

ITM 795 – Social Media Analytics

COURSE OUTLINE FOR 2026-2027

Semester, Section
Classroom, Class Time

Prerequisite(s): ITM 207 or HTM 402 or MKT 500 or RMG 821 or QMS 442

Antirequisite(s): ITM 733

Faculty/Contract Lecturer Information

- **Faculty/Contract Lecturer Name:** Amira Ghenai
- **Office Location:** TRS 2-040
- **Office Hours:** by appointment
- **Phone:** (416) 979 – 5000, ext. 544871
- **Course Website:** my.torontomu.ca (for courses using D2L)
- **Email Address:** aghenai@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 will help students develop a deeper understanding of social media analytics. Students will be introduced to the types of questions that can be answered using publicly available social media datasets with users' privacy and research ethics in mind. Students will collect, clean and analyze data from social media using sentiment and social network analysis techniques. They will also prepare reports to demonstrate

how the project outcomes can support evidence-based, data-driven management practices.

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.

Teaching Methods

- All lectures will be in person unless otherwise indicated by the instructor.
- Lectures, readings, case study analysis, discussions and hands-on activities are the primary teaching methods in this course.
- Students are expected to have studied the assigned readings and completed any online or written pre-class assignments prior to attending the lectures.
- The lectures will review and expand the textual material, providing students with the professor's commentary and examples.
- The hands-on activities will focus on learning and applying the automated tools and techniques discussed in the assigned readings and during the lectures to individual and group projects. These activities will reinforce the application of various social media analytics techniques.

For the term project, students will work in teams to develop and complete a social media analytics project. The goal of this project is to apply data analytics techniques to analyze social media discourse about a particular event, company, product, or service to:

- Identify main topical themes and sentiments (e.g., what customers are saying),
- Identify key influencers (both individual and organizational accounts), and
- Determine how to use this information to improve the products/services under examination.

Course Materials

See the “Topics and Course Schedule” section below for a list of assigned articles and online resources. All readings are freely available through the provided links or via [TMU’s library website](#).

The course will use the following web-based software:

Software	Functionality	Availability
Communalytic https://communalytic.org	Social Media Analytics, Text Analysis, Social Network Analysis and Visualization	EDU-version (free)

Course Learning Outcomes

Upon completion of the course, it is expected that students will be able to:

1. Discuss and explain how organizations (both public and private) can use social media to achieve their organizational goals and improve organizational performance;
2. Learn how to measure the success (quantitatively and qualitatively) of social media campaigns;
3. Explain and contrast basic concepts and common frameworks used in social media analytics;
4. Identify suitable data sources and evaluate the quality and integrity of social media data;
5. Understand and address technical and ethical issues of using social media data for analytics.
6. Apply different types of data analytics to derive insights from social media data, including methods such as sentiment analysis, geo-based analytics, and social network analysis;
7. Demonstrate competence in analyzing business cases and developing reports for management decision-making with social media data;
8. Develop and implement social media analytics projects and strategies to support business intelligence and evidence-based management

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

Generative AI tools (e.g., ChatGPT, CoPilot, Grammarly) can provide valuable support in improving research and writing skills, but responsible use is essential to prevent plagiarism and maintain the authenticity of your work. In this course, except for in-class quizzes and midterm (or unless otherwise specified), you may exclusively use such tools to refine and enhance your writing or to assist with data management tasks (e.g., generating a list of suggested keywords for social media data collection or looking up an Excel function to manipulate data tables). However, creating entirely original content, using generative AI for data analysis instead of the course software (Communalytic), or generating references using generative AI tools is prohibited and will be considered a violation of [Policy 60: Academic Integrity](#). Please also note that, according to Policy 60, submitting text, images, or any other academic work that has not been personally created (including AI-generated content) without proper attribution may constitute plagiarism.

If you choose to use a generative AI tool for an assignment in the permitted cases outlined above, clearly explain how you used it in the Acknowledgement section of your submission. You should detail the tool used, its purpose, and how the generated output contributed to your submission. If you are unsure about whether your use is appropriate or how to describe it, consult the instructor before submitting your work. Failing to disclose the use of generative AI tools may be considered a breach of Policy 60. Be aware that generative tools can hallucinate; that is, produce content that seems plausible but is incorrect, so you must carefully review and interpret the output before deciding how to incorporate it into your work in this course.

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.

Topics and Course Schedule (tentative)

Week	Topic	Readings
1	Social Media Analytics: Overview Ethics of Using Social Media Data	1. Internet Research Ethical Guidelines 3.0 - https://aoir.org/reports/ethics3.pdf 2. Jacobson, J., Gruzd, A., & Hernández-García, Á. (2020). Social Media Marketing: Who Is Watching the Watchers? <i>Journal of Retailing and Consumer Services</i>, 53, 101774. https://doi.org/10.1016/j.jretconser.2019.03.001 3. Does Research Using Social Media Platforms Require Research Ethics Board Review? Guidance in Applying TCPS 2 (2022)- https://ethics.gc.ca/eng/reb-cer_social-sociaux.html
2	Data Structure, Collection and APIs (Application Program Interface)	4. Hands-on resources on data collection from different platforms using CommunalYTic: ▪ Reddit - Recent Submissions ▪ YouTube - Video Comments ▪ Bluesky - Keyword-based Search ▪ Mastodon - Hashtag-based Search
3	Topic Analysis	5. Understanding Word/Sentence Embeddings (also see here) 6. Understanding UMAP (Uniform Manifold Approximation and Projection) 7. How HDBSCAN Works (also see here) 8. Hands-on: How-to Use the Topic Analyzer in CommunalYTic 9. Hands-on: Adjusting Clustering Parameters based on the Davies-Bouldin Index (DBI)
4	Civility Analysis (Toxicity vs Pro-social Scores)	10. Morales, E., Hodson, J., O'Meara, V., Gruzd, A., & Mai, P. (2025). Online toxic speech as positioning acts: Hate as discursive mechanisms for othering and belonging. <i>New Media & Society</i>, 14614448251338493. https://journals.sagepub.com/doi/full/10.1177/14614448251338493 11. Gruzd, A., Mai, P., & Taleb, O. (2024). Digital battleground: An examination of anti-refugee discourse on Twitter against Ukrainians displaced by Russia's invasion of Ukraine. <i>First Monday</i>. https://doi.org/10.5210/fm.v29i8.13734 12. Hands-on: How-to Use CommunalYTic Civility Analyzer 13. Hands-on: Civility(Toxicity) Analysis + Topic Analysis with Chapman's Ice Cream COVID19 Dataset

Week	Topic	Readings
5	Sentiment Analysis	14. Garay, J., Yap, R., & Sabellano, M. J. (2019). An analysis on the insights of the anti-vaccine movement from social media posts using k-means clustering algorithm and VADER sentiment analyzer. In <i>IOP Conference Series: Materials Science and Engineering</i> (Vol. 482, p. 012043). https://iopscience.iop.org/article/10.1088/1757-899X/482/1/012043/meta 15. Botchway, R. K., Jibril, A. B., Kwarteng, M. A., Chovancova, M., & Oplatková, Z. K. (2019, September). A review of social media posts from UniCredit bank in Europe: a sentiment analysis approach. In <i>Proceedings of the 3rd International Conference on Business and Information Management</i> (pp. 74-79). https://dl-acm-org.ezproxy.lib.torontomu.ca/doi/pdf/10.1145/3361785.3361814 16. Hands-on resource: Sentiment Analysis in Communalitic
6	READING WEEK	NO CLASS
7	Social Network Analysis	17. Grandjean, M. (2021). Introduction to social network analysis: basics and historical specificities. In <i>HNR+ ResHist Conference 2021</i>. https://dx.doi.org/10.5281/zenodo.5083036 18. Hands-on: Network Visualization in Communalitic 19. Hands-on: How-to use Polarity Scores in Network Visualization
8	Social Network Analysis (Part 2)	20. Gruzd, A., & Mai, P. (2020). Going viral: How a single tweet spawned a COVID-19 conspiracy theory on Twitter. <i>Big Data & Society</i>, 7(2). https://doi.org/10.1177/2053951720938405 21. Gruzd, A., Ghenai, A., & Mai, P. (2024). How COVID-19 Conspiracy Theories Spread on Twitter. <i>HICSS</i>. https://hdl.handle.net/10125/106682 22. Gruzd, A., Mai, P., & Soares, F. B. (2022). How coordinated link sharing behavior and partisans' narrative framing fan the spread of COVID-19 misinformation and conspiracy theories. <i>Social Network Analysis and Mining</i>, 12(1), 118. https://link.springer.com/article/10.1007/s13278-022-00948-y

Week	Topic	Readings
9	Social Media Platforms, Users and Communities	23. Gruzd & Mai (2025). The State of Social Media in Canada 2025. Social Media Lab Toronto Metropolitan University. https://doi.org/10.6084/m9.figshare.28830188 24. Mai, Saiphoo, Soares & Gruzd (2022). The Influence of Influencers. Social Media Lab Toronto Metropolitan University. https://doi.org/10.6084/m9.figshare.21586947
10	Social Media Platforms and Misinformation	25. <u>Misinformation, Disinformation and Mal-Information eReader (mediadefence.org)</u> 26. Soares, F. B., Gruzd, A., & Mai, P. (2023). Falling for Russian Propaganda: Understanding the Factors that Contribute to Belief in Pro-Kremlin Disinformation on Social Media. Social Media + Society, 9(4). https://doi.org/10.1177/20563051231220330 27. Gruzd, A., Abul-Fottouh, D., Song, M. Y., & Saiphoo, A. (2023). From Facebook to YouTube: The Potential Exposure to COVID-19 Anti-Vaccine Videos on Social Media. Social media+ society, 9(1). https://doi.org/10.1177/20563051221150403 28. Tufchi, S., Yadav, A., & Ahmed, T. (2023). A comprehensive survey of multimodal fake news detection techniques: Advances, challenges, and opportunities. International Journal of Multimedia Information Retrieval, 12(2), 28. https://doi.org/10.1007/s13735-023-00296-3
11	Fake Accounts, Social Bots and DeepFakes	29. Shao, C., Ciampaglia, G. L., Varol, O., Yang, K.-C., Flammini, A., & Menczer, F. (2018). The spread of low-credibility content by social bots. Nature Communications, 9(1), Article 1. https://doi.org/10.1038/s41467-018-06930-7 30. Cao, Y., Li, S., Liu, Y., Yan, Z., Dai, Y., Yu, P. S., & Sun, L. (2023). A Comprehensive Survey of AI-Generated Content (AIGC): A History of Generative AI from GAN to ChatGPT. arXiv. http://arxiv.org/abs/2303.04226 31. Meta's threat disruptions reports - https://transparency.meta.com/en-gb/metasecurity/threat-reporting 32. EU's DSA Transparency Database - https://transparency.dsa.ec.europa.eu/?lang=en

Week	Topic	Readings
12	Big Data Technologies	33. Gruzd, A., Zhang, J., & Mai, P. (2025). GraphOptima: A graph layout optimization framework for visualizing large networks. <i>SoftwareX</i>, 29, 102034. https://doi.org/10.1016/j.softx.2025.102034 34. Gruzd, A., De Domenico, M., Sacco, P. L., & Briand, S. (2021). Studying the COVID-19 infodemic at scale. <i>Big Data & Society</i>, 8(1), 20539517211021115. https://journals.sagepub.com/doi/full/10.1177/20539517211021115
13	Work-In-Progress Group Presentations	N/A

Evaluation

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

	Evaluation Component	Percentage of Final Grade	Due Date	Anticipated Return Date
Individual	In-Class Participation (5 out of 7 in-class participation quizzes x 2%)	10%	Weekly	Weekly during class
	Weekly hands-on activities/labs (each lab worth 2% with a total of 5)	10%	Weekly	Weekly after lab session @ midnight
	Midterm	40%	See D2L	27 Oct, 2026
Group	Group Project: Social media campaign analytics	40%	See D2L	10 Dec 2026
	Final Grade	100%		

Note: Students must achieve a course grade of at least 50% to pass this course.

At least 20% of student's grade based on individual work will be returned to students before 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.

Late submissions: Your assignments must be submitted via D2L by the deadline specified on D2L (11:59 pm on the due day); otherwise, the submission will be deemed late, and a penalty of 10% per day late will be applied. Assignments over three (3) calendar days late will not be accepted, and a grade of zero (0) will be assigned.

If you anticipate submitting late due to a health or family emergency, please contact the [Academic Accommodation Support office](#) to request formal accommodation. Unfortunately, the instructor cannot grant an extension on an individual basis without the University's approval.

No Academic Accommodation Support request will be granted for the In-Class participation quizzes or for the Weekly hands-on activities/labs.

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.