Instructors:  
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Class Time/Location:  
Thursday, 3:00 pm - 6:00 pm, 757 JMHH

Office Hours:  by appointment.

Reading Materials:

Texts:  


Articles:  
Journal articles will be distributed electronically via Canvas.
Course Description and Objectives:

This course introduces the fundamental methodological issues that arise in behavioral research: research design, data collection, and data analysis. Illustrative examples are drawn from the behavioral sciences with a focus on the behavior of consumers and managers, but also include other areas (depending on student interests). The general approach taken in this course emphasizes the following perspectives.

1. **Design, data collection, and data analysis are integrative and simultaneous aspects of research** (not independent and sequential). There is a focus on completely mastering the essentials of these components of research, and learning how they relate to more advanced topics.

2. **The separation of "quantitative" and "behavioral" approaches is unnecessary.** These approaches shared a common interest in rigorously testing theory-based causal hypotheses about human behavior.

3. **The current focus in behavioral research on statistical "significance" (i.e., rejecting a null hypothesis of some sort) is misguided and counterproductive.** Rather, research should be designed to validly measure important phenomena and use appropriate statistical models to estimate effect sizes for the factors that might (or might not) cause these phenomena.

4. **Consideration of 1, 2, and 3 leads to a focus on deeply understanding the general linear model of observed variables,** and this model unifies the most widely used types of data analysis (e.g., OLS regression, ANOVA, factor analysis, SEM, repeated measures, time series, and hierarchical linear models).

Specific topics that are covered include: the development of research ideas; the nature of explanation; statistical power, effects size, and significance tests; observational, experimental, and quasi-experimental designs; data and measurement; multi-causal explanations and multi-factor models; between-subjects and within-subjects experimental manipulations and data analysis.

Although grounded in theory, this course emphasizes pragmatic and widely used research methods with a hands-on approach. **Put more simply, this course aims to provide the essential foundations for publishing research in top academic journals.**
Grading:

MKTG 942
20% Class Participation (including assignments)
80% Take-Home Exam 1

MKTG 943
20% Class Participation (including assignments)
40% Take-Home Exam 2
40% Project Presentation

Class Participation:

In addition to participating in class discussions, on some weeks one or two students will be assigned/volunteer to bring in a short example or problem from their own research or a literature of interest to them that is related to the topics covered the previous week. Also, there will be occasional homework assignments.

Take-Home Exams:

At two points in the course, open-book, open-note, take-home exams will be assigned. The questions on these exams will designed to be similar questions on the qualifying exam for marketing students.

Project:

Each student will develop a written proposal for a research project that will be submitted one week prior to presenting the proposal on the last day of class.
### Schedule of Classes:

#### Topics in Research Methods
(MKTG 942 & 943; Professors Wes Hutchinson & Bob Meyer)

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
<th>CCWA</th>
<th>Articles</th>
<th>SAS &amp; HW due</th>
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<tbody>
<tr>
<td>1 Aug 30</td>
<td><strong>No Class:</strong> Small group lab sessions will be scheduled later.</td>
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<td>2 Sept 6</td>
<td><strong>The nature of explanation:</strong> Correlation and causation; Statistical power and effect size; Reliability (stability) and validity (bias); Internal, external, and construct validity; Bayesian thinking about research design and threats to validity; how to read equations as statements about causal theories.</td>
<td>2</td>
<td>Cohen (1994); Brewer (2000); Brinberg, Lynch, and Sawyer (1992); Wilkinson et al. (1999)</td>
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<td>*Kline (2011); *Chintagunta et al. 2006; *Cohen (1995)</td>
<td><strong>HW1:</strong> p-value quiz &amp; my favorite donut survey</td>
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<td>3 Sept 13</td>
<td><strong>Data &amp; measurement:</strong> Choosing what to explain and what to measure; behavioral vs. self-reported, scale types; range-frequency theory; Simpson’s paradox; principal components analysis (PCA) &amp; K-means cluster analysis</td>
<td>4.1, 4.2, 11</td>
<td>Sears (1986); Hutchinson (TN, 2003); Weaver &amp; Schwarz (2008); HW: Erdem &amp; Keane (1996)</td>
<td><strong>HW2:</strong> Causation in Erdem &amp; Keane eqs.</td>
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<td>*John &amp; Benet-Martinez (2000); *Cooke et al. (2004)</td>
<td>FACTOR; FASTCLUS</td>
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<td>4 Sept 20</td>
<td><strong>Multi-causal explanations and multi-factor models:</strong> Multiple regression models (OLS): standardized &amp; unstandardized coefficients; correlations among IVs, SEs for coefficients (Type III SS); Multi-collinearity (VIF, tolerance, condition number); statistical power for OLS analyses.</td>
<td>3.7, 4.5, 6, 10.5</td>
<td>Hutchinson (TN, 2017a); Iacobucci 2009; Irwin &amp; McClelland (2001); Zhao, Lynch, &amp; Chen (2010); Weingarten &amp; Hutchinson (2018)</td>
<td><strong>HW3:</strong> PCA &amp; k-means exercise</td>
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<td>*Baron &amp; Kenny (1986); MacKinnon et al (2007); *Preacher &amp; Hayes (2008); *Preacher &amp; Kelley (2011)</td>
<td>GLM; REG;</td>
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<td>5 Sept 27</td>
<td><strong>Multi-causal explanations and multi-factor models (continued):</strong> Moderation, Mediation Analysis &amp; Structural equation models (SEM): structural equation modeling (SEM) &amp; confirmatory factor analysis (CFA); polynomials functions, interactions, &amp; moderation; path analysis; measurement error; mediation</td>
<td>3, 5, 10, 12</td>
<td>Iacobucci 2009; Irwin &amp; McClelland (2001); Zhao, Lynch, &amp; Chen (2010); Weingarten &amp; Hutchinson (2018)</td>
<td><strong>HW4:</strong> OLS exercise</td>
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<td>*Baron &amp; Kenny (1986); MacKinnon et al (2007); *Preacher &amp; Hayes (2008); *Preacher &amp; Kelley (2011)</td>
<td>P&amp;H process sub-routine</td>
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<td>6 Oct 4 (maybe Oct 3)</td>
<td><strong>Experimental Design and ANOVA:</strong> theoretical and practical issues; representative design; between vs. within subject designs; ANOVA for between-subjects experiments; covariates and ANCOVA; F ratios, MS, &amp; SS; Type III SS (SEs for coefficients); ANOVA tables; contrasts; least squares means; Latin Square designs; repeated measures ANOVA; method of moments vs. maximum likelihood estimation; unobserved heterogeneity</td>
<td>3, 5, 10</td>
<td>Wolfinger &amp; Chang (1998); Hutchinson (TN, 2017b); Hutchinson, Kamakura, &amp; Lynch (2000); *Dhami (2004); *West, Biesanz, and Pitts (2000); *Veryzer &amp; Hutchinson (1998)</td>
<td><strong>HW5:</strong> mediation exercise</td>
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<td>GLM; MIXED</td>
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<td>7 Oct 11</td>
<td><strong>Review &amp; Special Topics</strong> (if time allows)</td>
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<td><strong>Meta-analysis:</strong> effect sizes, estimated parameters, explaining variation in effect size, problems &amp; solutions</td>
<td>14</td>
<td>Rosenthal &amp; DiMatteo (2001); Take-Home Exam 1 posted.</td>
<td><strong>HW6:</strong> ANOVA exercise</td>
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<td>8 Oct 18</td>
<td><strong>Repeated measures designs and variants.</strong> Analysis of mixed between-within designs, nested designs, randomized block designs</td>
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<td>Take-Home Exam 1 due.</td>
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<td>Oct 25</td>
<td><strong>Fractional Factorial Designs.</strong></td>
<td>Design resolution, creations of regular fractions, alias structures, numerical optimization methods, special cases such as Latin squares</td>
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<td>Nov 1</td>
<td><strong>Stated Choice Design Designs.</strong></td>
<td>A survey of methods for constructing choice experiments, including folder designs, heuristics for selecting optimal designs</td>
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<td>Nov 8</td>
<td><strong>Analysis of Stated Choice Experiments.</strong></td>
<td>Basics of analysis of discrete responses: logistic regression, the multinomial logit model and generalizations</td>
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<td>Nov 15</td>
<td><strong>Emerging Topics in Behavioral Measurement</strong></td>
<td>The collection and analysis of eye-tracking data, text analysis including sentiment and topic analysis</td>
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<td>Nov 22</td>
<td>Thanksgiving Break</td>
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<td>Nov 29</td>
<td><strong>Research Reporting and Ethics</strong></td>
<td>How to report findings in publications, traps in exploratory research, ethical dilemmas</td>
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<td>Dec 6</td>
<td><strong>Student Presentations</strong></td>
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Reading List

(not including CCW&A)

Required


Hutchinson, J. Wesley (2003),"Simpson's Paradox." Teaching Note.

Hutchinson, J. Wesley (2017a),"Guidelines for Decisions about Statistical Power.” Teaching Note.

Hutchinson, J. Wesley (2017b),"Top 11 Take-Aways for Regression and ANOVA." Teaching Note.

Iaobucci, Dawn (2009), "Everything you always wanted to know about SEM (structural equations modeling) but were afraid to ask," Journal of Consumer Psychology, 19, 673–680.


Optional


