

Business 9824 – Experimental Design Fall 2026

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Tuesdays, 3:30 p.m. – 6:30 p.m.
12 Sessions
See Learn for Course Dates
Location: Room 1205

COURSE DESCRIPTION

Experimental design is the engine behind causal claims in academic research, and this seminar is about learning to run it well. We work through the fundamentals (i.e., randomization, control, measurement, validity, power, factorial structure, mediation and moderation) from a marketing and consumer behaviour/psychology lens, using a mix of statistical texts and published experiments.

The course has two aims. The first is to make you a demanding reader of others' experiments. By the end of the term you should be able to open a paper in a good journal, reconstruct the design from the method section, work out what the authors manipulated and what they merely measured, judge whether the evidence supports the conclusions, and say precisely where the design is strong and where it is not. The second aim is to make you a better designer of experiments. You will take an original idea from a problem through to hypotheses, a conceptual model, and the experiments that would test it.

The format is a seminar, which puts you in the driver's seat. Most sessions are built around a set of readings, and you lead the discussions of them. Two sessions work differently: one in which you find and dissect a factorial design of your own choosing, and a hands-on practicum in which we fit interaction and conditional process models together. The term closes outside the laboratory, with field experiments and then natural experiments.

The term will take on a shape that is worth knowing from the start. Part 1 is one session on what an experiment is for. Part 2, Sessions 2 to 6, takes the design apart one decision at a time: who gets which treatment, what you measure, whether the result travels, how many people you need, and how factors combine. Part 3, Sessions 7 to 9, moves from showing an effect to explaining it. Part 4 is your own study, presented to your peers. Part 5 follows the experiment out of the lab, first keeping random assignment and then losing it. Each session page on the course website says where it sits in that story arc.

There are no prerequisites, although graduate coursework in research methods and statistics will help.

LEARNING OUTCOMES/OBJECTIVES

By the end of this course you should be able to:

- Explain the scientific rationale for experimentation and place experiments within a larger research programme. (Sessions 1 and 4; assessed through class contribution.)
- Apply the facets of validity for causal inference to published work and to your own designs. (Sessions 2–4; assessed through discussion leadership and the final paper.)
- Work confidently with the concepts, methods and statistics behind experimental designs: randomization and control, power and effect size, factorial structure, mediation, moderation and conditional process analysis. (Sessions 2 and 5–9; assessed through discussion leadership and the practicum.)
- Read a published experiment critically: reconstruct its design, evaluate its manipulations and manipulation checks, and judge whether the analysis supports the claims. (Sessions 3 and 6, and the empirical papers throughout; assessed through discussion leadership.)
- Design original experiments: build a research question from a problem, derive hypotheses, specify a conceptual model, and lay out the studies that would test it. (Assessed through the paper presentation and the final paper.)
- Recognize when random assignment is unavailable and evaluate quasi-experimental, natural and field alternatives. (Sessions 11–12; assessed through class contribution and the final paper.)

METHODS OF EVALUATION

Component	Weight	Date
Class Contribution	60%	Throughout the term
Milestone 1, the problem and the measure	Required, ungraded	October 4, 2026
Milestone 2, the model and the hypotheses	Required, ungraded	October 25, 2026
Milestone 3, the design sketch	Required, ungraded	November 8, 2026
Paper Presentation	10%	November 17, 2026
Final Paper	30%	December 8, 2026
Total	100%	

Condition of passing. Attendance is a requirement, not a courtesy. You may miss at most two sessions. If you miss three or more, you may not submit the final paper, and you cannot pass the course without it.

CLASS CONTRIBUTION (60%)

This course is a seminar, a format that requires you to prepare ahead of time and to speak. I will evaluate your contribution in two ways. First, the quality and quantity of what you contribute to class discussions. Did you show evidence that you have thought about the readings and that you are well prepared for the session? Did you ask good questions, provide thoughtful answers, or offer excellent commentary?

Four things tell me you are contributing. You sat with the readings and showed it: when you make a claim about a paper you point at the study, the table or the figure, and we can all turn to it. You advance the design conversation: your comment is about a decision the authors made, or one your own work will have to make, rather than about whether the theory is true. You build on what someone else said, taking the last comment somewhere instead of delivering your own regardless. And you lead well when it is your turn. Quantity matters, but three comments that move the discussion beat ten that do not. The full criteria are on the Assessments page on the course website.

Second, throughout the semester you will lead the discussion of assigned readings by talking about and 'teaching' the important content of the reading in whatever manner you think will be most effective. Every time you lead, distribute a hard-copy handout of no more than one page, double-sided, that summarizes and explains. You may use PowerPoint, but you do not have to; I leave that to you and your peers to coordinate. Please do not change what laptop is hooked up to the projector every time we change readings. There is no reading from notes. You have to decide what matters and focus on that. Get into the details where appropriate, remembering that this is a course on experimental design, so that should always be the focus, rather than, say, critiquing the theories embedded in empirical papers.

If you are assigned an empirical research paper, as opposed to a chapter summary, you must also: (a) provide a detailed conceptual model, either one overall model for simpler papers or a set of models where the paper is more complicated; and (b) present the details of the experimental design. What is manipulated? How? What are the manipulation checks? What is the measure of process, if any?

You will also set the question. If you are leading a reading, post the one question you want the room to think about before class on its session page at least 48 hours before we meet, and put it on your handout. Bring more in mind for if or when it runs out, but the posted one is the core of your slot, and a slot is ten to thirty-five minutes. Everyone else comes having thought about it. I would rather the question come from the person who has read it most closely than from me, and deciding what is worth asking is most of the skill this course is trying to build.

You will lead the discussions of individual readings, not whole sessions. There are over 40 readings to lead across Sessions 2 to 12, papers and chapters, so each of you will lead several discussions, spread across the term. In the first week, I will ask you to skim every reading and rank the ones you would most like to lead via a form on the course website. Those rankings drive the assignments I will make. From the second class session onwards, discussion leaders' names will sit under each reading on the session pages.

Textbook chapters are led, too. Each chapter is its own reading and its own pick, so you can take Oehlert 7 or Hayes 4 the way you would take a paper, and you will teach it and set its questions the same way. I keep a handful of readings for myself: all of Session 1, and the three Hayes chapters in Session 9, which we work through together in the practicum. Past that, the seminar is yours to run. I will set the stage and weigh in when the discussion needs a boost, but you will do the majority of the talking.

This syllabus lives on the course website at <https://bus9824.pages.dev>, and that copy is always the current one. If anything changes during the term, it will change there, and I will let you know in class.

MILESTONES

A ten-page paper in December is a long way from nothing in September. Three short steps break the distance up. None carries a grade. All three are required, and each one hands you back a piece of the paper you may otherwise write in the last week.

One page each, submitted on Learn by 11:59 p.m.

- **The problem and the measure**, due Sunday October 4, 2026. One paragraph on the problem, then the dependent measure and what the participant actually does. I write you two or three lines back by the Friday.
- **The model and the hypotheses**, due Sunday October 25, 2026. Your conceptual model drawn, and two to four hypotheses. Pick a partner (and if we have an odd number of students, form one group of three). You read each other's page and return a one-page reviewer note within the week.
- **The design sketch**, due Sunday November 8, 2026. The studies, the factors and what a participant sees, the control conditions, the manipulation checks, the dependent measure, and the sample size with the power calculation from Session 5. I will skim all of them and write back to anyone whose design would not survive presentation day.

A milestone is done to spec and on time, or it is not done. There is no partial credit, because there is no credit. Missing one costs you nothing on paper, but it costs you feedback, and you will get out of this course what you put into it, so put the work in early and often. The criteria for each are on the Assessments page on the course website.

PAPER PRESENTATION (10%)

You will present your paper idea in class on November 17, 2026. This takes the form of a typical conference presentation, with all the associated structure and formality. The presentation will run about 15 minutes, determined in part by the number of students registered, and it must include motivation, contribution, research question, a presentation of the background literature, an explicit theoretical model (this is critical), the formulation of hypotheses, and a detailed explanation of your experimental design. You may not use notes. Upload your slides to the Learn assignment before class starts; a PDF is fine. The presentation must be engaging and polished.

The class and I will give you feedback afterwards, and your final paper should be responsive to it. It may help to think of me as the editor and of the other students as reviewers. You will have three weeks between the presentation and the paper deadline. Start writing before the presentation, not after it.

PAPER (30%)

Find a topic. Do not start with a data set, a method, or some idea you have already developed elsewhere. Start instead with a problem that is new to you, and one that implicates a 'consequential dependent measure', meaning one that "requires participants to (a) invest a resource, such as money, time, or effort; or (b) experience a real outcome, such as receiving their chosen option" (Inman et al. 2018). What else the topic has to be is set out in the M1 criteria at bus9824.pages.dev/assessments/, and M1 in week three is where I will check it. Read them before you settle on anything.

Then write a paper about it. Since the course runs only a few months, I do not expect you to collect data.

The paper must be de novo, meaning independent of your other current or past coursework and of any workplace effort. The one exception to working alone is the milestone swap in October, where a classmate reads your one-page model and returns a reviewer note. Past that, no other person may read your draft or give you feedback on it before you hand it in, and no one else may write or edit any part of it for you. Generative AI is governed separately, by the policy set out under *Use of Generative Artificial Intelligence (AI)* below; read that section before you start.

The paper must be hypothesis driven, presenting two to four hypotheses. It must include a conceptual model, demonstrate a good grasp of the literature, attempt to make a contribution, and put theory front and center. It must contain:

- **Title page:** Title, author name, and abstract.
- **Statement of contribution:** See the *Journal of Consumer Research* guidance on the consumer relevance and contribution statement at <https://consumerresearcher.com/manuscript-preparation>, or the *Journal of Marketing* submission guidelines at <https://www.ama.org/submission-guidelines-american-marketing-association-journals/>. One page.
- **Introduction:** Position the paper. Why is it important? What is the contribution? What is the general approach? What is the paper's goal? What is the motivating problem? This section must include a succinct and precise statement of your research question. Use examples, and be clear about the nature of the motivating problem.
- **Literature review and hypothesis development:** Should be derived from and supporting your research question.
- **Study design:** Working within an experimental framework, give a detailed overview of your proposed experiment or experiments. Present one or two in detail, and include your instruments as an appendix.
- **Expected results:** State specifically what you expect. If you do not have data, and I do not expect you to, provide mock-ups (figures, tables, and so on). If you do have data, feel free to use it.
- **Discussion:** Assume the hypotheses are supported. So what? Where do we go from here? What did you contribute? What are the limitations of this approach?
- **Conceptual model:** There must be a theoretical figure: a picture of how you conceptualize the relationships among your core variables.
- **References:** Must be accurate and complete. You are responsible for every one of them.

What I read for in each of these, and in the design and the writing, is on the Assessments page on the course website. Read it before you start, not after.

Due. The paper is due by 11:59 p.m. on December 8, 2026. Upload it to Learn in the submission space entitled *Final Paper*.

Length and formatting. Ten pages of text, not counting references, tables and figures, the title page, the statement of contribution, or the AI disclosure statement. Develop your ideas logically and clearly; I value depth over breadth. Type the paper 1.5 spaced, with 1-inch margins, in 12-point Times New Roman. Use section headings, subheadings and page numbers. For everything else (references, tables and figures), adopt a style used by the *Journal of Marketing* or the *Journal of Consumer Research*.

MATERIALS/REQUIRED READING

Neither required text costs you anything. Both are available online at no charge, and there is nothing to buy for this course.

Gary W. Oehlert (2010), *A First Course in Design and Analysis of Experiments*. Free at <http://users.stat.umn.edu/~gary/book/fcdae.pdf>.

Andrew F. Hayes (2022), *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*, 3rd edition. Free through Western Libraries at <https://ebookcentral.proquest.com/lib/west/detail.action?docID=6809031>. Sign in with your Western credentials.

Journal articles and book chapters. Available through Western Libraries, with links on the course website. Where we are licensed to republish something, the PDF is on the site; otherwise it is on Learn or behind a library link. No cost either way.

Software. All free. We will use R for the power analysis in Session 5 and the PROCESS macro in Session 9. Install R and RStudio before Session 5, along with the *pwr* and *Superpower* packages; instructions are given with that session below. PROCESS has versions for R, SPSS and SAS, and you may use whichever you prefer. Western provides SPSS and SAS at no charge if you want them.

COURSE TIMELINE AND FORMAT

We meet in Room 1205 on Tuesdays from 3:30 p.m. to 6:30 p.m. for twelve sessions, beginning September 15, 2026 and ending December 1, 2026. Eleven of the twelve are in person. Session 5, on October 13, falls during fall reading week and will run online. Attendance expectations are the same for that session as for any other.

I will record each session, audio only, so that I can go back over the discussion when I mark contribution rather than rely on memory. The recording and its transcript stay with me and my faculty assistant, are used for nothing else, are not shared with the class, and will be deleted at the end of the semester.

I will make every effort to follow the timeline below. If a session has to move, I will tell you as far in advance as I can and post the change on the course website.

The reading list is settled. Who leads which reading comes from the rankings you submit in the first week on the course website, and I will publish the reading-leader assignments there after the first week. Full readings for each session appear under DETAILED SESSION SCHEDULE at the end of this syllabus.

#	Date	Topic	Notes
1	September 15, 2026	Introduction	
2	September 22, 2026	Randomization, Placebos and Control	
3	September 29, 2026	Measuring Outcomes	
4	October 6, 2026	Validity	
5	October 13, 2026	Sample Size, Power and Effect Sizes	Online (reading week)
6	October 20, 2026	Factorial Designs	
7	October 27, 2026	Mediation	
8	November 3, 2026	Moderation	
9	November 10, 2026	Practicum on Interactions	
10	November 17, 2026	Paper Presentations	
11	November 24, 2026	Field Experiments	

#	Date	Topic	Notes
12	December 1, 2026	Natural Experiments	Last class
	December 8, 2026	No class	Final paper due

USE OF GENERATIVE ARTIFICIAL INTELLIGENCE (AI)

Generative AI is permitted in this course, within the limits set out here. I take this position for a simple reason: these tools are already part of how research gets done, and you will spend the rest of your career deciding when to reach for them and when not to. Learning to make that judgment well, under supervision, is part of your training. Banning the tools would only push the decision somewhere I cannot help you with. What follows is meant to make the boundaries clear rather than to slow you down.

What you may use it for. You may use generative AI to help you read: to clarify a statistical concept, walk through a derivation, or check your understanding of a method. You may use it to search for and locate literature. You may use it to stress-test an argument you have already formed, to play the sceptical reviewer against your own draft, to write and debug analysis code, and to improve your prose at the sentence level once the thinking is done.

What you may not use it for. The intellectual content of your paper must be yours. Do not use AI to generate your research question, your hypotheses, your conceptual model, or your statement of contribution. Do not ask it to draft passages that you then submit as your writing. Do not use it to substitute for reading the papers you cite. And do not paste other people's unpublished work into a commercial tool: a colleague's working paper, a manuscript you are reviewing, or data you do not own. That is a confidentiality problem before it is an AI problem.

The standard your writing has to meet. Your paper is assessed as a piece of scholarly writing that could plausibly be sent to the *Journal of Marketing* or the *Journal of Consumer Research*, and it is held to what those journals expect: an argument that advances in a clear line, claims kept proportionate to the evidence behind them, definitions that stay fixed from one page to the next, and prose that is specific rather than general. Current AI systems write fluently and emptily. They produce even-handed paragraphs that commit to nothing, transitions that join nothing, and confident characterizations of literatures they have not read. That writing is easy to recognize and it will be marked down, not because a machine was involved, but because it is weak scholarship, and it would be marked down just the same if you had produced it unaided. Whatever you submit, you have to be able to defend every sentence of it in conversation with me.

References. Be careful here. Language models fabricate citations, and they attach real findings to the wrong papers with complete confidence. You are responsible for every reference in your paper. Read what you cite. Confirm that each source exists, that the authors and year are right, and that it actually says what you claim it says. A fabricated or misattributed citation is a serious matter in academia, and I will treat one in your paper the way an editor would treat one in a manuscript. Deliberate or repeated fabrication will be handled as a scholastic offence.

Disclosure. If you use generative AI on any graded work, add a short statement after your references. Name the tools, say what you used them for, and indicate how much of the final text they touched. For example: "I used Claude to search for literature on X, to check my understanding of Y, and to tighten the Discussion section. The research question, hypotheses and conceptual model are my own, and I read and verified every source cited." The statement does not count toward your ten pages and it will not lower your grade. Failing to disclose will.

Preparing for class. Read the papers themselves. You will lead discussion several times this term, and the class and I will ask you about specifics: how a manipulation was executed, what the control condition was, what the manipulation check showed, why a covariate was included. A summary will not carry you through that, and it becomes obvious very quickly when someone has read about a paper instead of reading it. Use these tools to understand a paper you have read, not to avoid reading it.

Opting out. Nothing in this course requires you to use generative AI. If you would rather not, for any reason, you are at no disadvantage and you need not explain yourself. Simply do the work and submit it.

If the policy is broken. Using generative AI in the ways prohibited above is a breach of academic integrity and will be handled under Western's Scholastic Offence policy, in the same way as plagiarism. I do not rely on AI detectors; they are not accurate enough to support an allegation of misconduct. I would rather talk to you. Expect me to ask you to walk me through how your paper came together: where the idea started, why you framed the hypotheses the way you did, what you decided against. If you have done the work, that conversation is an easy (and interesting) one.

COURSE RULES

I will not accept late assignments except by prior written arrangement, or unless I receive what I judge to be unambiguous evidence of extenuating circumstances, in which case it is at my discretion how to handle grading. Otherwise, late assignments earn an automatic grade of zero. Assignments that exceed page limits will receive a penalty of no less than 25%. The milestones are not graded, so this rule does not reach them. They are still required, and a milestone handed in after the date has missed the feedback it exists to earn.

I expect you to attend all classes, on time and prepared. If you plan to be absent or late, email me ahead of time. You are responsible for consulting your classmates about what you missed; I will not meet to provide an overview of a missed session. If you miss three or more classes, you may not hand in the final paper.

Pay attention to the quality of your writing and your arguments: well organized and well articulated, with specific and clear meanings and careful formatting. Communicate in such a manner that you cannot possibly be misunderstood. Poor writing and grammar take away from your intended contribution, and I will be much harsher on poorly written submissions.

LEARNING TOOLS AND RESOURCES

The course website at <https://bus9824.pages.dev> is where the course actually lives. The current syllabus, the schedule, discussion leader assignments, session materials and any announcements are posted there. Check it weekly.

The site is private, so it is not open to the web and search engines cannot reach it. The link that opens it is pinned at the top of our course in Learn. Open that link once on each device you use and it will remember you until the end of term. I keep the link in Learn rather than emailing it so that it cannot get buried in your inbox, and so that only people enrolled in the course can find it. If it ever stops working, email me and I will sort it out.

Learn is used for three things and no more: it holds that link, it takes the three milestones, and it takes your final paper. Learn keeps those private, which is why they are not on the course website.

Western Libraries can help you with systematic literature searching and reference management, which will save you time on the final paper. The Writing Support Centre offers appointments on academic writing; using it is encouraged and does not conflict with the rule against having others read your draft, provided the discussion is about your writing rather than about your ideas or your argument.

For the practicum, PROCESS documentation and worked examples are available through the Hayes text and at <https://haskayne.ucalgary.ca/CCRAM/resource-hub>.

ENROLLMENT RESTRICTIONS

Enrollment in this course is restricted to graduate students in the Ivey PhD Program, as well as any student that has obtained special permission to enroll in this course from the course instructor as well as the Graduate Chair (or equivalent) from the student's home program.

ACADEMIC OFFENCES: PLAGIARISM AND ACADEMIC INTEGRITY

Scholastic offences are taken seriously and students are directed to read the Scholastic Offences policy, specifically, the definition of what constitutes a Scholastic Offence.

I do not run your work through plagiarism-detection software. I read it, and if something in a paper does not sit right I will come to you and ask about it before I do anything else.

GENDER-BASED SEXUAL VIOLENCE SUPPORT

Western is committed to reducing incidents of gender-based and sexual violence (GBSV) and providing compassionate support to anyone who is going through or has gone through these traumatic events. If you are experiencing or have experienced GBSV (either recently or in the past), you will find information about support services for survivors, including emergency contacts, on the Wellness and Wellbeing website. To connect with a case manager or set up an appointment, please contact support@uwo.ca.

HEALTH AND WELLNESS SERVICES

As part of a successful graduate student experience at Western, we encourage students to make their health and wellness a priority. Western provides several on campus health-related services to help you achieve optimum health and engage in healthy living while pursuing your graduate degree. See <https://www.uwo.ca/health>.

Students who are in emotional or mental distress should refer to Mental Health Support at Western for a complete list of options about how to obtain help.

ACCESSIBLE EDUCATION

Western is committed to achieving barrier-free accessibility for all its members, including graduate students. As part of this commitment, Western provides a variety of services devoted to promoting, advocating, and accommodating persons with disabilities in their respective graduate program.

Graduate students with disabilities (for example, chronic illnesses, mental health conditions, mobility impairments) are strongly encouraged to register with Accessible Education (AE), a confidential service designed to support graduate and undergraduate students through their academic program. With the

appropriate documentation, the student will work with both AE and their graduate programs (normally their Graduate Chair and/or Course instructor) to ensure that appropriate academic accommodations to program requirements are arranged. These accommodations may include individual counselling, alternative formatted literature, accessible campus transportation, learning strategy instruction, writing exams and assistive technology instruction.

A FINAL WELCOME AND REQUEST OF STUDENTS

I welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability, and other visible and nonvisible differences. I consider this classroom to be a place where you will be treated with respect. All members of this class are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the class. If it is appropriate to our learning and you feel comfortable doing so, I ask that you share your unique point of view as we explore the course content.

DETAILED SESSION SCHEDULE

Readings are listed below by session. Anchor texts are shown in bold; everything else is a journal article. Your first-week rankings on the course website decide who leads which reading. I publish the assignment once, after the first week, and it then sits under each reading on the session pages for the rest of the term.

Session 1: Introduction (September 15, 2026)

- **Oehlert**, Chapter 1.
- **Hayes**, Chapter 1.
- **Hayes**, Chapter 2.
- Kardes (1996), "In Defense of Experimental Consumer Psychology," *Journal of Consumer Psychology*, 5(3), 279–296.
- Lehmann, McAlister and Staelin (2011), "Sophistication in Research in Marketing," *Journal of Marketing*, 75(4), 155–165.
- Lynch, Alba, Krishna, Morwitz and Gurhan-Canli (2012), "Knowledge Creation in Consumer Research: Multiple Routes, Multiple Criteria," *Journal of Consumer Psychology*, 22(4), 473–485.

Session 2: Randomization, Placebos and Control (September 22, 2026)

- **Oehlert**, Chapter 2.
- **Oehlert**, Chapter 3.
- **Campbell, Cook and Shadish**, Chapter 8.
- McFerran, Dahl, Fitzsimons and Morales (2010), "I'll Have What She's Having: Effects of Social Influence and Body Type on the Food Choices of Others," *Journal of Consumer Research*, 36(6), 915–929.
- Yzerbyt, Muller and Judd (2004), "Adjusting Researchers' Approach to Adjustment: On the Use of Covariates When Testing Interactions," *Journal of Experimental Social Psychology*, 40(3), 424–431.
- Shiv, Carmon and Ariely (2005), "Placebo Effects of Marketing Actions: Consumers May Get What They Pay For," *Journal of Marketing Research*, 42(4), 383–393.

Session 3: Measuring Outcomes (September 29, 2026)

- Calder and Malthouse (2003), "The Behavioral Score Approach to Dependent Variables," *Journal of Consumer Psychology*, 13(4), 387–394.
- Morales, Amir and Lee (2017), "Keeping it Real in Experimental Research – Understanding When, Where, and How to Enhance Realism and Measure Consumer Behavior," *Journal of Consumer Research*, 44(2), 465–476.
- Steenkamp and Maydeu-Olivares (2015), "Stability and Change in Consumer Traits: Evidence From a 12-year Longitudinal Study, 2002–2013," *Journal of Marketing Research*, 52(3), 287–308.
- Wong, Rindfleisch and Burroughs (2003), "Do Reverse-Worded Items Confound Measures in Cross-Cultural Consumer Research? The Case of the Material Values Scale," *Journal of Consumer Research*, 30(1), 72–91.
- Weijters, Cabooter and Schillewaert (2010), "The Effect of Rating Scale Format on Response Styles: The Number of Response Categories and Response Category Labels," *International Journal of Research in Marketing*, 27(3), 236–247.

Session 4: Validity (October 6, 2026)

- Calder, Phillips and Tybout (1982), "The Concept of External Validity," *Journal of Consumer Research*, 9(3), 240–244.

- Lynch (1982), "On the External Validity of Experiments in Consumer Research," *Journal of Consumer Research*, 9(3), 225–239.
- Winer (1999), "Experimentation in the 21st Century: The Importance of External Validity," *Journal of the Academy of Marketing Science*, 27, 349–358.
- Lynch (1999), "Theory and External Validity," *Journal of the Academy of Marketing Science*, 27, 367–376.
- Albert and Thomson (2024), "Epistemological Jangle and Jingle Fallacies in the Consumer-Brand Relationship Subfield: A Call to Action," *Journal of Consumer Research*, 51(2), 383–407. Read Web Appendix H as well.

Session 5: Sample Size, Power and Effect Sizes (October 13, 2026)

- **Oehlert**, Chapter 7.
- **Ellis**, Chapter 1 (Introduction to Effect Sizes).
- Cohen (1992), "Statistical Power Analysis," *Current Directions in Psychological Science*, 1(3), 98–101.
- Maxwell, Kelley and Rausch (2008), "Sample Size Planning for Statistical Power and Accuracy in Parameter Estimation," *Annual Review of Psychology*, 59(1), 537–563.
- Meyvis and Van Osselaer (2018), "Increasing the Power of Your Study by Increasing the Effect Size," *Journal of Consumer Research*, 44(5), 1157–1173.
- van der Sluis, Samper, Kristofferson and Hlava (2025), "How Do Physical Disability Cues Influence Assumptions about Consumer Tastes? Unpacking the Disability Preference Stereotype," *Journal of Consumer Research*, 51(5), 916–936.

This session runs online, because October 13 falls in fall reading week. I will post the link on the course website beforehand. Before class, install R and RStudio, then run `install.packages(c("pwr", "Superpower"))`. We use `pwr` for the standard designs and `Superpower` for factorial designs and interactions, where power has to be worked out from the pattern of cell means you expect rather than from a single effect size. Reference, not required: Kelley and Preacher (2012), "On Effect Size," *Psychological Methods*, 17(2), 137.

Session 6: Factorial Designs (October 20, 2026)

- **Oehlert**, Chapter 8.
- **Oehlert**, Chapter 9.

Find a recent paper from a top journal in your field that runs a factorial experiment. For marketing that means *JCR*, *JCP*, *JM*, *JMR* or *JAMS*. Choose one whose design is close to what you are planning for your own study, if you can. Post the citation and a link on the Session 6 page of the course website by 5 p.m. on Thursday October 15, so that everyone has the weekend to skim the set. The board is first come, first served: if your paper is already up, pick another. Bring a one-page handout, hard copy, on the experiment in that paper you find most interesting, best or worst, your call, covering: (1) the conceptual model for that experiment, drawn; (2) a detailed description of the factors and how they were manipulated; (3) the evidence the paper offers that the manipulations worked, reproduced if it is given and described and evaluated if it is not; and (4) whether the analysis and evidence actually support the conclusions the authors draw.

You get about twelve minutes on it, and one question from me: which of the four validities does the design handle least well?

Session 7: Mediation (October 27, 2026)

- **Hayes**, Chapter 3.

- **Hayes**, Chapter 4.
- Zhao, Lynch and Chen (2010), "Reconsidering Baron and Kenny: Myths and Truths about Mediation Analysis," *Journal of Consumer Research*, 37(2), 197–206.
- Bullock, Green and Ha (2010), "Yes, But What's the Mechanism? (Don't Expect an Easy Answer)," *Journal of Personality and Social Psychology*, 98(4), 550.
- Pieters (2017), "Meaningful Mediation Analysis: Plausible Causal Inference and Informative Communication," *Journal of Consumer Research*, 44(3), 692–716.
- Reich, Campbell and Madrigal (2019), "Who Deserves Faulty Products? How Blaming the Victim Prevents Consumer Punitive Actions," *Journal of Consumer Psychology*, 30(1), 60–76.

Session 8: Moderation (November 3, 2026)

- **Hayes**, Chapter 7.
- **Hayes**, Chapter 8.
- Spencer, Zanna and Fong (2005), "Establishing a Causal Chain: Why Experiments Are Often More Effective than Mediational Analyses in Examining Psychological Processes," *Journal of Personality and Social Psychology*, 89(6), 845.
- You, Yang, Wang and Deng (2020), "When and Why Saying 'Thank You' is Better than Saying 'Sorry' in Redressing Service Failures," *Journal of Marketing*, 84(2), 133–150.
- Winterich, Reczek and Irwin (2017), "Keeping the Memory but Not the Possession: Memory Preservation Mitigates Identity Loss from Product Disposition," *Journal of Marketing*, 81(5), 104–120.

Session 9: Practicum on Interactions (November 10, 2026)

- **Hayes**, Chapter 5.
- **Hayes**, Chapter 11.
- **Hayes**, Chapter 12.

This session is hands-on. Bring your laptop. Before class, download the "Practicum Data" file from the course website and install PROCESS 4.2 from <https://haskayne.ucalgary.ca/CCRAM/resource-hub>. There are versions for R, SPSS and SAS. I will demonstrate in R; use whichever you are comfortable with.

Session 10: Paper Presentations (November 17, 2026)

No readings. Each of you presents your paper idea in about 15 minutes, conference style: no interruptions during, questions after. See the Paper Presentation section above for what to include. I will post the running order on the course website the week before.

Session 11: Field Experiments (November 24, 2026)

- Gneezy (2017), "Field Experimentation in Marketing Research," *Journal of Marketing Research*, 54(1), 140–143.
- White and Simpson (2013), "When Do (and Don't) Normative Appeals Influence Sustainable Consumer Behaviors?," *Journal of Marketing*, 77(2), 78–95.
- White, MacDonnell and Dahl (2011), "It's the Mind-Set That Matters: The Role of Construal Level and Message Framing in Influencing Consumer Efficacy and Conservation Behaviors," *Journal of Marketing Research*, 48(3), 472–485.
- Johnson, Lewis and Nubbemeyer (2017), "Ghost Ads: Improving the Economics of Measuring Online Ad Effectiveness," *Journal of Marketing Research*, 54(6), 867–884.
- Goldstein, Cialdini and Griskevicius (2008), "A Room with a Viewpoint: Using Social Norms to Motivate Environmental Conservation in Hotels," *Journal of Consumer Research*, 35(3), 472–482.

- Bohner and Schlüter (2014), "A Room with a Viewpoint Revisited: Descriptive Norms and Hotel Guests' Towel Reuse Behaviour," *PLoS ONE*, 9(8).

Reference, not required: West, Biesanz and Pitts (2000), "Causal Inference and Generalization in Field Settings: Experimental and Quasi-Experimental Designs," in Reis and Judd (eds.), *Handbook of Research Methods in Social and Personality Psychology*.

Session 12: Natural Experiments (December 1, 2026)

- Goldfarb, Tucker and Wang (2022), "Conducting Research in Marketing with Quasi-Experiments," *Journal of Marketing*, 86(3), 1–20.
- Grosz, Ayaita, Arslan, Buecker, Ebert, Hünermund, ... and Rohrer (2024), "Natural Experiments: Missed Opportunities for Causal Inference in Psychology," *Advances in Methods and Practices in Psychological Science*, 7(1).
- Seiler, Yao and Wang (2017), "Does Online Word of Mouth Increase Demand? (And How?) Evidence from a Natural Experiment," *Marketing Science*, 36(6), 838–861.
- Proserpio and Zervas (2017), "Online Reputation Management: Estimating the Impact of Management Responses on Consumer Reviews," *Marketing Science*, 36(5), 645–665.

Final paper due 11:59 p.m., December 8, 2026.