



ITIS5408
Social Analytics
Fall 2024

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Office Hours: By Appointment Only

Class Meeting: In person on Tuesdays 2:35pm-5:35pm

Course Calendar Description: The process, tools and techniques necessary to acquire, clean, and analyze text that has been generated on social platforms. Social network analysis, sentiment analysis, topic extraction, and co-occurrence analysis. Also offered at the undergraduate level, with different requirements, as BUSI 4408, for which additional credit is precluded.

Course Description: Tools for data analytics; analyzing data beyond statistics; data mining and predictive modeling; time series analysis and forecasting; neural networks algorithms in business analytics. Includes: Experiential Learning Activity.

Course Learning Objectives:

1. Gain understanding of basic data management and integration techniques.
2. Mining unstructured text data
3. Social Network analysis.

Course Prerequisites: N/A

Required Materials: SAS Studio and the SAS Viya platform will be used to complete assignments. It is highly recommended that students familiarize themselves with SAS as much as possible before the assignments are distributed. SAS offers a free e training called *Prog 1* that provides an overview of the SAS interfaces and introduces data manipulation techniques that will be used in this course. For assignments, the course will use the SAS environment provided by SAS online for Academics. Instructions on how to access this portal will be given on Brightspace.

Final Exam Date: TBD

Drop Course Policy: The deadline for academic withdrawal follows the dates prescribed by Carleton University: <https://calendar.carleton.ca/academicyear/>

Grading Scheme:

Paper Review Presentation	20%
Applied Assignments 3X10	30%
Midterm Quiz	20%
Final Exam	30%
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TOTAL	100%

Each component of your grade will be assigned a percentage score. Your final course grade will be a weighted average of each of these components.

- Paper Review: Students will choose from a list of journal papers on text mining and network analysis. Students will present a summary of each paper in a brief presentation.
- Assignments: Students will be given three assignments for completion before the beginning of class on the assigned date. Assignments must be submitted electronically before the start of the class on the dates indicated on the course outline. Failure to submit the assignments on time may result in the loss of marks. Students may work in groups to complete the assignments; however, each student must prepare and submit their own assignment.
- Midterm Quiz: A short multiple choice quiz will be delivered via Brightspace before the start of reading week.
- Final Exam: A final take home exam will be held during the regular scheduled exam period.

The minimum computing requirements for e-proctoring service are as follows:

- Hardware: Laptop
- OS: Windows 10, Mac OS 10.14, Linux Ubuntu 18.04
- Internet Browser: Google Chrome, Mozilla Firefox, Apple Safari, or Microsoft Edge

Note: Tablets, Chromebooks and Smartphones are not supported at this time. Windows-based tablets are not supported at this time.

Late Assignments:

To ensure fairness for all students, penalties will be applied to late assignments: Failure to submit an assignment on time will result in an initial penalty of five (5) percentage points, followed by an additional (2) percentage points per day thereafter. For example, an assignment that would normally merit a grade of 80% would receive a grade of 75% if submitted after the deadline on the due date, 73% if submitted the following day, and so on. Requests for extension will be considered in cases of illness, family emergency, or other exceptional circumstances.

Preparation and Participation:

Students are expected to read the assigned readings and to have completed the practical exercises.

Contribution to Program Learning Goals ([MBA](#)):

MBA Learning Goal	Not Covered	Introduced	Taught but Not Assessed	Taught and Assessed
MB1 Leadership and Collaboration <i>Graduates will be equipped for leadership and collaboration.</i>			✓	
MB2 Communication <i>Graduates will be effective communicators</i>				✓
MB3 Critical Thinking and Problem Solving <i>Graduates will be skilled in critical thinking and problem solving.</i>				✓
MB4 Functional Knowledge <i>Graduates will have functional knowledge of all areas of business.</i>				✓
MB5 Global Business <i>Graduates will have an appreciation of the global environment of business.</i>	✓			
MB6 Ethical Reasoning <i>Graduates will be skilled in ethical reasoning and decision-making.</i>			✓	

COURSE SCHEDULE

Week	Date	Topic/Agenda	Pre-class Preparation
1	Sept 10 2024	<ul style="list-style-type: none"> • Introduction and review of course outlines, class norms and technical environment • Introduction to Social Analytics • Steps in Analytic Project • Overview of Data • Discussion of text mining 	<ul style="list-style-type: none"> • Lecture Notes
2	Sept 17 2024	<ul style="list-style-type: none"> • Data Manipulation Overview • Introduction to SAS Studio • Data Integration Techniques • Procedures relevant when working with text. 	<ul style="list-style-type: none"> • Lecture Notes
3	Sept 24 2024	<ul style="list-style-type: none"> • Text Analytics I • SAS Visual Text Analytics (VTA) • Corpus Review • Text Filter • Text Parsing 	<ul style="list-style-type: none"> • Lecture Notes • In class SAS Exercises 1.1 & 1.2
4	Oct 1 2024	<ul style="list-style-type: none"> • Text Analytics II • SAS Visual Text Analytics (VTA) • Concept Definition/Extraction • Assignment 1 Distributed 	<ul style="list-style-type: none"> • Lecture Notes • In class SAS Exercises 2.1, 2.2, 2.3
5	Oct 08 2024	<ul style="list-style-type: none"> • Text Analytics II • Categorization • Taxonomy Creation • Scoring New Data 	<ul style="list-style-type: none"> • Lecture Notes
6	Oct 15 2024	<ul style="list-style-type: none"> • NLP Overview • SAS Visual Text Analytics (VTA) • Custom Concepts • Introduction to LITI 	<ul style="list-style-type: none"> • Lecture Notes • 4.3
	Oct 22 2024	<ul style="list-style-type: none"> • No Classes 	NA
7	Oct 29 2022	<ul style="list-style-type: none"> • SNA I • Overview to Social Network Analysis • Theoretical Origins • Assignment 2 Distributed • 	<p>Lecture Notes</p> <p>Assignment 1 Due (let me know if you need more time)</p>
8th	Nov 5 2024	<ul style="list-style-type: none"> • SNA II • Visualization of Networks • Assignment 3 Distributed 	<ul style="list-style-type: none"> • Lecture Notes • Assignment 2 Due
9	Nov 12 2024	<ul style="list-style-type: none"> • SNA III • Probabilistic Methods • Descriptive Statistics for Social Networks 	<ul style="list-style-type: none"> • Lecture Notes
10	Nov 19 2024	<ul style="list-style-type: none"> • SNA III • Levels of Analysis for SNA 	<ul style="list-style-type: none"> • Lecture Notes • Assignment 3 Due

11	Nov 26 2024	<ul style="list-style-type: none"> • Putting it all together. • SNA+ Text Analytics • 	<ul style="list-style-type: none"> • Lecture Notes
12	Dec 3 2022	<ul style="list-style-type: none"> • Final Take home Exam 	<ul style="list-style-type: none"> • NA

ADDITIONAL INFORMATION

Course Sharing Websites:

Materials created for this course (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s).

Recommended Calculator for Examinations:

If you are purchasing a calculator, we recommend any one of the following options: Texas Instruments BA II Plus (including Pro Model), Hewlett Packard HP 12C (including Platinum model), Staples Financial Calculator, Sharp EL-738C & Hewlett Packard HP 10bII

Group Work:

The Spratt School of Business encourages group assignments. They provide you with opportunities to develop and enhance interpersonal, communication, leadership, followership and other group skills. Group assignments are also an effective way to learn integrative skills for putting together a complex task. Your professor may assign one or more group tasks, assignments, or projects in this course. Before embarking on a specific problem as a group, it is your responsibility to ensure that the problem is meant to be a group assignment and not an individual one.

Peer Evaluation for Group Work

To deter social loafing and ensure fairness in grading, you will be asked to assess the contribution of your fellow group members. This information will be used when assigning the grade for the final project. The procedure is as follows: Each student should take 100 points and allocate those points to the various members of the group (including him/her/themself) to reflect the contributions made by each member. For instance, if there are four members in a group and everyone contributed equally, each individual would receive 25 points. Conversely, if an individual contributed relatively little, the remaining group members might allocate few points to that member. To ensure that these peer evaluation scores are reasonable and free from personal bias, you will be asked to provide a detailed written explanation for your point allocation.

Letter Grades:

In accordance with the Carleton University Undergraduate Calendar (p. 34), the letter grades assigned in this course will have the following percentage equivalents:

A+ = 90-100	B+ = 77-79	C+ = 67-69	D+ = 57-59	F = Below 50
A = 85-89	B = 73-76	C = 63-66	D = 53-56	
A - = 80-84	B - = 70-72	C - = 60-62	D - = 50-52	

Grades entered by Registrar:

WDN = Withdrawn from the course

DEF = Deferred

Academic Regulations:

University rules regarding registration, withdrawal, appealing marks, and most anything else you might need to know can be found on the university's website, here:

<https://calendar.carleton.ca/grad/gradregulations/>

Requests for Academic Accommodation:

Carleton is committed to providing academic accessibility for all individuals. You may need special arrangements to meet your academic obligations during the term. The accommodation request processes, including information about the *Academic Consideration Policy for Students in Medical and Other Extenuating Circumstances*, are outlined on the Academic Accommodations website (students.carleton.ca/course-outline).

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

- **Pregnancy**
Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: <https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf>
- **Religious Obligations**
Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: <https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf>
- **Students with Disabilities**
If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. <https://carleton.ca/pmc/>

- **Survivors of Sexual Violence**

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and its survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: <https://carleton.ca/sexual-violence-support/>

- **Student Activities**

Carleton University recognizes the substantial benefits, to both the individual student and the university, that result from participating in activities beyond the classroom experience. Reasonable accommodation will be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. <https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

For more information on academic accommodation, please contact the departmental administrator or visit: <https://students.carleton.ca/course-outline/>

Academic Integrity:

Violations of academic integrity—presenting another's ideas, arguments, words or images as your own, using unauthorized material, misrepresentation, fabricating or misrepresenting research data, unauthorized co-operation or collaboration or completing work for another student—are a serious academic offence, weaken the quality of the degree, and will not be tolerated. Penalties may include; a grade of Failure on the submitted work and/or course; academic probation; a refusal of permission to continue or to register in a specific degree program; suspension from full-time studies; suspension from all studies at Carleton; expulsion from Carleton, amongst others. Students are expected to familiarize themselves with and follow the Carleton University Student Academic Integrity Policy which is available, along with resources for compliance at: <https://carleton.ca/registrar/academic-integrity/>

Centre for Student Academic Support:

The Centre for Student Academic Support (CSAS) is a centralized collection of learning support services designed to help students achieve their goals and improve their learning both inside and outside the classroom. CSAS offers academic assistance with course content, academic writing and skills development. Visit CSAS on the 4th floor of MacOdrum Library or online at: <https://carleton.ca/csas/>

Other Important Information:

- Students must always retain a hard copy of all work that is submitted.
- All final grades are subject to the Dean's approval.
- For us to respond to your emails, we need to see your full name, CU ID, and the email must be written from your valid CARLETON address. Therefore, in order to respond to your inquiries, please send all email from your Carleton cmail account. If you do not have or have yet to activate this account, you can do so by visiting <https://carleton.ca/its/get-started/new-students-2/>