ITM 410 or ITM 415

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

[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

This course focuses on business analysis, organizational processes, enterprise architecture, and security/risk management. This course explores the design, selection, implementation and management of enterprise business processes from the perspectives of IT capabilities. These capabilities are typically organized and presented as enterprise architecture, consisting of high-level internally compatible representations of organizational business models, data, applications, and information technology

infrastructure. Students will learn frameworks and strategies for infrastructure management. They will hone their ability to communicate technology architecture strategies concisely to a general business audience.

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 in-person on campus. This applies to in-person, virtual, and online courses, including sections/courses delivered through the Chang School.

Format of the class: The course material will be delivered using a “2-hour + 1-hour” format. More specifically, the instructor introduces each week the concepts, definitions, frameworks and use cases in a 2-hour lecture. Then, in a 1-hour session, an academic assistant (under the supervision of the instructor) works with students on Labs, Assignments and/or project questions.

Course Materials

Textbook and Other Learning Materials:

Required textbook and other reading materials:

Title: Enterprise Architecture at Work: Modelling, Communication and Analysis (4rd Edition)

Author: Marc Lankhorst Publisher: Springer

ISBN: 978-3662539323

Price: \$146.95

TOGAF online resources:

The Open Group Documentation:

Available for access and download (Free) at:

Edition 9.2: <http://pubs.opengroup.org/architecture/togaf9-doc/arch/>

Edition 10 (2022 and 2025 releases): <https://pubs.opengroup.org/togaf-standard/introduction/>

Suggested/recommended reading materials:

To supplement the main textbook materials, specific sections from the publications listed below will be covered in the lectures, labs, assignments and project. The students will be responsible only for these sections that are covered by the instructor in the course.

1. Textbook covering the practical aspects of EA (optional):

Title: Modeling Enterprise Architecture with TOGAF: A Practical Guide Using UML and BPMN

Authors: Philippe Desfray and Gilbert Raymond

Publisher: Morgan Kaufmann

ISBN: 978 – 012-4199842

Price: \$73.95 (Paperback); \$44.99 (ebook)

2. An EA software vendor's perspective on Enterprise Architecture:

Title: Introduction to Enterprise Architect by Sparx Systems

Available for access/download (Free) at:

https://sparxsystems.com/enterprise_architect_user_guide/13.0/

3. The Open Group Service-Oriented Architecture:

Available for access and download (Free) at:

<https://www.opengroup.org/what-we-do-technology-standards/soa/source-book/intro>

4. Articles from IBM on Service-Oriented Architecture:

Available for access and download (Free) at:

<https://www.ibm.com/think/topics/soa>

<https://www.ibm.com/think/topics/soa-vs-microservices>

5. Articles on enterprise security architecture from TOGAF portal:

- *“TOGAF® and SABSA® Integration”*, a White Paper by The Open Group TOGAF-SABSA Integration Working Group (October 2011).
- *“A Guide to Modeling SABSA® with the ArchiMate® Specification”*, by The Open Group and The SABSA Institute (December, 2024).

Course Learning Outcomes

Upon the successful completion of this course, students should be able to:

1. Explain the principles underlying an enterprise architecture system
2. Explain how digitized business processes, IT infrastructure, shared data and customer interfaces are identified and linked in the enterprise architectures
3. Identify the principles underlying Enterprise Security, Privacy, Trust and Accessibility for Enterprise Architecture
4. Assess the integration of Service Oriented architecture (SOA) with business process logics
5. State some of the existing EA frameworks and tools and how they are applied in business today
6. Assess the limitations of legacy systems in today's business environment
7. Describe the Information Technology Infrastructure Library (ITIL) Framework
8. Describe the Control Objectives for Information Technologies (COBIT) Framework.

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 and Plagiarism Detection

Generative AI Course Policy

Students may use Generative AI (e.g. ChatGPT, Grammarly, Perplexity, DeepL Translator) for ideation and brainstorming but not for research or for writing anything that will be submitted for credit. Failure to stay within these limits will be considered a breach of Policy 60.

Turnitin or another originality detection software

Turnitin is a plagiarism prevention and detection service to which TMU subscribes. It is a tool to assist faculty/contract lecturers in determining the similarity between students' work and the work of other students who have submitted papers to the site (at any university), internet sources, and a wide range of books, journals and other publications. While it does not contain all possible sources, it gives faculty/contract lecturers some assurance that students' work is their own. No decisions are made by the service; it generates an "originality report," which faculty/contract lecturers must evaluate to judge if something is plagiarized.

Students agree by taking this course that their written work will be subject to submission for textual similarity review to Turnitin. We strongly recommend that faculty/contract lecturers can opt to have student's papers included in TMU's institutional repository rather than the default Turnitin repository. Use of the Turnitin service is subject to the terms-of-use agreement posted on the Turnitin website. Students who do not want their work submitted to this plagiarism detection service must, by the end of the second week of class, consult with their faculty/contract lecturer to make alternate arrangements. Students who choose not to have their papers screened for textual similarity review by turnitin may be required to submit additional work with their research essay. For example:

- an annotated bibliography of each source used in your paper; and/or
- the first few pages of each cited source used in your paper

Even when a faculty/contract lecturer has not indicated that a plagiarism detection service will be used, or when a student has opted out of the plagiarism detection service, if the faculty/contract lecturer has reason to suspect that an individual piece of work has been plagiarized, the faculty/contract lecturer is permitted to submit that work in a non-identifying way to Turnitin.

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/academic-integrity-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-and-learning/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

The software tools that will be used in this course are:

- The Web applications available at the portals: <https://www.visual-paradigm.com/> and <https://bpmn.io/>
- The software application Archi that is available at the portal <https://www.archimatetool.com/>

These software tools are available to students for free.

Topics and Course Schedule

Week	Topic	Readings
Week 1	Application of Business Process Modeling (BPM) & Legacy ERP systems • Describe business process management • Describe legacy systems and their limitations in today's business	Lecture notes from the instructor
Week 2	Introduction to Enterprise Architecture and Sparx Systems • Explain the role of enterprise architecture • Explain business architecture modelling and its drivers • Demonstrate how a professional EA system works	Lankhorst: Chapter 1
Week 3	Enterprise Architecture frameworks & methods • Describe EA at work • Explain the TOGAF and Zackman • Explain the OMG architecture • Discuss principles of BPMN • Discuss the ADM method	Lankhorst: Chapters 2, 3 & TOGAF documents
Week 4	Enterprise Architecture Modeling • Explain EA Goals, Requirements, Constraints and Principle • Explain EA Stakeholders, Drivers and Assessment • Explain EA Business Layer • Explain EA Technology Layer	Lankhorst: Chapters 4, 5. TOGAF documents
Week 5	Enterprise Architecture Tools, view and viewpoints • Explain the purpose of architectural views and viewpoints • Explain UML modelling using Archi software • Utilize tools such as fork, pool and lane	Lankhorst: Chapters 6, 7
Week 6	Group Project Case & Midterm Examination	
Week 7	Enterprise Architecture Development • Explain stakeholders' views associated with EA • Explain major viewpoints defined in ArchiMate • Explain viewpoints and visualization using Sparx Systems • Discuss layered architecture development	Lankhorst: Chapter 8 & 9

Week	Topic	Readings
Week 8	Governance Models for Enterprise Architecture • Explain the role of architecture governance • Discuss the TOGAF architecture governance • Explain the COBIT framework • Explain the ITIL framework • Explain the CMM (CMMI) IT implementation model	Lankhorst: Chapter 10 & TOGAF documents
Week 9	EA Risk Assessment with ArchiMate Model • Describe EA analysis techniques • Explain functional analysis of an EA • Explain ArchiMate metrics for performance measures • Discuss the TOGAF model for risk analysis	Lankhorst: Chapter 9 & TOGAF documents
Week 10	Service Oriented Architecture Modeling • Explain SOA architecture • Discuss the SOA architectural vs Microservices • Explain the Enterprise Service Bus • Explain Service Oriented Infrastructure (SOI)	TOGAF documents
Week 11	Enterprise Architecture an ArchiMate Case Study • Explain the case of TOGAF SOCCI framework with ArchiMate	Lankhorst: Chapter 12 & TOGAF SOA modeling
Week 12	Enterprise Security and Privacy Management • Explain network optimization and performance • Explain EA security domains • Explain SABSA security matrix • Discuss TOGAF security management • Explain the ArchiMate language security model • Explain Privacy-by-Design (PbD) principles associated with EA	SABSA/TOGAF Security Model

(*) Because the area and topics of Enterprise Architecture are constantly evolving, the instructor may include other reading material for some individual course lectures. If that happens, the instructor will clearly indicate to students the type of material that was included and the corresponding documents. This additional reading material will likely come the list provided above in the section “**Suggested/recommended reading materials**”.

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
Labs	Weeks 2, 4, 6, 9,10	10%	Week 3, 5, 7, 10, 11
Assignments	Weeks 3, 5, 8	15%	Weeks 4, 8 (or 9), 12
Group Project	Week 11	10%	Week 13
Midterm Exam	Week 6	30%	Week 8
Final Exam	TBD	35%	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. Students who are not able to meet the due date of anyone the above components must provide documentation to explain the reasons they missed the specified deadline.			

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.