COURSE INFORMATION

Course title:	Customer Analytics		
Course code:	BAMA 520	Credits:	2
Session, term, period:	Period 4	Class location:	Angus 337 (BA1) & 435 (BA2)
Section(s):	BA1 & BA2	Class times:	M/W 2-4pm PST
Course duration:	Mar 6 to Apr 6, 2023	Pre-requisites:	n.a
Division:	Marketing & Behavioural Science	Co-requisites:	n.a
Program:	MBAN		

INSTRUCTOR INFORMATION

Instructor:	Yanwen Wang		
Phone:	604-827-0078	Office location:	Over zoom
Email:	yanwen.wang@sauder.ubc.ca	Office hours:	By appointment

Teaching assistant:	Zining Wang
Email:	zining.wang@sauder.ubc.ca

COURSE DESCRIPTION

Traditionally, marketers have focused on the acquisition of new customers through mass advertising and price-oriented promotions, accepting as a fact of life that newly acquired customers would eventually switch to competitors. Today, the focus has changed from customer acquisition to customer development and retention, particularly for the firm's best customers. This shift from customer acquisition to development and retention requires a new mindset from product-centric to customer-centric management and raises new questions. For instance, what is the maximum amount a firm should spend to acquire a customer? Should firms want to keep their customers forever? What can be learned from customer defection?

New forms of information technology provide increasingly rich data of individual-level customer behavior to address these issues but few firms have the expertise to intelligently act on such information. This course will provide students with the analytical tools that are necessary for understanding and predicting customer behavior and assessing customer lifetime value. The course will be grounded in relevant academic work as well as cases and exercises covering a broad set of industries and applications.

You will develop a deep understanding of customer centricity and its implications for the firm, learn about state-of-the-art methods for calculating customer lifetime value and customer equity, and develop the analytical and empirical skills that are needed to judge the appropriateness, performance, and value of different statistical techniques that can be used to address issues around customer acquisition, development, and retention.

COURSE FORMAT

Class time will be used for a combination of lectures, discussion, solving sample problems, and case discussions. Attendance is expected to accomplish the learning objectives below. Lectures and discussions will assume that students having pre-read the corresponding chapters and case studies as listed in the course schedule below.

LEARNING OBJECTIVES

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

1. Understand the importance of customer-centric valuation
2. Link customer satisfaction, loyalty program, and recommendation system with the broad concept of customer relationship management
3. Apply key customer value analytics tools to a real customer database
4. Recommend strategies based on customer relationship analytics

ASSESSMENTS

Summary

Component	Weight
Individual assignments	5 %
Group assignments	39 %
Final exam	50 %
Class participation	6 %
Total	100%

Details of Assessments

Individual Assignments (5%)
There is one individual assignment during the term. The objective is to help you gain better understanding of the skills taught in class.

Group Assignments (13%*3)
Each group has 4 team members. You will stay in the same team for all the group assignments. If you want to choose team member and form your own team, please form your teams on Canvas under the "People - > Group Assignment" sector by midnight Mar 5 2023. If you do not form a team by then, I will randomly assign you to a group and reveal group formation information in class on Mar 6 2023.

Please answer all the suggested questions for each group case write up. The objective is to help you learn data analysis skills through practice and from each other. Group assignments must be prepared individually for each group. Sharing work across groups is strictly prohibited in line with the RHL Academic Misconduct Regulations. Peer evaluations will be conducted at the end of semester.

Peer evaluations will be completed at the end of the term to provide feedbacks on how team members think each member (including their own) is contributing to the group project. Individual grades on group assignment may be subject to adjustment following my review of peer evaluations. Reductions can be significant, ranging from a decrease of 10% to a decrease of 100% if an individual has contributed little or nothing to the team's work. In most instances, where team members are reliable and contribute, no adjustments are made.

Students are required to complete peer evaluations by the specified deadline (announced before the end of the class). Failure to complete the evaluation will result in a 10% reduction in the mark received for the group assignment portion of this course (for example if you got 35 out of 35 on the group assignment score and did not complete peer evaluations your total group score will be adjusted to 31.5). Please ensure that you complete the peer evaluations on time.

Class Participation (6%)
We will devote a significant portion of class time to solving practice problems and cases. In order to maximize the benefits to you, it is of utmost importance that you be prepared to discuss the materials during class. For effective class participation includes:
- (1) complete all the class-activity on time. All the class surveys are designed to help facilitate in-class discussions.
- (3) install all the software prior to the in-class lab sessions,
- (4) ask questions about concepts related to class or lecture contents,
- (5) share your experience or point of view with the class,

Note that attending class and not speaking has neither a positive nor a negative impact on your participation score.

Final Exam (50%)
The final exam will be online with Lockdown Browser. All the browsers will be locked down except access to Canvas.

LEARNING MATERIALS
Course pack
There is no required textbook for this course. Instead, we will use **a combination of cases and articles** for readings. All the class materials can be accessed from Canvas or through purchase (see Course Pack info below).

Course Pack

1. Go to the Ivey Publishing website at www.iveypublishing.ca
2. Log in to your existing account or click "Register" to create a new account and follow the prompts to complete the registration. If registering, choose the "Student" role.
3. Click on this link or copy into your browser: https://www.iveypublishing.ca/s/ivey-coursepack/a1R5c00000EivohEAB
4. Click "Add to Cart".
5. Go to the Shopping Cart (located at the top of the page), click "Checkout", and complete the checkout process.
6. When payment has been processed successfully, an Order Confirmation will be emailed to you immediately and you will see the Order Confirmation screen.
7. Once you have completed your order, click on your username on the top right --> Orders --> Downloads

IMPORTANT: Access to downloadable files will expire 30 days from the order date, so be sure to save a copy on your computer. The downloadable file is a PDF document that can be opened using Adobe Reader.
This material is for your personal use only and is not to be shared or distributed in any form.

You will also be required to use several market research tools including R and Rstudio in this course. Please follow the instructions below to install the software.

Data analysis software
R and Rstudio
- Install r-base: https://mirror.its.sfu.ca/mirror/CRAN/
- Install RStudio desktop Free version: https://www.rstudio.com/products/rstudio/download/

COURSE-SPECIFIC POLICIES AND RESOURCES
Missed or late assignments, and regrading of assessments
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 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
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:
- the reproduction (copying and pasting) of code with none or minimal reformatting (e.g., changing the name of the variables)
- the translation of an algorithm or a script from a language to another
- the generation of code by automatic code-generations 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.

COVID-19 Policies for Attendance & Academic Concessions:
If a student feels unwell, they should stay home and send a courtesy email to each impacted instructor and cc their program manager. The student should also submit an Academic Concession Request & Declaration Form.

If a student suspects possible COVID-19 infection, they should use the BC Ministry of Health's self-assessment tool, to help determine whether further assessment or testing for COVID-19 is recommended.

If a student is required to self-isolate (e.g., while waiting for test results), they should follow the steps above (stay home, email instructor(s) and program manager, submit an Academic Concession Request & Declaration Form, and follow BC Health Guidance.

Students who are required to quarantine, should get in touch with their Program Manager to discuss the possibility of academic concessions for each impacted course. The Program Manager will work closely with your instructors to explore options for you to make up the missed learning.

COVID-19 Safety in the Classroom:
Visit the following website for the most recent updates regarding COVID-19 protocol on campus:
https://students.ubc.ca/campus-life/returning-to-campus

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
In-Person Regulations
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.

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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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.

COURSE SCHEDULE
(Subject to change with class consultation)

Class	Date	Topic	Individual Assignment	Group Assignment
1	Mar 6 (M)	Introduction to Customer Analytics		
2	Mar 8 (W)	Customer Lifetime Value Monte Carlo Simulation		
6	Mar 13 (M)	Linear Regression Margins		
7	Mar 15 (W)	Response Model I Customer Acquisition and Retention		Group assignment 1 Maru Batting Case
3	Mar 20 (M)	Response Model II Customer Acquisition and Retention	Book Transaction RFM	
4	Mar 22 (W)	Survival Analysis		Group assignment 2 Pilgrim Bank
5	Mar 27 (M)	Clustering I Customer Segmentation		
8	Mar 29 (W)	Clustering II Customer Segmentation		Group assignment 3 Educational Service
9	Apr 3 (M)	Collaborative Filtering I Recommender System		
10	Apr 5 (W)	Collaborative Filtering II Recommender System		