UCD Michael Smurfit
Graduate Business School

MKT 42400: Consumer Insights & Analytics

Fall Trimester 2023/24

Time (Room):	15332	Tuesday	09:00-12:00 (Th1-GSB)
	15333	Tuesday	14:00-17:00 (E201-GSB)
	15334	Wednesday	09:00-12:00 (C201-GSB)

Office Hours (Room): By appointment

Instructors: David DeFranza
Marius Claudy

Email: david.defranza@ucd.ie
marius.claudy@ucd.ie

Marketers can now utilize a fast-growing volume of customer data to generate insights and make better decisions. Yet, data is not information, and information is not insight. Data is only of value when it is collected rigorously, analyzed correctly, and more importantly, when it is translated into insights that help marketers to make better decisions. This course aims to highlight latest advances in customer insights and analytics and to understand the benefits and limitations of various approaches. You'll learn how to translate business problems into research questions, and how to evaluate and implement appropriate research designs, and how to generate marketing insights from online and offline data.

Learning Outcomes

By working through a series common business problems and relevant case studies, this module aims to improve your data literacy and quantitative reasoning skills as they apply to marketing. At the end of this module, you should be able to:

1. Understand how to read and interpret customer data
2. Learn how to collect, clean, analyze and interpret data from sources such as surveys, websites, apps, or geo-tracking.
3. Learn about various methods to analyze customer data
4. Comprehend the difference between correlation and causation
5. Understand the basic concepts of predictive analytics
6. Learn about key (customer) metrics like ROI and CLV

Required Readings

This module will utilize a textbook, readings from which are required. The book is available from the library and new, used, and electronic editions are available from most book sellers. The book is:

Siegel, A. F., & Wagner, M. R. (2022) *Practical Business Statistics*. Elsevier.

- Publisher link: https://tinyurl.com/7hw3xcyu
- UCD library link: https://go.exlibris.link/QvywQn4m

In addition to assigned chapters from the textbook, additional articles and cases may be assigned. Please see Brightspace for more information and reading deadlines.

Cases are provided through Harvard Business Publishing. Please use the links below to download a copy of the cases. Note that many cases include a supplemental data file which you should also download.

Title	Authors	Case URL
All Nutrition (A): Focus Group Research for Market Segmentation	Kamel Jedidi, Robert Morais	https://hbsp.harvard.edu/tu/685b3c39
All Nutrition (B): Quantitative Research for Market Segmentation	Kamel Jedidi, Robert Morais	https://hbsp.harvard.edu/tu/aa648ad7
Student Spreadsheet for All Nutrition (A and B)		https://hbsp.harvard.edu/tu/80b925e8
Rocket Fuel: Measuring the Effectiveness of Online Advertising	Zsolt Katona, Brian Bell	https://hbsp.harvard.edu/tu/f9f358f6
Student Spreadsheet for Rocket Fuel		https://hbsp.harvard.edu/tu/0566ea92
Advertising Experiments at RestaurantGrades	Michael Luca, Weijia Dai, Hyunjin Kim	https://hbsp.harvard.edu/tu/53db4ac5
Spreadsheet Supplement for Advertising Experiments at RestaurantGrades		https://hbsp.harvard.edu/tu/f2c73c7a
Multiple Regression and Marketing-Mix Models	Rajkumar Venkatesan, Shea Gibbs	https://hbsp.harvard.edu/tu/91606bfb
Conjoint Analysis: A Do it Yourself Guide	Elie Ofek and Olivier Toubia	https://hbsp.harvard.edu/tu/9dcd3936
Marketing Analysis Toolkit: Market Size and Market Share Analysis	Thomas Steenburgh, Jill Avery	https://hbsp.harvard.edu/tu/a4abd1eb

Spreadsheet supplement for Marketing Analysis Toolkit		https://hbsp.harvard.edu/tu/4aef5ae6

It is essential that you review all required readings as these will not only help aiding your learning and understanding of the core concepts discussed but also be used as part of the class discussion throughout the course. Please ensure that all suggested readings are reviewed in advance of each session in which they are assigned.

Required Software

This module assumes access to and competency with spreadsheet software such as Microsoft Excel or Google Sheets. Please note that both tools are available for free to students through UCD Connect. Applications will be discussed specifically in Microsoft Excel, which is recommended.

If you are not comfortable with the basic functions of Microsoft Excel (including cell references, functions, pivot tables, etc.) you can review these concepts through DataCamp courses which are provided as part of this module. Please note that completion of these courses is optional, and your progress will not be monitored or evaluated by instructors.

You can access DataCamp via:
https://www.datacamp.com/groups/shared_links/9f23c34da5a77f94acf32708787ebd993d5ee6fc712cf92b326f5cb8a2985cbb

Assessment

This module has three assessment components, each with a specific weighting and marks totaling 100%. There will be no exam. The weighting assigned to and responsibility for (i.e., whether an assessment is to be completed by an individual or group) each component is shown below. Following, each assessment component is discussed in detail.

Assessment Component	Weighting	Individual / Group	Deadline
1. Online Quizzes	30%	Individual	In class on Week 6 & Week 12
2. Weekly Mini-Case	50%	Group	Monday each week; Final due 8 December
3. A/B Testing Simulation	20%	Individual	10 November

Online Quizzes

Online quizzes will test your knowledge of the course material. For each quiz you will have to answer between 10 and 20 multiple-choice type questions about the content covered in the preceding weeks. A specific time window during which the quizzes are available will be announced prior to the quiz day. All quizzes will be conducted in class.

Please note that quizzes will only be available for the time specified in the course and that failure to conduct the quiz will automatically result in zero marks. During that window you a limited amount of time to correctly answer as many questions as possible. Please note that you will answer a small subset taken from a large pool of questions, and that the questions will be randomly allocated to each student. This means that students are unlikely to see the same question and/or questions in the same order. Quizzes may cover any material discussed in class or in the assigned reading.

Weekly Mini-Case

Working in randomly assigned groups, you will answer a set of questions based on a case study and data set. Answering the questions will require the application of data analysis methods discussed in previous lectures using Microsoft Excel, Google Sheets, or a program capable of similar calculations and computations. Before 23:59 on Monday each week, teams are required to submit two documents: 1. A Microsoft Excel file (extension .xlsx) with complete solutions to the questions; 2. A three slide presentation which succinctly answers the questions. At the beginning of each class, two teams will be selected at random to present their solutions to the class, using their submitted slides.

At the end of the semester, teams will submit a form detailing the relative contribution of each member to the assignment and indicating the "best" three submissions from the semester which will be reviewed in more detail.

The case studies will be graded on the following criteria:

- Assignment completion [20%]: Your team's timely submission of each mini-case.
- Solution quality [70%]: The three "best" submissions will be reviewed and evaluated based on completeness, correctness, and overall quality.
- Individual contribution [10%]: The individual contribution of each team member will be assessed through the form submitted at the end of the semester.

Weekly mini-case assignments will not be accepted after the deadline (scheduled start of class). Teams which are selected at random and have not prepared and submitted a presentation will receive a 20% penalty on their overall case study grade.

A/B Testing Simulation

Students in this course will participate in the A/B Testing Simulation. The simulation teaches core concepts in A/B testing. In the simulation, you'll play the role of an eCommerce director of a fictional company, and your goal is to increase customer conversion rates to maximize profits. To do this, you'll have access to a realistic eCommerce test suite where you'll run a series of experiments testing multiple variations of each component. The simulation dashboard is modelled after real-world testing interfaces, where you'll get to set up experiments, gather data about customer conversion rates, evaluate that data, and make decisions about the go to market strategy for the product based on what you learned. The simulation takes place in two stages. In the first

(Practice) stage, you'll run a series of experiments on your own to understand the interface and test potential strategies. In the second (Tournament stage), you'll use what you learned in the practice stage to run experiments and maximize profits. You'll be competing against your classmates, and you'll be benchmarking your performance against a reinforcement learning algorithm.

The simulation will be graded on the following criteria:

- Overall performance [60%]: Your overall performance in the simulation as compared to others in your class.
- Simulation assessment [40%]: A brief written report describing the strategy attempted, challenges faced, what you learned along the way, and what you would do differently in the future.

Further details of the assignment will be provided during the introduction of the simulation.

Assessment Criteria and Grade Descriptors

This module utilizes criterion referencing and UCD grade descriptors. Before attempting the assessments for this module, you are encouraged to review the grade descriptors. A copy of the UCD grade descriptors can be downloaded from:

https://www.ucd.ie/history/t4media/UCD%20Module%20Grade%20Descriptors-1.pdf

Protocol for submitting your assignments: All continuous assessment should be submitted electronically via Brightspace, by the deadline specified. Please do not email assignments directly to the teaching team, unless explicitly directed to do so.

Statement of Inclusion

This module strives to be a model of inclusion. We respect and value student diversity in all of the modules we offer. We aim to provide and promote equitable access and opportunity to all students regardless of disability, race, age, gender, sexuality or socio-economic status. Students are encouraged to approach staff to discuss their learning needs. Any information disclosed will be treated confidentially.

University Policies

You should ensure you are familiar with the following UCD protocols:

- ***Plagiarism and Academic Integrity:*** UCD and the College of Business take academic integrity extremely seriously. All work must be your own, be completed specifically for this module and not have been submitted elsewhere. It should also be accompanied by a signed own work statement, such as the following:

I declare that all materials included in this essay/report/project/dissertation is the end result of my own work and that due acknowledgement have been given in the bibliography and references to ALL sources be they printed, electronic or personal.

The university's plagiarism and academic integrity policy is available from: https://www.ucd.ie/secca/studentconduct/

- ***Harvard Referencing Style:*** UCD College of Business uses the Harvard style of referencing. The UCD library has developed some resources on avoiding plagiarism and on how to reference correctly using the Harvard style. These resources are available from: https://libguides.ucd.ie/academicintegrity

- ***Assessment Submission Form:*** When submitting a piece of assessment, you are asked to attach an assessment submission form. This form is available from: https://www.ucd.ie/t4cms/assessment%20submission%20form.pdf

- ***Late Submission of Coursework:*** This policy outlines the steps you should take where you know in advance that you will not be in a position to meet a submission deadline and the penalties imposed in such circumstances. See https://www.ucd.ie/t4cms/latesub_po.pdf

- ***UCD Extenuating Circumstances policy:*** If, during the course of this module, you encounter any serious unforeseen circumstances that are beyond your control and which prevent you from meeting the requirements of the module, you should consult this policy. A student guide to this policy is available from: https://www.ucd.ie/students/studentdesk/extenuatingcircumstances/

- ***UCD Student Code:*** The UCD Student Code establishes the University's regulations and expectations in respect of student behaviour and conduct. The Student Code is available from: https://www.ucd.ie/secca/studentconduct/

Module Topics

The schedule below outlines the planned themes lecture by lecture. Updates and additions will be notified in class and on Brightspace. Ensure that you have completed the required reading, listed on Brightspace, prior to the beginning of each lecture.

Lecture	Topic
1	Introduction
2	Visual data exploration
3	Describing data
4	Understanding data distributions
5	Inferential statistics
6	Introduction to experiments
	• **Online Quiz 1**
7	Analyzing experiments
8	Lab experience
9	Advanced experiments
10	Correlation and regression
11	Conjoint analysis
12	Forecasting
	• **Online Quiz 2**