

# MCS\*4910 Data-driven Decision Making Winter 2020 0.5 Credits

# General Course Information

Instructor:	Tanya Mark, Joseph Mudge, Tirtha Dhar, Yuanfang Lin
Email	Tanya.mark@uoguelph.ca; joseph_mudge@cooperators.ca
Office Location	<u>tdhar@uoguelph.ca</u> ; <u>yuanfang@uoguelph.ca</u> MINS 202C
Office Hours	By appointment
Department/School	Marketing and Consumer Studies
Class Schedule:	Tuesday (MACS121) and Thursday (MACS232) 2:30 pm – 3:50pm
Pre-requisites:	15.0 Credits, Registration in the B.Comm. Program (Marketing Management Major)

### **Restrictions:**

#### **Course Description**

This course focuses on the decision-making role of the marketing manager who is responsible for creating the strategic marketing plan. To support decision making, students will learn essential skills to understand different types of data and various analytical tools for providing insight into managerially relevant problems. Students will learn the importance of asking the right questions to support business objectives rather than focusing on the data and the tools. This course uses cases extensively to provide students with an opportunity to develop the analytical skills required of marketing managers. In addition, this course will offer weekly labs to expose students to best practices in data management and tools.

#### **Course Learning Outcomes**

Upon successfully completing this course, you will:

### **Knowledge and Understanding:**

• Demonstrate the ability to analyze market intelligence using a variety of sources.

### **Discipline/Professional and Transferable Skills:**

• Develop strategic business problems and objectives using data and analytics.

• Recommend and justify a solution to a business problem using data to create value for stakeholders in the marketplace.

**Attitudes and Values** 

Summary of Course Content and Materials				
Class	Date	Торіс	Instructor	Readings
1	January 7 <sup>th</sup>	Introduction	Tanya, Tirtha, Yuanfang, Joe	Review course outline
2	January 9 <sup>th</sup>	Importance of data and analytics in business	Tanya	Case: Carolinas HealthCare System: Consumer Analytics Articles: Introduction to cases (optional for those not familiar with case approach to teaching)
3	January 14 <sup>th</sup>		Tanya	Case: Conroy's Acura: Customer Lifetime Value and Return on Marketing
4	January 16 <sup>th</sup>	Business Understanding	Joe	<ul> <li>The Co-operators</li> <li>Insurance Industry</li> <li>Group project overview</li> </ul>
5	January 21 <sup>st</sup>		Tanya	Case: Telenor: Revolutionizing Retail Banking in Serbia: Digital Transformation of the Customer Experience
6	January 23 <sup>rd</sup>	Data and R	Joe	
7	January 28 <sup>th</sup>	Descriptive Statistics	Yuanfang	<ul> <li>Descriptive Statistics</li> <li>Graphic Illustration and Numerical Summary</li> </ul>
8	January 30 <sup>th</sup>	R cleaning and exploring data	Joe	
9	February 4 <sup>th</sup>		Yuanfang	Case: CDK Digital marketing: Addressing Channel conflict with data analytics

10	February 6 <sup>th</sup>	R summarizing data	Joe	
11	February 11 <sup>th</sup>		Tirtha	Inferential Statistics – Part I (Correlation Analysis, Regression Analysis)
12	February 13 <sup>th</sup>	Inferential Statistics Part I in R (correlation and regression analysis)	Joe	
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13	February 25 <sup>th</sup>		Yuanfang	Inferential statistics – Part II (multivariate regression, principal component analysis)
14	February 27 <sup>th</sup>	Inferential Statistics Part II in R	Joe	
15	March 3 <sup>rd</sup>		Yuanfang	Inferential statistics – Part III (cluster analysis/segmentation) discriminant analysis
16	March 5 <sup>th</sup>	Data mining	Joe	Clustering and segmentation
17	March 10 <sup>th</sup>		Tirtha	Case: Sarah gets a diamond
18	March 12 <sup>th</sup>	Data visualization	Joe	
19	March 17 <sup>th</sup>	Experimental designs	Tirtha	Case: Rocket Fuel: Measuring the Effectiveness of Online Advertising
20	March 19 <sup>th</sup>	Story telling	Joe	
21	March 24 <sup>th</sup>		Tirtha	Case: Hollywood Rules
22	March 26 <sup>th</sup>	Meeting with faculty		Faculty will be available to meet with students to address any concerns about their presentations
23	March 31 <sup>st</sup>			PRESENTATIONS (3 groups)

24	April	<b>2</b> nd
24	ADIII	Ζ.

Course Assessment					
			Associated Learning Outcomes	Due Date/ location	
Assessment 1:	20%	Class Contribution	LO 1 - 3	Wk1- 12	
Assessment 2:	15%	Case Report	LO 2	TBD	
Assessment 3:	15%	Midterm Exam	LO 1 - 3	TBD	
Assessment 4:	50%	Group Project	LO 1 - 3	Week 12	

Total 100%

### Teaching and Learning Practices

In-Class Discussion Assigned cases and readings should be reviewed in detail prior to class. You should be ready to discuss the case, your analysis, and recommendation for each class. I expect you to be actively engaged in the discussion – to contribute regularly and to take a leadership role in moving the discussion forward. I believe we are all equally responsible for the quality of the discussion, and that the value of the course depends on the individual contributions of each participant.

**Case Report** (Individual) Each student will be assigned one case for which they will write a report with a maximum of 5 pages double-spaced with 12 pt. font (not including references or appendices). Case assignments will be posted on courselink on the first day of classes. A hard copy must be submitted at the beginning of the class in which the case is being taught. Any late submission will receive a minimum of 20% deduction for each 24-hour period it is late.

See "Case Report" for details on the assignment. The "Case Report" will be distributed at the beginning of the course and will be available on the course webpage under /content/cases.

Group<br/>ProjectThe objective of the group project is to understand the consumer journey using<br/>rich data through the quoting process used by The Co-operators. The details of<br/>the group project and the data that is available to perform analytics to support<br/>your recommendation for the company will be explained in class.

GROUP FORMATION: Students are required to carefully choose the members of their group (maximum of 5 members each).

Project WRITE-UP: Each group will be required to submit a hard copy of their 5page report, single spaced, 12pt font (excluding exhibits and references), in the dropbox in MINS 205. For details on the content of the Project report refer to the "Project Report" document distributed in class and available on the course webpage under /content/project. Any late submission will receive a minimum of 20% deduction for each 24-hour period it is late.

PRESENTATION: Each group must present their solution to the problem to the class. The objective of the presentation is to convince your classmates that you have identified the challenges facing the company, performed the appropriate analysis, and have a recommendation with a detailed action plan. It is important to justify your recommendation. The length of the presentation should not exceed 15 minutes with an additional 5 minutes for questions. Two or three members of each group should be selected to present but the expectation is that the entire group is responsible for the preparation. The presentation should use the format described under "Presentation Criteria" provided in this syllabus.

MEMBER CONTRIBUTION: I expect each member to contribute equally to the case report and presentation. Any problems that arise must be discussed with me during office hours or by appointment. Peer evaluations will be completed at the end of the term so as to ensure equal participation from each group member. If necessary, appropriate rescaling of each individual's grade for the group work will be made.

# **Course Resources**

# Required Text: MCS4910 Data-driven Decision Making Casebook winter 2020

The casebook contains the articles and cases that we will use daily throughout the term. The purchase of the casebook is mandatory and it is available at the University Bookstore. You will not receive your exam without proof of purchase of the case booklet. You may submit your proof of purchase, found at the front of the casebook, to the instructor or your TA.

# Recommended Text: N.A.

### **Other Resources:**

- This course has a website (see http://courselink.uoguelph.ca/). All announcements will be made on the course website. Please check your website frequently.
- I will be communicating with you via your central email account <uoguelph.ca> from time to time. You are required to check this account on a regular basis. Please be advised that I will not edit my mailing list to your hotmail/yahoo etc. account.
- While I endeavour to check my email daily, students can reasonably expect a response from me within 24 to 48 hours.

# **Course Policies**

# **Grading Policies**

Unless you have discussed an extension well ahead of the due date with the instructor, late penalties of 20% of the total grade earned per day (including weekends) will be assigned to any assessment (i.e. deducted from the total mark). Extensions will only be granted on the basis of valid medical or personal reasons, and need to be requested via email to the instructor as soon as possible. Late assignments will not be accepted once graded assignments have been returned officially to the class at large, unless circumstances permit and alternative arrangements have been made.

Students who find themselves unable to meet course requirements by the deadlines or the criteria expected because of medical or personal reasons, should review the regulations on academic consideration in the Academic Calendar and discuss their situation with the instructor, program counselor or other academic counselor as appropriate.

http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-grds.shtml

# Missed Assignments:

A grade of zero will be assigned if you fail to submit an assignment, unless you are ill or have other compassionate reasons. Please read your Undergraduate Calendar for the regulations regarding illness and compassionate grounds. Please note, vacation travel, moving house, or outside work commitments will not be accepted as valid reasons for missing deadlines.

If you have religious observances which conflict with the course schedule or if you are registered with Student Accessibility Services, please contact the course instructor in order to make arrangements for your assessment if appropriate.

# **University Policies**

# **Academic Consideration**

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id#, and e-mail contact. See the academic calendar for information on regulations and procedures for Academic Consideration:

http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml

# Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Undergraduate Calendar:

https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08amisconduct.shtml

# Accessibility

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact Student Accessibility Services as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 56208 or email sas@uoguelph.ca or see the website: <u>https://wellness.uoguelph.ca/accessibility/</u>

# **Course Evaluation Information**

Please refer to the Course and Instructor Evaluation Website

# **Recording of Materials**

Presentations which are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a classmate or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

### Drop date

The last date to drop one-semester courses, without academic penalty, is Apr 3, 2020. For regulations and procedures for Dropping Courses, see the Academic Calendar:

https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml

Date Submitted to Chair:	
Chair Signature (Approval):	- methit & De
Date Approved by Chair:	