BADM 6553 / Advanced Methods in Management Research III

Instructor
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Course Site: (Canvas): http://canvas.okstate.edu

Catalogue Description:
Building on the first two seminars in the sequence, this class focuses on developing and testing more nuanced hypotheses such as those involving moderated mediation, change, and non-linear effects. In addition, more sophisticated analytical approaches necessary to deal with complex samples, contexts, and measurement will be introduced; such as, structural equation modeling, multilevel modeling, polynomial and spline regression, and logistic regression.

Course Overview and Objectives:
This course focuses on a range of advanced statistical models and approaches that you can use to test statistical models and write up the results for publication in any management journal. We review then build on the fundamentals discussed your previous classes, and discuss the conceptual and practical steps that need to be undertaken to provide a complete methods section. We will discuss models ranging from the simple (regression analysis) to more advanced models (moderation; mediation; combinations of these two) and statistical techniques (SEM; Path Models; Multilevel Modeling; Non-Continuous DVs).

<table>
<thead>
<tr>
<th>Course Objectives</th>
<th>SSB Ph.D. Learning Goal</th>
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<tr>
<td>Demonstrate in-depth competency of fundamental principles of statistical analysis</td>
<td>Knowledge of scholarly literature</td>
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<td>Ability to conduct rigorous research</td>
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<tr>
<td>Apply class principles together with theoretical considerations to set-up and test study hypotheses.</td>
<td>Knowledge of scholarly literature</td>
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<td>Ability to conduct rigorous research</td>
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<td>Effective communication and presentation</td>
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<tr>
<td>Apply skills, knowledge, and tools to the start-to-finish production of the methodological part of a research paper</td>
<td>Ability to conduct rigorous research</td>
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<td>Effective communication and presentation</td>
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Textbook
Besides the required textbook, we will cover a number of readings each week, as indicated in the list of readings below. These readings are available on Canvas. I also have a list of recommended books that, while optional, are great resources and can be useful in honing your data analysis skills.
Course Organization
This is only partially a lecture course. I will give a lecture outlining some main points relevant to a topic at hand, but most of the learning will be done collectively. In other words, the discussion will be facilitated to a large extent by the students. Each week, there will be a core set of foundational readings that we will all go over in depth, and then each student will be responsible for asking questions, discussing how the topic applies to their work, and linking this to broader research questions. Some of the issues discussed will be posted in advance; others will arise during conversation. For the posted ones, students will ensure that they are properly prepared for the relevant discussion. Demonstrations of competence will be ensured via homework assignments. Finally, at the conclusion of the semester, each student will submit and present a research report on a topic that interests you; only constraint is that it needs to represent a quantitative analysis of a stated question or set of hypotheses, and that it has to utilize the methods presented in class.

Course Topic Overview

Important note: No (lesson) plan extends with any certainty beyond the first contact with the classroom (von Moltke, 1871, paraphrased). I fully expect to need to spend more time on particular topics, and this outline has this explicitly accounted for.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tr>
<td>1</td>
<td>Course introduction</td>
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<td>2</td>
<td>Moderation revisited</td>
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<td>3</td>
<td>Mediation revisited</td>
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<td>4</td>
<td>Multiple regression</td>
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<td>5</td>
<td>Non-continuous outcomes</td>
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<td>6</td>
<td>Review and Midterm Presented</td>
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<td>7</td>
<td>Midterm exam due – Discuss in Class</td>
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<td>8</td>
<td>Change as IV/DV</td>
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<td>9</td>
<td>Multilevel Modeling</td>
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<tr>
<td>10</td>
<td>Review?</td>
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<tr>
<td>11</td>
<td>Synthesis</td>
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<td>12</td>
<td>Meta-analysis</td>
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<td>13</td>
<td>Bayesian Analysis</td>
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<td>14</td>
<td>Presentations</td>
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<tr>
<td>15</td>
<td>Review</td>
</tr>
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<td>16</td>
<td>Final Exam</td>
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List of Readings

Moderation Revisited


Optional


Mediation Revisited


Optional


Multiple Regression


Optional


Non-Continuous Outcomes


Optional


Change as Independent Variable


Optional


Multilevel Modeling


Optional


Change as Dependent Variable


Optional


Meta-Analysis


Optional


Bayesian Analysis


Optional


Other Suggested Material


*Sage “little green books”. These are all great as an introduction and overview.