



Carleton
UNIVERSITY

SPROTT
SCHOOL OF BUSINESS

ITIS5408
Social Analytics
Monday, 11:30pm - 2:30pm,
Tory Building, 447

Instructor: Hugh Cairns
Email: hugh.cairns@carleton.ca
Office Hours: By Appointment

Course calendar description from 2019/2020 graduate calendar:

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.

Includes: Experiential Learning Activity

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.

Learning Objectives: Understand the importance of social platform data to organizational strategy and decision making

- Understand the fundamentals of, and demonstrate proficiency in social network analysis
- Understand the fundamentals of, and demonstrate proficiency in text analytics

Sentiment analysis

Topic Extraction

Cluster Analysis

Natural Language Processing

Incorporating unstructured data into traditional analytical models

Course Prerequisites: The prerequisites for this course are: ITIS 5401, MKTG 5200, BUSI 5801. Also offered at the undergraduate level, with different requirements, as BUSI 4408, for which additional credit is precluded.

Materials:

Miranda, S. (2017). Introduction to Social Analytics: Concepts and Methods.

Available from: cuLearn

Struhl, S. (2015). Practical Text Analytics. Interpreting text and unstructured data for business intelligence.

Available from: library or purchase through Amazon.

Other readings as distributed throughout the semester

Drop Course Policy:

The deadline for academic withdrawal is the last day of classes (each term).

Grading Scheme:	2 Hands on Assignments	30%
	4 In class Projects	20%
	Final Project	50%
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	TOTAL	100%

Course Software: 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. The course can be located at: <http://support.sas.com/training/tutorial> at the bottom of the page. The Prog 1 course is usually 3 days in duration so please give yourself enough time to complete. 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 the CULearn site.

Assignments: Students will be given two 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.

In Class Projects: A Business Case will be assigned in week 3. The business case has two components; a 15-minute presentation and a 6-8-page report. The topic of the business case must be submitted to me in Week 8. The presentations will be delivered to the class in the second half of class beginning in week 11. The final report is due at the end of week 12. All students must submit their own work and are subject to the academic integrity policies found at the bottom of this outline.

Mid Term Exam: There will be no midterm exam.

Final exam date: There will be no final exam

Preparation and participation: Students are expected to have read the readings assigned. This will help the students understand the context of the analytical method(s) that will be covered in class.

Missed assignments and deferred examination: All assignments not submitted by the start of class (8:30am) will receive a grade of zero.

Deferred Final Examination:

Students unable to write a final examination because of illness or other circumstances beyond their control must contact the instructor and the MBA office in writing to request a deferred exam. Permission may be granted when the absence is supported by a medical certificate and or appropriate document/s to support the reason for the deferral.

Course Schedule:

Week	Date	Topic/Agenda	Pre-class Preparation
1	Jan 6 2020	<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 	<ul style="list-style-type: none"> • Lecture Notes
2	Jan 13 2020	<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	Jan 20 2020	<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	Jan 27 2020	<ul style="list-style-type: none"> • Text Analytics II • SAS Visual Text Analytics (VTA) • Concept Definition/Extraction • In-Class Assignment 	<ul style="list-style-type: none"> • Lecture Notes • In class SAS Exercises 2.1, 2.2, 2.3
5	Feb 3 2020	<ul style="list-style-type: none"> • Text Analytics II • Categorization • Taxonomy Creation • Scoring New Data • Meet the Client Final Presentation • Take home Assignment 1 distributed 	<ul style="list-style-type: none"> • Lecture Notes
6	Feb 10 2020	<ul style="list-style-type: none"> • NLP Overview • SAS Visual Text Analytics (VTA) • Custom Concepts • Introduction to LITI • In-Class Assignment 	<ul style="list-style-type: none"> • Lecture Notes • 4.3
	Feb 17 2020	No Classes	NA
	Feb 24 2020	No Classes	NA
7	Mar 2 2020	<ul style="list-style-type: none"> • SNA I • Overview to Social Network Analysis • Theoretical Origins • Take home Assignment 1 submitted • 	<ul style="list-style-type: none"> • Lecture Notes

8	Mar 9 2020	<ul style="list-style-type: none"> • SNA II • Visualization of Networks <p><i>In class assignment</i></p>	<ul style="list-style-type: none"> • Lecture Notes
9	Mar 16 2020	<ul style="list-style-type: none"> • SNA III • Probabilistic Methods • Descriptive Statistics for Social Networks • <i>Take home Assignment 2 distributed</i> 	<ul style="list-style-type: none"> • Lecture Notes
10	Mar 23 2020	<ul style="list-style-type: none"> • SNA III • Levels of Analysis for SNA <p><i>In Class Assignment</i></p>	<ul style="list-style-type: none"> • Lecture Notes
11	Mar 30 2020	<ul style="list-style-type: none"> • Putting it all together. • SNA+ Text Analytics • 	<ul style="list-style-type: none"> • Lecture Notes
12	Apr 6 2020	<ul style="list-style-type: none"> • Client Presentations • <i>Take home Assignment 2 submitted</i> 	<ul style="list-style-type: none"> • NA

Policy on Mobile Devices

The use of mobile devices IS NOT PERMITTED in this class. It is disruptive to the instructor and class members. If you carry such a device to class, please make sure it is turned off. If an emergency situation requires you to keep it turned on, please discuss this with your instructor prior to class.

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).

Required calculator in BUSI course 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 in the school for several reasons. They provide you with opportunities to develop and enhance interpersonal, communication, leadership, follower-ship and other group skills. Group assignments are also good for learning integrative skills for putting together a complex task. Your professor may assign one or more group tasks/assignments/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.

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
A = 85-89	B = 73-76	C = 63-66	D = 53-56
A - = 80-84	B - = 70-72	C - = 60-62	D - = 50-52
F = Below 50			

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:

<http://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/>

Requests for Academic Accommodation

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

Pregnancy obligation

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 obligation

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>

Academic Accommodations for 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. 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/>

Accommodation for Student Activities

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience.

Reasonable accommodation must 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: students.carleton.ca/course-outline

Academic Integrity

Violations of academic integrity are a serious academic offence. 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 – 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: carleton.ca/csas

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 may wish to do so by visiting <https://carleton.ca/its/get-started/new-students-2/>

Important dates and deadlines

<https://sprott.carleton.ca/students/mba/dates-deadlines-policies/>