

Business 9704 – Research Methods (Part II)

Winter 2026

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Mondays 1:00pm – 4:00pm
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Course LEARN page: <https://learn.ivey.ca/courses/6674>

1. COURSE DESCRIPTION

This course builds on the first half taught by Professor Zhang. In this portion of the course, we will focus primarily on data-related challenges, their implications for drawing valid inferences about target populations, and strategies for addressing them. Although the emphasis will be on quantitative research, the issues we examine are relevant across social science and management research, regardless of methodological approach. When necessary, we will introduce technical material, but the primary focus will remain on theoretical foundations and conceptual understanding.

2. LEARNING OUTCOMES

By the end of this course, you will have a solid foundation for evaluating the quality of quantitative research. You will be able to identify problems in how relationships are assessed and how causal inferences are drawn, and you will be familiar with common strategies used to address these problems.

3. METHODS OF EVALUATION

Grades will be based on five elements:

1. Weekly seminar participation (20%)
2. Seminar lead (20%) – 10% for written notes; 10% for presentation
3. Position papers (20%) - Due weekly before 8pm on the Saturday before class
4. Midterm test (20%) – Held in class on February 9
5. Final test (20%) – Held in class on March 30

Weekly topics and electronic copies of the readings will be available on the course **LEARN** site.

2.1 Weekly seminar participation (20%)

The success of this course depends on active and consistent participation from all students. If you do not engage regularly in weekly discussions, your participation grade will be affected. Participation involves more than sharing opinions—students are expected to critically evaluate the readings, offer thoughtful insights, and situate the material within a broader scholarly context.

2.2 Weekly seminar leader (20%)

- **10 points for preparation notes; 10 points for discussion**

In addition to regular weekly participation, each student will serve as the seminar leader for one class session. Although I will provide support when needed, you will be primarily responsible for facilitating that week's discussion of the assigned readings. The seminar leadership portion of the class typically occurs during the first half of the session and lasts approximately 90 minutes. Seminar leadership assignments—including dates and readings—will be finalized in the first class on January 5.

The seminar leader's primary responsibility is to stimulate informed, critical discussion of the core ideas in the weekly readings. Rather than summarizing each reading independently, you should encourage students to think about how the readings intersect—where they overlap, complement, or contradict one another. Preparing a substantial list of discussion questions is essential; avoid questions that can be answered with a simple "yes" or "no."

You should not lecture, deliver a PowerPoint presentation, or distribute extensive handouts. However, you should begin the session with a brief five-minute introduction that (1) outlines the overall theme of the week, (2) explains why the issues are important, and (3) highlights the specific topics that the discussion will address.

Your grade will be based on two components—your written preparation (seminar notes and proposed discussion questions) and your facilitation of the in-class discussion—each worth 10 points. You are encouraged to email me your seminar plan, including your discussion questions, by noon on the Saturday before your session if you would like feedback. A final version of your notes must be submitted at the end of your seminar.

2.3 Position papers (20%)

- **10 papers x 2 grades each**

You are required to complete 10 position papers based on the required readings. A position paper is due for every week except the week of the midterm test (February 4) and the week of the final test (April 1). Each satisfactorily completed paper is worth 2 points. Papers that do not demonstrate sufficient effort will receive a grade of 0.

Each position paper must be two pages in length (typed, double-spaced, 12-point font) and no longer; papers under one full page will automatically receive a grade of 0. I will provide written comments only on papers that are not deemed satisfactory.

While you should engage with all required readings for the week, you should not discuss each reading separately. Instead, draw connections across the texts, highlight points of convergence and divergence, and link the material to broader themes discussed in the course. Your paper should also raise issues, problems, or questions that you plan to contribute during the seminar discussion—in essence, helping the seminar leader foster productive conversation. At the end of each paper (within the two-page limit), you must include two seminar discussion questions.

Weekly position papers are due by 8:00 p.m. (London, ON time) on the Saturday before class. Late submissions will not be accepted. Papers must be submitted on LEARN in PDF format.

2.4 Midterm test (20%) - February 9

The midterm test will be held in class on February 9 and is worth 20% of your final grade. It will consist of both applied case study problems and short essay questions based on the assigned readings and the class discussions leading up to the test date. (Be sure to take thorough notes on the readings.)

You will complete the test on your laptop and submit your responses on LEARN before leaving the classroom. You will have two hours to write the test.

2.5 Final test (20%) - March 30

The final test will be held in class on March 30 and is worth 20% of your final grade. Like the midterm, it will consist of applied case study problems and short essay questions. The final exam is cumulative and will draw on all assigned readings and class discussions from the entire course, including material covered before the midterm.

You will complete the test on your laptop and submit your responses on LEARN before leaving the classroom. You will have two hours to write the test.

4. COURSE SCHEDULE AND REQUIRED READINGS

I suggest that you read the sources in the order in which they appear in the list.

1. January 5: What 'should' research look like?

- a. objectivity and subjectivity
- b. basic and applied research

- c. publication bias

Readings:

Gimbel, Edward W. (2016) 'Interpretation and Objectivity: A Gadamerian Reevaluation of Max Weber's Social Science,' *Political Research Quarterly*, 69 (1): 72-82.

Narayanamurti, V., T. Odumosu, and L. Vinsel (2013) 'RIP: The Basic/Applied Research Dichotomy,' *Issues in Science and Technology*, 29 (2): 31-36.

Fanelli, Daniele (2011) 'Negative results are disappearing from most disciplines and countries,' *Scientometrics*, 90(3): 891-904.

Ouimet, Mathieu, Pierre-Olivier Bedard and Francois Gelineau (2011) 'Are the h-index and some of its alternatives discriminatory of epistemological beliefs and methodological preferences of faculty members? The case of social scientists in Quebec' *Scientometrics*, 88:91-106.

Joober, Ridha, Norbert Schmitz, Lawrence Annable and Patricia Boksa (2012) 'Publication bias: What are the challenges and can they be overcome?' *Journal of Psychiatry Neuroscience*, 37(3):149-52.

Fassin, Y. (2021) 'Does the Financial Times FT50 journal list select the best management and economics journals?' *Scientometrics* 126, 5911-5943.

2. January 12: Survey research

- a. Question wording, placement and response format
- b. Knowledge-based questions
- c. Sensitive questions
- d. Mode effects

Readings:

Bishop, George F., Alfred J. Tuchfarber and Robert W. Oldendick (1986) 'Opinions on Fictitious Issues: The Pressure to Answer Survey Questions,' *Public Opinion Quarterly*, 50: 240-250.

DeLeeuw, Edith D. (2018) 'Mixed-Mode: Past, Present, and Future,' *Survey Research Methods*, 12(2): 75-89.

Jabkowski, Piotr and Aneta Piekut (2024) 'Between Task Complexity and Question Sensitivity: Nonresponse to the Income Question in the 2008–2018 European Social Survey,' *Survey Research Methods*, 18: 113-135.

Stern, Michael, J., Don A. Dillman and Jolene D. Smyth (2007) 'Visual Design, Order Effects, and Respondent Characteristics in a Self-Administered Survey,' *Survey Research Methods*, 1(3): 121-138.

3. **January 19: Measuring concepts**

- a. validity and reliability
- b. collinearity
- c. common method variance
- d. single indicators vs composite measures

Readings:

(a) reliability, validity, and collinearity

Hammersley, Martyn (1987) 'Some Notes on the Terms 'Validity' and 'Reliability',' *British Educational Research Journal* 13 (1): 73-81.

Bedeian, Arthur G. (2014) "'More Than Meets the Eye": A Guide to Interpreting the Descriptive Statistics and Correlation Matrices Reported in Management Research,' *Academy of Management Learning & Education*, 13(1): 121-135.

Conway, James M. and Charles E. Lance (2010) 'What Reviewers Should Expect from Authors Regarding Common Method Bias in Organizational Research,' *Journal of Business and Psychology*, 25(3):325-334.

(b) composite measures

Peterson, Robert A. (1994) 'A Meta-Analysis of Cronbach's Coefficient Alpha,' *Journal of Consumer Research*, 21 (2): 381-391.

Markle, Gail L. (2013) 'Pro-Environmental Behavior: Does It Matter How It's Measured? Development and Validation of the Pro-Environmental Behavior Scale (PEBS),' *Human Ecology*, 41 (6): 905-914.

Wright, Thomas, James Campbell Quick, Sean T. Hannah and M. Blake Hargrove (2017) 'Best practice recommendations for scale construction in organizational research,' *Journal of Organizational Behavior*, 38 (5):615-628.

4. **January 26: Causality and spurious relationships**

- a. causal relationships
- b. Hawthorne and placebo effects
- c. Simpson's paradox
- d. mediation and moderation; interaction effects

Readings:

(a) causality

Cox, D. R. and Nanny Wermuth (2001) 'Some Statistical Aspects of Causality,' *European Sociological Review*, 17 (1): 65-74.

Brym, Robert (2018), 'Chapter 5: The Social Bases of Cancer,' Pp. 81-102 in Robert Brym, *Sociology as a Life or Death Issue*, 4th Canadian ed. Toronto: Nelson.

Wickstrom, Gustav and Tom Bendix (2000) 'The "Hawthorne effect" - what did the original Hawthorne studies actually show?' *Scandinavian Journal of Work Environment and Health*, 26(4): 363-367.

(b) mediation, moderation, and interaction effects

Bandyopadhyay, Prasanta S. , Mark Greenwood, Don Wallace F. Dcruz and Venkata Raghavan R. (2015) 'Simpson's Paradox and Causality,' *American Philosophical Quarterly*, 52 (1): 13-25.

Wagner, Clifford H. (1982) 'Simpson's Paradox in Real Life,' *The American Statistician*, 36 (1): 46-48.

Dawson, Jeremy F. (2014) 'Moderation in Management Research: What, Why, When, and How,' *Journal of Business and Psychology*, 29 (1): 1-19.

5. **February 2: Making inferences from sample data**

- a. random samples and classical statistical inference
- b. bootstrapping
- c. sampling and inferences from qualitative data

Readings:

(a) survey data and statistical inference

Brick, J. Michael (2011) 'The future of survey sampling,' *Public Opinion Quarterly*, 75 (5): 872-888.

Andersen, Robert and David A. Armstrong II (2022) 'Chapter 1: Some Foundation," in *Presenting Statistical Results Effectively*. London: Sage Publications.

Andersen, Robert (2008) '5. Standard errors for robust regression,' *Modern Methods for Robust Regression*. Sage (pp. 70-78).

(b) qualitative data

Marshall, Martin (1996) 'Sampling for qualitative research,' *Family Practice*, 13: 522-525.

Paluck, Elizabeth L (2010) 'The Promising Integration of Qualitative Methods and Field Experiments,' *The Annals of the American Academy of Political and Social Science*, 628: 59-71.

Alexander, J. Trent , Robert Andersen, Peter W. Cookson, Jr., Kathryn Edin, Jonathan Fisher, David B. Grusky, Marybeth Mattingly, and Charles Varner (2017) 'A Qualitative Census of Rural and Urban Poverty,' *The ANNALS of the American Academy of Political and Social Science*, 672 (1): 143-161

6. February 9: Midterm test

February 16: FAMILY DAY (no class)

7. February 23: Data issues and regression analysis (Guest lecturer: Anders Holm)

- a. types of missingness
- b. consequences of missingness and measurement error
- c. selection bias

Readings:

Altman, Douglas G. and J. Martin Bland (2007) 'Statistics Notes: Missing data,' *British Medical Journal*, 334 (7590): 424.

Little, Roderick J. A. (1992) 'Regression With Missing X's: A Review,' *Journal of the American Statistical Association*, 87 (420): 1227-1237.

Hausman, Jerry (2001) 'Mismeasured Variables in Econometric Analysis: Problems from the Right and Problems from the Left,' *The Journal of Economic Perspectives*, 15 (4): 57-67.

Solon, Gary, Steven J. Haider and Jeffrey Wooldridge (2013) 'What are we weighting for? *NBER working paper 18859*. National Bureau of Economic Research. <http://www.nber.org/papers/w18859>

Jordan, et al. (2013) 'Volunteer Bias in Recruitment, Retention, and Blood Sample Donation in a Randomised Controlled Trial Involving Mothers and Their Children at Six Months and Two Years: A Longitudinal Analysis,' *PLoS ONE*, 8(7): e67912.

8. **March 2: Outliers and nonlinearity**

- a. importance of graphical methods
- b. detecting and accommodating nonlinearity
- c. influential outliers and 'solutions'

Readings:

Anscombe, F. J. (1973) 'Graphs in Statistical Analysis,' *The American Statistician*, 27(1): 17-21.

Andersen, Robert (2009) 'Nonparametric Methods for Modelling Nonlinearity in Regression Analysis,' *Annual Review of Sociology*, 35: 67-85.

Jasso, G. (1985) 'Marital Coital Frequency and the Passage of Time: Estimating the Separate Effects of Spouses' Ages and Marital Duration, Birth and Marriage Cohorts, and Period Influences,' *American Sociological Review*, 50: 224-241.

Kahn, J.R. and J.R. Udry (1986) 'Marital Coital Frequency: Unnoticed Outliers and Unspecified Interactions Lead to Erroneous Conclusions,' *American Sociological Review*, 51: 734-737

Jasso, G. (1986) 'Is It Outlier Deletion or Is It Sample Truncation? Notes on Science and Sexuality,' *American Sociological Review*, 51:738-42.

Leone, Andrew J., Miguel Minutti-Meza and Charles E. Wasley (2019) 'Influential Observations and Inference in Accounting Research,' *The Accounting Review*, 94(6): 337-365.

9. March 9: Assessing importance and displaying results

- a. substantive or practical importance
- b. relative importance
- c. effect displays

Readings:

(a) substantive importance

Wood, John, Nick Freemantle, Michael King and Irwin Nazareth (2014) 'Trap of trends to statistical significance,' *BMJ: British Medical Journal*, 348: 1-6.

Neely, Stephen (2019) 'Science vs Significance,' *Public Administration Quarterly*, 43 (2): 185-221.

(b) effective presentation of meaningful results

Andersen, Robert and David A. Armstrong II (2022) '5.5 Relative Importance of Predictors,' Pp 118-122 in *Presenting Statistical Results Effectively*. London: Sage Publications

Andersen, Robert and David A. Armstrong II (2022) '6 Assessing the Impact and Importance of Multi-category Explanatory Variables,' Pp 135-167 in *Presenting Statistical Results Effectively*. London: Sage Publications

Fox, John (1987) 'Effect Displays for Generalized Linear Models,'" *Sociological Methodology*, 17: 347-61.

10. March 16: Assessing difference over time (Guest lecturer: Anders Holm)

- a. longitudinal data, repeated cross-sectional and panel data
- b. random effects, fixed effects
- c. difference-in-difference

Readings:

Bell, Andrew and Kelvyn Jones (2014) 'Explaining Fixed Effects: Random Effects Modeling of Time-Series Cross-Sectional and Panel Data,' *Political Science Research and Methods*, 3 (1): 133 – 153.

Kandker et al. (2010) '5. Double Difference,' Pp 71-86 in *Handbook on impact evaluation: Quantitative Methods and Practice*. World bank.

Foverskov et al. (2017) 'Socioeconomic position across the life course and cognitive ability later in life: the importance of considering early cognitive ability,' *Journal of Ageing and Health*, 31(6): 1:20.

11. March 23: Cross-national and comparative research

- a. logic of comparative method
- b. survey comparability
- c. contextual versus compositional effects
- d. multilevel models

Readings:

(a) comparative data

Collier, David (1993) 'The Comparative Method,' Pp 105-119 in *Political Science: The State of the Discipline*. UC Berkeley. Report #: 5. Retrieved from <https://escholarship.org/uc/item/25v8z2xs>

Smith, Shawna N., Stephen D. Fisher & Anthony Heath (2011) 'Opportunities and challenges in the expansion of cross-national survey research,' *International Journal of Social Research Methodology*, 14:6, 485-502.

(a) inference from contextual data

Stipak, B., & Hensler, C. (1982). 'Statistical Inference in Contextual Analysis,' *American Journal of Political Science*, 26(1): 151-175.

Peugh, James L. (2010) 'A practical guide to multilevel modeling,' *Journal of School Psychology*, 48: 85-112.

12. March 30: Final test (in class)

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 appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_grad.pdf.

All required papers may be subject to submission for textual similarity review to the commercial plagiarism-detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).

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 at the following website: https://www.uwo.ca/health/student_support/survivor_support/get-help.html. 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/mental distress should refer to Mental Health Support at <https://www.uwo.ca/health/psych/index.html> for a complete list of options about how to obtain help. Additionally, students seeking help regarding mental health concerns are advised to speak to someone they feel comfortable confiding in, such as their faculty supervisor, their program director or program coordinator.

ACCESSIBLE EDUCATION WESTERN

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 Western \(AEW\)](#), a confidential service designed to support graduate and undergraduate students through their academic program. With the appropriate documentation, the student will work with both AEW 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 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 (optional)

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.