



SYLLABUS

SMB-A/7245

Analytics of Micro Marketing Data
Spring 2021 – Online

COURSE OVERVIEW

Instructor

Instructor: Hongshuang (Alice) Li

Email: li.815@osu.edu

Office hours: please sign up using the link below (kindly let me know if none of slots works for you)

<https://www.signupgenius.com/go/9040e4fa5a62daafd0-office>

Course description

This course is a blending of online lectures and Zoom discussion on every other Saturday. It is an elective course with a focus on the analytics of disaggregate marketing data. After taking this course, the students will be familiar with the different measurement scale and appropriate techniques for a specific type of data, including categorical data, ordinal data and interval/ratio data. The course will cover modeling techniques and tools, such as textual analysis, utility-based analysis, and attribution models, to solve marketing problems in corporate setting. Students will have hands-on experience with various types of marketing data collected from real-life cases.

Course learning outcomes

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

1. Identifying the appropriate statistical techniques to solve a marketing research problem, including:
 - 1.1. Recognizing the measurement scales of the data

- 1.2. Describing data with basic summary statistics
- 1.3. Choosing the appropriate statistical method based on the data nature
2. Performing analysis of micro marketing data using R
 - 2.1. Collecting, cleaning and pre-processing textual data
 - 2.2. Applying LDA package in R on textual data
 - 2.3. Applying ordered logit model on ordinal data
 - 2.4. Applying attribution analysis on multi-touch data
3. Interpreting research findings and making marketing recommendations
 - 3.1. Interpreting the analytics findings from various perspectives, and delivering the research outcome to the marketing manager of a company, an advertising agency, or a third-party research institute.
 - 3.2. Recognizing and understanding the caveats in the studies.

HOW THIS COURSE WORKS

Mode of delivery: This course is bending a mix of 75% asynchronous online instruction with 25% synchronous Zoom meetings. There are no required sessions when you must be logged in to Carmen at a scheduled time.

Pace of online activities: This course is divided into **weekly modules** that are released one week ahead of time. Students are expected to keep pace with weekly deadlines but may schedule their efforts freely within that time frame.

Credit hours and work expectations: This is a **1.5-credit-hour course**. According to [Ohio State policy](#), students should expect around 1.5 hours per week of time spent on direct instruction (instructor content and Carmen activities, for example) in addition to 3 hours of homework (reading and assignment preparation, for example) to receive a grade of average.

Attendance and participation requirements: Because this is an online course, your attendance is based on your online activity and participation. The following is a summary of everyone's expected participation:

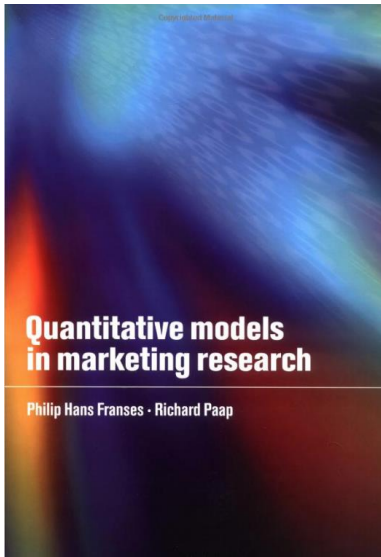
- **Participating in online activities for attendance: AT LEAST ONCE PER WEEK**
You are expected to log in to the course in Carmen every week. (During most weeks you will probably log in many times.) If you have a situation that might cause you to miss an entire week of class, discuss it with me *as soon as possible*.
- **Synchronous Zoom sessions: 3 MEETINGS**
You are expected to attend all 3 synchronous Zoom sessions.
- **Participating in discussion forums: OPTIONAL**
As part of your participation, each week we suggest you participate class discussion on the discussion forum on Carmen.

COURSE MATERIALS AND TECHNOLOGIES

Textbooks

REQUIRED

- Philip Hans Franses and Richard Paap. Quantitative models in marketing research. Cambridge, 2010.



ISBN-13: 978-0521143653
ISBN-10: 0521143659

RECOMMENDED/OPTIONAL

- Peter E Rossi, Greg M. Allenby, and Rob McCulloch. Bayesian statistics and marketing. John Wiley & Sons, 2012.

ISBN-13: 978-0470863671
ISBN-10: 0470863676

Course technology

For help with your password, university e-mail, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Standard support hours are available at <https://ocio.osu.edu/help/hours>, and support for urgent issues is available 24x7.

- Self-Service and Chat support:** <http://ocio.osu.edu/selfservice>
- Phone:** 614-688-HELP (4357)
- Email:** 8help@osu.edu
- TDD:** 614-688-8743

REQUIRED EQUIPMENT

- Computer: current Mac (OS X) or PC (Windows 7+) with high-speed internet connection
- Webcam: built-in or external webcam, fully installed and tested
- Microphone: built-in laptop or tablet mic or external microphone

REQUIRED SOFTWARE

- [Microsoft Office 365](#): All Ohio State students are now eligible for free Microsoft Office 365 ProPlus through Microsoft's Student Advantage program. Full instructions for downloading and installation can be found <https://ocio.osu.edu/kb04733>.
- R: it is a free programming software that can be downloaded from <http://www.r-project.org/>.

WEEKLY SCHEDULE

Detailed materials are posted on Carmen

Week 1 (3/1 – 3/5): Course Intro, Data, and Measurement Scale

Week 2 (3/8 – 3/12): Text mining and Latent Dirichlet Allocation

Zoom Meeting # 1 (3/13)

Week 3 (3/15 – 3/19): Binomial DV – Probit and Logit

Week 4 (3/22 – 3/26): Ordered multinomial DV – Ordered Probit and Ordered Logit

Zoom Meeting # 2 (3/27)

Week 5 (3/29 – 4/2): Case Study – Multichannel Marketing and Attribution

Week 6 (4/5 – 4/9): Attribution – Nested Logit

Week 7 (4/12 – 4/16): Survival Model and Experiment

Zoom Meeting # 3 (4/17)

GRADING AND FACULTY RESPONSE

How your grade is calculated

ASSIGNMENT CATEGORY	POINTS
Quiz (week 1)	10
Application in R (week 2 and 4)	40
Short answers (week 3 and 5)	20
Written Report for Case Study (week 6 and 7)	30
Total	100

Late submissions

Late submission can get at most 70% of the grade. Homework must be received by the instructor prior to the posting of answer keys to Carmen. Any submission after the posting of answer keys gets no credit.

Grading scale

93–100: A	73–76.9: C
90–92.9: A-	70 –72.9: C-
87–89.9: B+	67 –69.9: D+
83–86.9: B	60 –66.9: D
80–82.9: B-	Below 60: E
77–79.9: C+	

Emailing Questions and Office Hours

- I respond to emails Monday – Friday. If you email me during these days I will respond to you on that day or within 24 hrs from the time you sent the email. If you send an email during the weekend (Saturday and Sunday), please do not expect a response from me until the following Monday.
- Office hours can be signed up via SignupGenius.

OTHER COURSE POLICIES

Discussion and communication guidelines

The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

- **Writing style:** While there is no need to participate in class discussions as if you were writing a research paper, you should remember to write using good grammar, spelling, and punctuation. A more conversational tone is fine for non-academic topics.
- **Tone and civility:** Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm doesn't always come across online.
- **Citing your sources:** When we have academic discussions, please cite your sources to back up what you say. (For the textbook or other course materials, list at least the title and page numbers. For online sources, include a link.)
- **Backing up your work:** Consider composing your academic posts in a word processor, where you can save your work, and then copying into the Carmen discussion.

Academic integrity policy

POLICIES FOR THIS ONLINE COURSE

- **Quizzes:** You must complete the quizzes yourself, without any external help or communication.
- **Written assignments:** Your written assignments, including discussion posts, should be your own original work. In formal assignments, you should follow APA style to cite the ideas and words of your research sources. You are encouraged to ask a trusted person to proofread your assignments before you turn them in – but no one else should revise or rewrite your work.
- **Reusing past work:** In general, you are prohibited in university courses from turning in work from a past class to your current class, even if you modify it. If you want to build on past research or revisit a topic you've explored in previous courses, please discuss the situation with me.
- **Falsifying research or results:** All research you will conduct in this course is intended to be a learning experience; you should never feel tempted to make your results or your library research look more successful than it was.
- **Collaboration and informal peer-review:** The course includes many opportunities for informal collaboration with your classmates. While study groups and peer-review of major written projects is encouraged, remember that comparing answers on a quiz or assignment is not permitted. If you're unsure about a particular situation, please feel free just to ask ahead of time.

OHIO STATE'S ACADEMIC INTEGRITY POLICY

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's *Code of Student Conduct*, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's *Code of Student Conduct* and this syllabus may constitute "Academic Misconduct."

The Ohio State University's *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the University, or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's *Code of Student Conduct* is never considered an "excuse" for academic misconduct, so I recommend that you review the *Code of Student Conduct* and, specifically, the sections dealing with academic misconduct.

If I suspect that a student has committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to the Committee on Academic Misconduct. If COAM determines that you have violated the University's *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- The Committee on Academic Misconduct web pages ([COAM Home](#))
- *Ten Suggestions for Preserving Academic Integrity* ([Ten Suggestions](#))
- *Eight Cardinal Rules of Academic Integrity* (www.northwestern.edu/uacc/8cards.htm)

Copyright disclaimer

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

Statement on title IX

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to

offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at titleix@osu.edu

Your mental health

A recent American College Health Survey found stress, sleep problems, anxiety, depression, interpersonal concerns, death of a significant other and alcohol use among the top ten health impediments to academic performance. Students experiencing personal problems or situational crises during the quarter are encouraged to contact the College of Pharmacy Office of Student Services in room 150 Parks Hall (614-292-5001) OR OSU Counseling and Consultation Services (614-292-5766) for assistance, support and advocacy. This service is free and confidential.

ACCESSIBILITY ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

Requesting accommodations

If you would like to request academic accommodations based on the impact of a disability qualified under the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, contact your instructor privately as soon as possible to discuss your specific needs. Discussions are confidential.

In addition to contacting the instructor, please contact the Student Life Disability Services at [614-292-3307](tel:614-292-3307) or ods@osu.edu to register for services and/or to coordinate any accommodations you might need in your courses at The Ohio State University.

Go to <http://ods.osu.edu> for more information.

Accessibility of course technology

This online course requires use of Carmen (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations with your instructor.

- [Carmen \(Canvas\) accessibility](#)
- Streaming audio and video
- Synchronous course tools