## COURSE INFORMATION

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| Course title: | Customer Analytics | | |
| Course code: | BAMA 520 - 011 | Credits: | 2 |
| Session and term: | 2024W1 | Class location: | Angus 437 |
| Section(s): | 001 | Class times: | M/W 10-12pm PST |
| Course duration: | Sep 4 – Oct 4 | Pre-requisites: | n/a |
| Division: | MBS | Co-requisites: | n/a |

## INSTRUCTOR INFORMATION

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|---|---|---|---|
| Instructor: | Yanwen Wang | | |
| Phone: | 604-827-0078 | Office location: | HA 570 |
| Email: | Yanwen.wang@sauder.ubc.ca | Office hours: | by appointment |

## 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 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

## SUSTAINABLE DEVELOPMENT GOALS (SDGS)

At UBC Sauder, we are committed to responsible business practices that can have transformative impacts on society. One of the ways we are reinforcing our commitment to responsible business is by showcasing relevant content in our courses via the lens of the United Nations Sustainable Development Goals. In this course, we will touch on topics that relate to the following goals:

| Sustainable Development Goal | Description of how and when the goal is covered in the course. |
|---|---|
| **Goal 9: Industry, Innovation and Infrastructure** | In week 3, we will have one full class dedecated to how GPT presents opportunities and challenges in data analysis and problem solving. |
| **Goal 10: Reduced Inequality** | In week 5, we will have reading, lecture content, and group discussions on how segmentation can treat consumers differentially based on various demographic differences, which can impact consumers' access to different products and services. |

## ASSESSMENTS

### Summary

| Component | Weight |
|---|---|
| Individual Assignments | 15% |
| Group Assignments | 50% |
| Class participation | 15% |
| Final Exam | 20% |
| Total | 100% |

### Details of Assessments

**Individual Assignments (10%+5%)**

There are three individual assignment during the term. The objective is to help you gain a better understanding of the skills taught in class.

**Group Assignments (10%*5 )**

Each group has 5 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 Sep 3 2024. 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 Sep 4 2024.

Please answer all the questions for each group case. 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 feedback on how team members think each member (including their own) is contributing to the group project. Individual grades on group assignments 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 50 out of 50 on the group assignment score and did not complete peer evaluations your total group score will be adjusted to 45). Please ensure that you complete the peer evaluations on time.


**Class Participation (15%)**

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
- (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 (20%)**

The final exam will be a computer-based multiple choice exam. Details to be reviewed in class.


## 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).

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/a1R5c00000FvZroEAF

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.

**Data analysis software**

You will also be required to use several market research tools including Tableau, Excel Analysis ToolPak, and GPT in this course. Please follow the instructions below to install the software.

**Tableau**

1. Download the latest version of Tableau Desktop and Tableau Prep Builder here https://www.tableau.com/tft/activation
2. Click on the link above and select "Download Tableau Desktop" and "Download Tableau Prep Builder". On the form, enter your school email address for Business E-mail and enter the name of your school for Organization.
3. Activate with your product key: **To be distributed later**
4. Already have a copy of Tableau Desktop installed? Update your license in the application: Help menu → Manage Product Keys

**Excel Analysis Toolpak**

You must have Excel 2019/2016 for Mac or 2019/2016/2013 for Window. UBC provides access to download Microsoft 365 for free (Microsoft 365 includes Excel 2016). Here's the link: https://it.ubc.ca/services/desktop-print-services/software-licensing/office-365-students

**Mac Users**

- Click the Tools menu, and then click Excel Add-Ins.
- In the Add-Ins available box, select the Analysis ToolPak check box, and then click OK.
- If Analysis ToolPak is not listed in the Add-Ins available box, click Browse to locate it.

- If you get prompted that the Analysis ToolPak is not currently installed on your computer, click Yes to install it.
- Quit and restart Excel. Now the Data Analysis command is available on the Data tab and the Tools menu.

**Windows Users**
- Click the File tab, and then click Options.
- Click Add-Ins, and then in the Manage box, select Excel Add-ins.
- Click Go. In the Add-Ins available box, select the Analysis ToolPak check box, and then click OK.
- If Analysis ToolPak is not listed in the Add-Ins available box, click Browse to locate it.
- If you get prompted that the Analysis ToolPak is not currently installed on your computer, click Yes to install it. After you load the Analysis ToolPak, the Data Analysis command is available in the Analysis group on the Data tab.

**GPT**

- Pls visit https://chatgpt.com/ . Only a free version account is required for this class.


## NO DISTRIBUTION OF RECORDINGS
There is no distribution of recordings of class. Classes are designed as and are intended to be in-person. Your attendance is expected. If you are unable to attend, the policy regarding missed classes described in this syllabus applies. It is your responsibility to ensure that you have the materials you need for missed classes.


## 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 Policy*
*Requesting Academic Concessions*
If you experience unanticipated events or other circumstances that constitute valid grounds for academic concession as defined by UBC's Academic Concession Policy, complete and submit the Academic Concession Request & Declaration Form. Concessions are time-senstive and the online form should be submitted within 48 hours of the missed deadline. Upon submission, your request will be recorded in the RHL and you will also receive an email with further insturctions. Please read this email carefully and be sure to also refer to the relevant course syllabus for each concession tht you have requested. Please know that you should continue to work on the coursework for the course(s) which you submitted a concession fo. You should anticipate being asked to submit work or write an exam as soon as the circumstances affecting your ability to fulfil your academic responsibilities are resolved.


### *Other Course Policies and Resources*
Policies on assessment due prior to students joining the course (i.e., during the add/drop period).

### 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.

### 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.

### 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 Indigeneity (including identification as First Nation, Métis, or Inuit), 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.

### Use of Artificial Intelligence

**Generative AI Permitted Where Specified With Attribution**
For this course, students may use generative artificial intelligence (AI), including ChatGPT, for specific assessments or coursework, where it is expressly specified by the instructor. In these cases of permitted use, students must disclose any use of AI-generated material as per the assessment guidelines. At a minimum, this will include proper attribution, including in-text citations, quotations and references. Please see your assessment guidelines for full details.

### 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.

### 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 consultation)

| Class | Date | Topic | Readings or Activities | Assessments due |
|---|---|---|---|---|
| 1 | Sep 4 (W) | Introduction to Customer Analytics | | |
| 2 | Sep 6 (F) | Customer Lifetime Value | Maru Batting Case | |
| 3 | Sep 9 (M) | Value of Data | Conquistador Beer | IA 1 due<br>GA 1 in class |
| 4 | Sep 11 (W) | Data Visualization I | Software installation | IA 2 due |
| 5 | Sep 16 (M) | Data Visualization II | JD.com | GA 2 in class |
| 6 | Sep 18 (W) | Market Demand - Linear Regression I | Movie Box Office | |
| 7 | Sep 23 (M) | Market Demand - Linear Regression II | | GA 3 in class |
| 8 | Sep 25 (W) | Customer Acquisition and Retention - Logistic Regression | | GA 4 in class |
| 9 | Oct 2 (W) | Field Experiment and Advertising Evaluation | StarDigital Case | GA 5 in class |
| 10 | Oct 4 (F) | Topics on GPT and class review | | |