

COURSE INFORMATION

Course title:	Fundamentals of Analytics and Tech		
Course code:	BA 515	Credits:	1.5
Session, term, period:	2020W1, Period 1	Class location:	Online
Section(s):			Tue/Thu 10am-12pm Tue/Thu 2pm-4pm
	DD1		
	DD2		
Course duration:	Sept. 14- Oct. 16, 2020	Pre-requisites:	n/a
Division:	AIS (Information Systems)	Co-requisites:	n/a
Program:	MM-Dual Degree		

INSTRUCTOR INFORMATION

Instructor:	Adam Saunders, Ph.D.		
Phone:	604.822.9956	Office location:	Henry Angus 673
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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 Python programming language and its rich ecosystem for data processing.

COURSE FORMAT

We will use Zoom to have our classes during the scheduled class times. Class time will be used for a combination of live lectures, live programming, and group/class discussions. Lectures and discussions will assume that students having pre-read the corresponding materials as listed in the course schedule.

LEARNING OBJECTIVES

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

1. Explain how firms are using digitization and automation, data and analytics, platforms, and crowdsourcing in order to reach business objectives, mitigate threats, seize opportunities, and be competitive.
2. Through hands-on experience with Python programming, have working knowledge on the basics of managing and analyzing datasets.

ASSESSMENTS

Summary

<u>Component</u>	<u>Weight</u>
In-Class Exercises	10%
In-Class “Quiz” questions	10%
Python Assignment	10%
Final Writeup	20%
Final Exam	50%
Total	<u>100%</u>

Details of Assessments

In-class Exercises (ICEs) 10%

- Students can work individually or in groups of any size. If you work in groups, you must still submit your own responses on Canvas.

In-Class “Quiz” Questions 10%

- Multiple-choice “Quiz” style questions will be given in class (using the Zoom polling feature).
- Only the best 9 out of 10 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.
- In order to receive credit, students need to attend their own section.

Python Assignment 10%

- There is a Python programming assignment worth 10% of the final course grade.
- Students can work individually or in groups of any size (from either section of BA 515). If you work in groups, you must still submit your own responses on Canvas.

Final Writeup 20%

- A five to six page writeup based on the course readings is due by Friday, October 16th at 4pm.
- The details and guidelines of the writeup can be found on Canvas.
- Students can submit writeups individually or work in pairs, with a teammate of their choosing from either section of BA 515.

Final Exam 50%

- There will be one written exam at the end of the course. You are responsible for everything that is covered in the classroom, including additional materials discussed in class. The exam will be open book and notes.
- The exam is scheduled for the week of October 19-23. The exact time will be set by RHL Operations Team and will be announced when available.

LEARNING MATERIALS

Required Reading Materials: *Machine, Platform, Crowd: Harnessing Our Digital Future* (Andrew McAfee and Erik Brynjolfsson; 2017, WW Norton).

Estimated cost of required materials: \$25.

Required Software: Python

Python is available for free, and instructions for installation will be given well ahead of time on Canvas. The easiest place to download Python is through the Anaconda Python distribution. It is an all-in-one package and most students will find this to be the easiest way to get started. No previous experience is assumed for this software. Most students will be able to install Python without a problem, and the BA 515 Team will do our very best to help students install Python on their own computers if they are having trouble. If students cannot install Python themselves, we will give instructions as to how to use Python in the cloud.

Additional Materials Highly Recommended but Not Required:

- *Introduction to Computing Using Python: An Application Development Focus, 2nd Edition* (Ljubomir Perkovic; 2015, Wiley).
- *Mindset: The New Psychology of Success* (Carol S. Dweck; 2007, Ballantine).

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 (except the final exam). 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.

Re-grading of Assessments

Great care is taken so as to uphold marking integrity. Should there be a suspected grading error, however, please make a request for re-marking via email to the instructor. Reasons for each re-marking request must be clearly explained in writing. The assessment will be reviewed in its entirety, from scratch, which may result in a positive, negative, or no grade change being made.

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) <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](#).

Other Course Policies and Resources

In-Class Exercises and Assignments

All in-class exercises and assignments are to be submitted on Canvas. No other method will be accepted (e.g., email or hard copy).

ALL times listed on the Course Schedule are for the local time in Vancouver, British Columbia, Canada (Pacific Daylight Time).

Calculation of Final Course Grades

A student's final course grade in BA 515 will be calculated "as is" in accordance with the Assessment Breakdown in this Course Outline.

In other words, a student does not necessarily have to pass the exam components of the course in order to pass the course, so long as s/he receives a final course grade of at least 49.50 out of 100. The reverse is also true—it is possible for a student who passed the exam components of the course to still fail the course if s/he had not performed satisfactorily in other components of the course.

Use of Discussion Board

A discussion board will be provided for all students to discuss and share ideas, concepts and questions relating to BA 515. The course instructor and the TAs will be monitoring this forum on a regular basis. Students are encouraged to use it to ask course-related questions, except for personal issues or requests for in-person help.

Many students, however, may still prefer to ask questions through email, and the BA 515 Team will cheerfully respond to every email they receive. Students are encouraged to include their UBC name and student number in their emails to the course instructor or the TAs.

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

During online lectures, students are not permitted to use any electronic devices other than the primary one used for attending the online lecture (e.g. laptop or desktop). Only Zoom should be open during the online lecture unless an instructor advises the use of another program/website for an in-class activity. Feedback from students indicates that personal devices are the number one distraction from effective learning and participation in the online learning environment.

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. 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.

Academic Freedom and Students Studying from Outside Canada

During this pandemic, the shift to online learning has greatly altered teaching and studying at UBC, including changes to health and safety considerations. Keep in mind that some UBC courses might cover topics that are censored or considered illegal by non-Canadian governments. This may include, but is not limited to, human rights, representative government, defamation, obscenity, gender or sexuality, and historical or current geopolitical controversies. If you are a student living abroad, you will be subject to the laws of your local jurisdiction, and your local authorities might limit your access to course material or take punitive action against you. UBC is strongly committed to academic freedom, but has no control over foreign authorities (please visit <http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,33,86,0> for an articulation of the values of the University conveyed in the Senate Statement on Academic Freedom). Thus, we recognize that students will have legitimate reason to exercise caution in studying certain subjects. If you have concerns regarding your personal situation, consider postponing taking a course with manifest risks, until you are back on campus or reach out to your academic advisor to find substitute courses. For further information and support, please visit: <http://academic.ubc.ca/support-resources/freedom-expression>

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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 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.

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.

ONLINE TEACHING TOOL & REQUIREMENTS

This course will be taught using Zoom for synchronous classes and office hours.

For this course, you are required to use a Zoom account during synchronous classes and office hours. If you do not have a Zoom account, you can create one here: <https://zoom.us/signup>. Note: creating a Zoom account requires that you provide a first name, last name, and email address to Zoom. For privacy purposes, you may consent to using your existing email address and your real name. Alternatively, if you prefer, you may sign up using an alternative email address and an anonymized name that does not identify you (i.e. Jane Doe, jane.doe@email.com). If you have trouble creating an account, or accessing a Zoom session, please contact CLCHelp@sauder.ubc.ca. You will be required to provide the email address associated with your Zoom account in a Canvas quiz for identification purposes.

To help replicate the classroom experience, make sessions more dynamic and hold each person accountable, both students and instructors are required to have their cameras on during Zoom sessions. Students who require an accommodation with regard to the "camera on" requirement must contact their instructors in advance of the first class to discuss options. As professional graduate students, students are expected to conduct themselves professionally by joining sessions on time, muting mics when not speaking, refraining from using any other technology when in-session, attending in business casual dress (at a minimum), and participating from a quiet environment. Content from synchronous sessions will be selectively recorded per instructor discretion and made available to students on Canvas for a maximum duration of the course length. This is done to allow students the opportunity to return to lecture content to solidify learnings.

COURSE SCHEDULE

(Subject to change with class consultation)

Class	Synchronous Or Asynchronous	Date	Topic	Readings or Activities	Assessments due
1	Synchronous	Tue. Sept. 15	Introduction	MPC Ch. 1 Introduction to Python	
2	Synchronous	Thu. Sept. 17	Humans vs. Machines: Decision-making	MPC Ch. 2 Python, Part 2	ICE-1 due Tue. Sept. 22 at 9am
3	Synchronous	Tue. Sept. 22	AI and Machine Learning	MPC Ch. 3-4 Python, Part 3	
4	Synchronous	Thu. Sept. 24	Platform Disruption	MPC Ch. 6-7 Python, Part 4	ICE-2 due Tue. Sept. 24 at 9am
5	Synchronous	Tue. Sept. 29	The Core vs. The Crowd	MPC Ch. 10, Part 1 Python, Part 5	
6	Synchronous	Thu. Oct. 1	Vital Principles for Crowds	MPC Ch. 10, Part 2 Python, Part 6	ICE-3 due Tue. Oct. 6 at 9am
7	Synchronous	Tue. Oct. 6	Crowd Success Stories	MPC Ch. 11 Python, Part 7	
8	Synchronous	Thu. Oct. 8	Blockchain	MPC Ch. 12 Python, Part 8	
9	Synchronous	Tue. Oct. 13	Decentralizing all things	MPC Ch. 13 Python, Part 9	Python Assign. due Tue. Oct. 13 th at 9am
10	Synchronous	Thu. Oct. 15	Review and Farewell	TBA	Final Writeup due Fri. Oct. 16 th at 4pm
<i>Final Exam Week of Oct. 19-23rd Time and date to be scheduled by RHL Operations Team.</i>					