COURSE INFORMATION

Course title:	Business Intelligence for Management		
Course code:	BAIT527	Credits:	1.5
Session, term, period:	2019W1, Period 6	Class location:	ANGU-435
Section(s):	101	Class times:	Mon, Wed 8:00-10:00 AM
Course duration:	Sep 3 to Oct 2, 2019	Pre-requisites:	n/a
Division:	Marketing and Behavioural Science	Co-requisites:	n/a
Program:	MBA		

INSTRUCTOR INFORMATION

Instructor:	Chunhua Wu, Ph.D.		
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Teaching assistant:	Zining Wang
Office hours:	n/a
Email:	zining.wang@sauder.ubc.ca

COURSE DERIPTION

"For every leader in the company, not just for me, there are decisions that can be made by analysis. These are the best kinds of decisions! They are fact-based decisions. "

— *Jeff Bezos*

The vast amount of available internal and external data has created unprecedented challenges as well as opportunities for today's enterprises. Firms are increasingly relying on business intelligence in the decision process to stay competitive in the market. The ability to understand the role of analytics in identifying business problems and seizing opportunities, and further to apply data analytics to enhance business performance has also become a key asset for managers.

This course provides a comprehensive introduction to the concepts, techniques and applications of business intelligence (BI). The class will equip students with a managerial overview of business intelligence, a basic understanding of statistics and economics foundations in BI, a general exposure to real-world BI applications and trends, and hands-on practices of BI software packages.

COURSE FORMAT

The course consists of a mix of lectures, case discussions, software tutorials, assignments and invited guest sessions. All class sessions will be interactive, requiring you to actively participate in and contribute to the class.

LEARNING OBJECTIVES

By the end of this course, students are expected to be able to:

1. Understand basic business intelligence and business analytics terminologies.
2. Use the basic features of business intelligence/analytics tools.
3. Generate data summaries on terabyte-size data in minutes using Google BigQuery.
4. Create and share effective and interactive data visualizations using Tableau.
5. Apply business analytics frameworks to analyze a business situation.
6. Generate business insights from business analytics outcomes.

ASSESSMENTS

Summary

Component	Weight
Assignments	65%
–Group	50%
–Individual	15%
Final exam	25%
Class participation	10%
Total	100%

Details of Assessments

Assignments (65%)

You are expected to finish an assignment every week. The five assignments account for 65% of the grade for the course. The assignments are designed to give you the opportunity to link the lecture contents with real-world practices and applications. Details of the assignments will be announced in the classes.

Assignment 1 (group): Numbers and insights (10%). You and the team need to provide business insights that you derive from the annual report of Costco Wholesale Corporation through 7 numbers. The assignment is due by *September 7, 11:59pm*.

Assignment 2 (group): Business dashboard design (10%). You and the team need to design business dashboards for the store manager at a grocery store. The assignment is due by *September 13, 11:59pm.*

Assignment 3 (group): Yelp reviews data summary (15%). You and the team need to perform data summaries in Google BigQuery using consumer reviews data from Yelp. The assignment is due by *September 20, 11:59pm*.

Assignment 4 (group): Airbnb in Vancouver (15%). You and the team need to data visualizations in Tableau using Airbnb Listing Information in Vancouver. The assignment is due by *September 27, 11:59pm*.

Assignment 5 (individual): Business analytics case analysis (15%). You need to identify a business scenario where business analytics, especially predictive analytics, could (but not yet) create value in the management decision-making process. Please put your analysis onto the AI canvas and write a 1-2 pages summary. The assignment is due by *October 2, 11:59pm*.

Final Exam (25%)

A final exam will be taken in class during the RHL exam period. It accounts for 25% of the course grade. It is an open book/software exam. The exam consists of multiple-choice questions and data analytics

questions. For the data analytics questions, you need to provide answers based on the data given and submit the analysis together with the answers.

Participation (10%)

You are expected to attend all the classes and actively participate in class discussions. Class participation accounts for 10% of your final course grade, and is used to reward students for activating the in-class learning environment. According to the school policy, you will be withdrawn from the course if you miss more than 20% of the classes for reasons other than illness. Participation points will be deducted if you are late to the classroom.
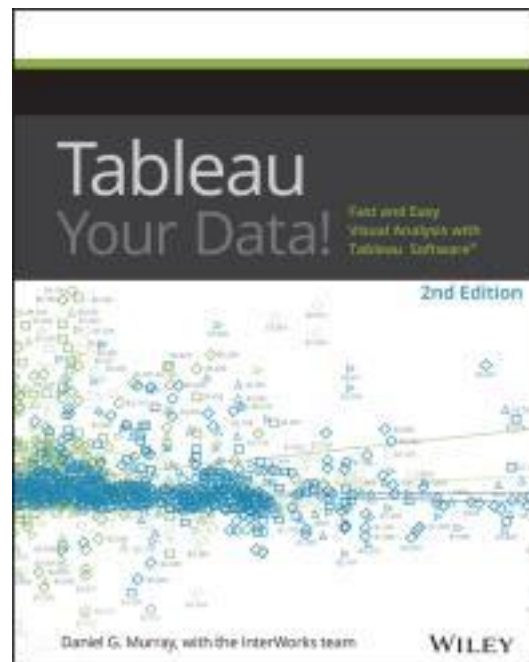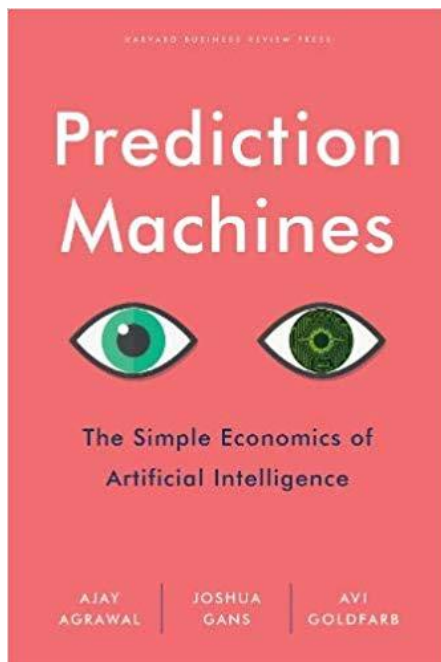
LEARNING MATERIALS

Textbooks

Required: There is no required textbook for this course. We will mostly use customized materials in the course.

Estimated cost of required textbooks: n/a.

Additional textbooks recommended but not required:

1. Prediction Machines: The Simple Economics of Artificial Intelligence, by Jay Agrawal, Joshua Gans, Avi Goldfarb, *Harvard Business Review Press 2018*
2. Tableau Your Data!, by Daniel Murray, Wiley 2016.

Reading Materials

Reading materials will be uploaded on Canvas.

Software and Tools

We will learn the basics of two SaaS/software tools for this course: Google BigQuery and Tableau. You are required to set up accounts, install the software and take the online tutorials before the first class we use them.

Google BigQuery: Please register an account by *September 10, 2019.*

- Please create an account (you can use your existing personal Google account) and sign in to https://cloud.google.com/BigQuery.
- Activate your account, and get $300 credit (free) to explore Google Cloud products.
- A short course to complete before class:
  - https://cloudacademy.com/course/introduction-to-bigquery/. You will have a 7-day free trial when you sign up, so you do not have to pay for this online course.
- Other resources:
  - BigQuery documentation: https://cloud.google.com/bigquery/.

Tableau: Please install the software on your computer by *September 17, 2019.*

- Download URL: http://www.tableau.com/tft/activation.
- Student evaluation license: TBD
- Tutorials to complete before class:
  - http://www.tableau.com/learn/training#getting-started only the "getting started" videos.
- Other resources: Tableau website.

COURSE-SPECIFIC POLICIES AND RESOURCES

Missed or late assignments, and regrading of assessments
Per the standard for RHL courses, late submissions will not be accepted and will receive a grade of zero.

Academic Concessions
If extenuating circumstances arise, please contact the RHL Graduate School program office as early as reasonably possible, and submit an Academic Concession Request & Declaration Form. If an academic concession is granted during the course, the student will be provided options by RHL, or by the instructor in consultation with RHL, per UBC's policy on Academic Concession.

Group Policy
The instructor will assign you to a group at the beginning of the course. Each group will have 3-4 members. Please contribute as much as you can to the group assignments. In the case that you feel other members of your group are not pulling their weights, or are disrupting the functioning of the group, try to resolve the issue yourselves. If you need further assistance you may always contact the instructor for help. We will have formal peer evaluations at the end of the course. Each group member will have the opportunity to evaluate the efforts and contributions of each other. In the case that the intra-group evaluations indicate a problem, the individuals who did not pull in their weights will receive discounted grades.

POLICIES APPLICABLE TO COURSES IN THE ROBERT H. LEE GRADUATE SCHOOL

Attendance
Excepting extenuating circumstances, students are expected to attend 100% of their scheduled class hours. Absent students limit their own academic potential, and that of their classmates, and cause unnecessary disruption to the learning environment. Students missing more than 20% of the total scheduled class hours for a course (including classes held during the add/drop period) without having

received an academic concession will be withdrawn from that course. Withdrawals, depending on timing, could result in a "W" or an "F" standing on the transcript.

Punctuality

Students are expected to arrive for classes and activities on time and fully prepared to engage. Late arrivals may be refused entry at the discretion of the instructor or activity lead. Students arriving later than halfway through a scheduled class will be treated as absent for that class.

Electronic Devices

Devices such as laptops, tablets, and cell phones are not permitted to be used in class unless directed by the instructor for in-class activities. Students who do not follow the School's policy in this regard may be required to leave the room for the remainder of the class, so that they do not distract others. Research shows that students' use of laptops in class has negative implications for the learning environment, including reducing their own grades and the grades of those sitting around them.

Citation Style

Please use the American Psychological Association (APA) reference style to cite your sources.
Details of the above policies and other RHL Policies are available at:
http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,199,506,1625

UNIVERSITY POLICIES AND RESOURCES

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available on the UBC Senate website at https://senate.ubc.ca/policies-resources-support-student-success.

Academic Integrity

The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment or exam and more serious consequences may apply if the matter is referred to the President's Advisory Committee on Student Discipline. Careful records are kept in order to monitor and prevent recurrences.

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All materials of this course (course handouts, lecture slides, assessments, course readings, etc.) are the intellectual property of the instructor or licensed to be used in this course by the copyright owner. Redistribution of these materials by any means without permission of the copyright holder(s) constitutes a breach of copyright and may lead to academic discipline. Audio or video recording of classes are not permitted without the prior approval of the Instructor.]

ACKNOWLEDGEMENT

UBC's Point Grey Campus is located on the traditional, ancestral, and unceded territory of the xwməθkwəy̓əm (Musqueam) people, who for millennia have passed on their culture, history, and traditions from one generation to the next on this site.

COURSE SCHEDULE

Below is the tentative class schedule. It is subject to change depending on the learning progress and outcomes. "PM" refers to the "Prediction Machines" book; "TD" refers to the "Tableau Your Data!" Book. "RM" refers to reading materials that will be posted on Canvas.

Class	Date	Topic	Readings or Activities	Assessments due
1	2019-09-04 Wed	Business Intelligence Introduction Course plan	RM PM Ch. 1-6	
2	2019-09-06 Fri	The Economics of Data	RM PM Ch. 7-11	A. 1: Numbers and Insights (due Sep 7 11:59pm)
3	2019-09-09 Mon	Business Performance Dashboard Assignment 1 Discussion	RM	
4	2019-09-11 Wed	Data Preparation BigQuery Basics	BigQuery Tutorial	A. 2: Dashboard Design (due Sep 13 11:59pm)
5	2019-09-16 Mon	SQL Language BigQuery Practices	RM	
6	2019-09-18 Wed Wed	Descriptive Analytics Tableau Introduction	Tableau Tutorial	A. 3: Explore Yelp Reviews (due Sep 20 11:59pm)
7	2019-09-23 Mon	Effective Data Visualization Tableau Practices	TD Ch. 3-6	
8	2019-09-25 Wed	Predictive Analytics	PM Ch. 12-14	A. 4: Airbnb in Vancouver (due Sep 27 11:59pm)
9	2019-09-30 Mon	Prescriptive Analytics	PM Ch. 15-19	
10	2019-10-02 Wed	Guest Lecture BI/BA Applications		A. 5: BA case analysis (due Oct 2 11:59pm)
	TBD	Final Exam		