HACOURSE INFORMATION

Course title:	Fundamentals of Analytics & Technology		
Course code:	BA 515	Credits:	1.5
Session, term, period:	Class of 2024, Period 2	Class location:	HA 132 (10am-12pm)
			HA 133 (2pm-4pm)
Section(s):	001, 002	Class times:	Mon/Wed 10am-12pm (Section 001)
			Mon/Wed 2pm-4pm (Section 002)
Course duration:	Oct. 31-Nov. 30, 2022	Pre-requisites:	n/a
Division:	AIS (Information Systems)	Co-requisites:	n/a
Program:	FT-MBA		

INSTRUCTOR INFORMATION

Instructors:	Gene Moo Lee, Adam Saunders		
Phones:	604.827.4459 (Lee)	Office location:	HA 372 (Lee)
	604.822.9956 (Saunders)		HA 673 (Saunders)
Emails:	Adam.Saunders@ubc.ca	Office hours:	TBD
	Gene.Lee@ubc.ca		

Teaching assistants:	Xiaoke Zhang, Jaecheol Park
Office hours/location:	TBD
Contact:	[Piazza discussion board](#)

COURSE DESCRIPTION

BA 515 is an introduction to business analytics and technology. There are two goals: First, we introduce the fundamental concepts of analytics and technology platforms (e.g., big data, AI, machine learning) and their implications to the economy. Second, we provide hands-on programming experiences to acquaint students with the Python programming language and its rich ecosystem for data processing, data visualization, and text analytics.

COURSE FORMAT

Class time will be used for a combination of lectures, discussions, and hands-on programming. Lectures and discussions will assume that students having read the materials before class.

LEARNING OBJECTIVES

By the end of this course, students will be able to:
1. Explain how firms are using digitization, automation, data and analytics in order to make better decisions and be more competitive.
2. Have coding literacy with hands-on experience in Python programming.
3. Have data literacy with basic data visualization and text analytics in Python.

LEARNING MATERIALS

1. Canvas: course management, announcement, assignments, grade posting
2. Required book: *Machine, Platform, Crowd: Harnessing Our Digital Future* (Andrew McAfee and Erik Brynjolfsson; 2017, WW Norton). Note: any edition is fine.
3. Slides and codes: [Dropbox link for slides, codes, and data](#)
4. Technology requirements: Laptop with Python 3 environment (e.g., [Anaconda](#), UBC Jupyter)

5. DataCamp: online learning and assignments (**free access** will be provided by instructor)
6. Piazza: online discussion forum (Let's not use email for Q&A)

ASSESSMENTS
Summary

Component	Weight
Class Participation	10%
iClicker Questions	10%
Reading Quizzes	5%
DataCamp Assignment	15%
Group Project	30%
Final Writeup	30%
Total	100%

Details of Assessments

Class Participation (10%)
Qualitative portion of class (5%)
A student's participation level (quantity and quality) will be recorded in every lecture. Students may receive verbal participation marks for asking questions of the course instructor and/or answering questions posed by the course instructor. Only the best 4 out of 5 lectures will be used to calculate a student's final course grade.

Quantitative portion of class (5%)
Effective class participation includes: (1) solving questions during the lecture, (2) asking significant questions, (3) sharing your point of view with the class, and (4) building on points raised by others. The participation can be either in lecture or in Piazza (the online Q&A platform we use). Note that office hour visits are not counted as course participation. Piazza allows students to post questions (publicly, anonymously, and privately) and to answer questions from the peers. Providing thorough and clear answers and ideas on the Piazza discussion board will be considered when calculating your participation grade. We will consider both quantity and quality of the class participation. The Instructor team does not accept course-related questions via email, so please post your questions on Piazza.

Find our class page at: https://piazza.com/ubc.ca/winterterm12022/ba515ftmba2022w

iClicker Questions (10%)
Qualitative portion of class (10%)
Multiple-choice iClicker questions will be given in class. Only the best 4 out of 5 lectures will be used to calculate a student's final course grade. Although students will receive partial marks for merely attempting the questions, full marks will be awarded for answering the questions correctly.

Reading Quizzes (5%)
Reading quizzes are tested through multiple-choice questions on Canvas before the corresponding readings are discussed in class. Only the best 4 out of 5 reading quizzes will be used to calculate a student's final course grade.

DataCamp Assignment (15%)

Learning programming requires a lot of hands-on practice. To provide a rich practice environment, you will be provided a free, unlimited access to DataCamp. You will be assigned to complete one course: Introduction to Data Science in Python. You are free to explore other DataCamp courses outside this class.

Group Project (30%)

There will be one group project on social media analysis. Details, including submission guidelines, will be posted on Canvas. The class will be divided into groups of three or four within the same section. You are free to choose your own group. We may use iPeer to conduct peer-reviews, which results can be used to give differential marks for individuals. Please consult with the Instructor team on any group-related issues.

Final Writeup (30%)

A five-page writeup based on the course readings is due by Friday, December 2nd at 12pm. The details and guidelines of the writeup can be found on Canvas. Students can submit writeups individually or work in a group of up to four, with a teammate of their choosing from BA 515.

Course-specific Policies and resources

Grace Period for all assessments

Students are given a one-hour grace period after the due date for all assessments. During this extra hour, submissions are considered late, but no penalty is assessed. Students will receive a grade of zero for anything submitted after the one-hour grace period unless academic concession has been granted.

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 https://webforms.sauder.ubc.ca/academic-concession-rhlee. 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.

Communication and feedback

1. For course related communication, please use Piazza (no emails!). For general questions that apply to the whole class, you can use create a public Piazza post publicly or anonymously (in this case other students do not know your identity). For private questions that only apply to yourself, you can create a private post in Piazza, which only instructors can see.
2. The TA and the Instructor will try the best to respond to your questions within one business day. Please note that business day does not include weekends and holidays.
3. We expect you to keep professionalism and respect when communicating with your Instructor, TA, and peers.

Code Plagiarism

Code plagiarism falls under the UBC policy for Academic Misconduct. Students must correctly cite any code that has been authored by someone else or by the student themselves for other assignments. Cases of "reuse" may include, but are not limited to:

a. the reproduction (copying and pasting) of code with none or minimal reformatting (e.g., changing the name of the variables)
b. the translation of an algorithm or a script from a language to another
c. the generation of code by automatic code-generation software

An "adequate acknowledgement" requires a detailed identification of the (parts of the) code reused and a full citation of the original source code that has been reused.

Students are responsible for ensuring that any work submitted does not constitute plagiarism. Students who are in any doubt as to what constitutes plagiarism should consult their Instructor before handing in any assignments.

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
Qualitative classes
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.

Quantitative classes
This is a programming course, and I encourage students to use their laptops or tablets to follow the course. However, please limit the usage to the course related activities. Cellphones are not permitted. During lectures, students are not permitted to use electronic devices other than the primary one used for attending the lecture (e.g., laptop or desktop).

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.

Respect for Equity, Diversity, and Inclusion

The UBC Sauder School of Business strives to promote an intellectual community that is enhanced by diversity along various dimensions including status as a First Nation, Metis, Inuit, or Indigenous person, race, ethnicity, gender identity, sexual orientation, religion, political beliefs, social class, and/or disability. It is critical that students from diverse backgrounds and perspectives be valued in and well-served by their courses. Furthermore, the diversity that students bring to the classroom should be viewed as a resource, benefit, and source of strength for your learning experience. It is expected that all students and members of our community conduct themselves with empathy and respect for others.

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.

Specifically, this course has programming assignments. In the world of Internet, it can be tempting to copy and paste the codes. But we take code plagiarism issues very seriously. Copying code or data (either fully or partially) is considered as academic dishonesty. If you use open-source code in the assignments, you should put an appropriate reference to it (e.g., URL) and respect the appropriate software license (e.g., GLP, MIT, Apache, etc.). If you are not sure about the boundary, please contact the Instructor. 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.

COPYRIGHT

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 and could be subject to legal action. Any lecture recordings are for the sole use of the instructor and students enrolled in the class. In no case may the lecture recording or part of the recording be used by students for any other purpose, either personal or commercial. Further, audio or video recording of classes are not permitted without the prior

consent of the instructor. Students may not share class Zoom links or invite others who are not registered to view sessions.

COVID-19 Considerations

All students must assess themselves daily for COVID-19 symptoms prior to coming to class. Please stay home if you exhibit symptoms or have tested positive for COVID-19. A list of COVID-19 symptoms can be found here. Use the BC Ministry of Health's self-assessment tool, to help determine whether further assessment or testing for COVID-19 is recommended. Full UBC COVID-19 Campus Rules can be found here.

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

(Subject to change with class consultation)

Week	Class	Date	Topics	Readings	Assignments
1	1	10/31	Course Introduction	*Machine Platform Crowd* Chapter 1	Reading Quiz 1
	2	11/2	Hello Python Data types: string, list		
2	3	11/7	Decision Making	*Machine Platform Crowd* Chapter 2	Reading Quiz 2
	4	11/9	Data visualization (matplotlib) Logic, if condition, filtering		DataCamp due 11/12
3	5	11/14	Artificial Intelligence	*Machine Platform Crowd* Chapter 3	Reading Quiz 3
	6	11/16	for loop Data analysis (pandas)		
4	7	11/21	The Core vs. The Crowd	*Machine Platform Crowd* Chapter 10-11	Reading Quiz 4
	8	11/23	Text analytics, Word cloud Sentiment analysis		
5	9	11/28	Blockchain	*Machine Platform Crowd* Chapter 12	Reading Quiz 5
	10	11/30	Group project workshop		12/2, 12pm Final Writeup
Exam Week			Group Project due	TBD by RHL	

Monday classes (qualitative) will be taught by Adam Saunders and Wednesday classes (quantitative) will be taught by Gene Moo Lee.