RMTD 580 – Causal Modeling
Summer 2014
Mondays & Wednesdays, 5-7 pm, 1103 Lewis Towers

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Office Hours by appointment

Course Description
This course will focus on current methods for the design and analysis of studies using experimental and quasi-experimental methods for causal inference. The topics of the course include statistical theory of causal models and specific design and analysis strategies including randomized controlled trials, clustered randomized trials, propensity score analysis, and instrumental variables analysis. Students will discuss various design and analysis strategies, and also analyze data resulting from experimental studies.

School of Education’s Conceptual Framework
The School of Education at Loyola University Chicago, a Jesuit and Catholic urban university, supports the Jesuit ideal of knowledge in the service of humanity. We endeavor to advance professional education in the service of social justice, engaged with Chicago, the nation, and the world. To achieve this vision the School of Education participates in the discovery, development, demonstration, and dissemination of professional knowledge and practice within a context of ethics, service to others, and social justice. We fulfill this mission by preparing professionals to serve as teachers, administrators, psychologists, and researchers; by conducting research on issues of professional practice and social justice; and by partnering with schools and community agencies to enhance life-long learning in the Chicago area. This course will equip students with the knowledge, skills of inquiry, and ethics necessary to be professional and socially just researchers. The data sets and case studies used in this course illustrate how statistical analysis can illuminate issues of social justice such as inequality in resources and achievement across segments of our society. In addition, the statistical techniques used in this course also add to students’ ability to understand the diversity of perspectives that researchers use to address social problems.

Required Text

Additional readings may be assigned throughout the course.

IDEA Objectives for the Course
This course will be focused on the following general objectives:
- Gaining factual knowledge
- Learning to apply course material
- Learning to analyze and critically evaluate ideas, arguments, and points of view
Student Expectations

Since this course will be run as a seminar, all students are expected to attend classes prepared to discuss the readings and any other assigned work. Students will also be expected to keep up-to-date on class assignments through the learning management system, Sakai. In addition, students are assumed to have a working knowledge of the use of SPSS for this course. Grading will be based on class participation, homework assignments and a final project.

Class Participation: 20%
Homework Assignments: 35%
Final Project: 45%

Dispositions

Each course in the School of Education focuses on one or more professional dispositions. Students are offered opportunities to receive feedback on their dispositional growth in the areas of professionalism, fairness and/or the belief that all students can learn. All three of these dispositions will be assessed in this course, and the descriptions for the expected behaviors for the dispositions can be found on the rubric posted in LiveText for this course.

Tentative Course Outline

<table>
<thead>
<tr>
<th>Date</th>
<th>Readings</th>
<th>Assignment</th>
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<tbody>
<tr>
<td>May 19</td>
<td>M &amp; W, Chapters 1-4</td>
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<tr>
<td>May 21</td>
<td>M &amp; W, Chapters 5-6</td>
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<tr>
<td>May 26</td>
<td>NO CLASS</td>
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<tr>
<td>May 28</td>
<td>M &amp; W, Chapter 7</td>
<td>Homework 1</td>
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<td>June 2</td>
<td>M &amp; W, Chapter 8</td>
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<td>June 4</td>
<td>M &amp; W, Chapter 9</td>
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<td>June 9</td>
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<td>Homework 2</td>
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<tr>
<td>June 11</td>
<td>M &amp; W, Chapter 10</td>
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<tr>
<td>June 16</td>
<td>M &amp; W, Chapter 11</td>
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<td>June 18</td>
<td>M &amp; W, Chapter 12</td>
<td>Homework 3</td>
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<td>June 23</td>
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<tr>
<td>June 25</td>
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<td>Final Project Due</td>
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We will discuss Homework assignments and the Final Project in class.

ACADEMIC POLICIES

Academic Honesty
Academic honesty is an expression of interpersonal justice, responsibility and care, applicable to Loyola University faculty, students, and staff, which demands that the pursuit of knowledge in the university community be carried out with sincerity and integrity. The School of Education’s Policy on Academic Integrity can be found at: [http://www.luc.edu/education/academics_policies_integrity.shtml](http://www.luc.edu/education/academics_policies_integrity.shtml). For additional academic policies and procedures refer to: [http://www.luc.edu/education/academics_policies_main.shtml](http://www.luc.edu/education/academics_policies_main.shtml)
**Accessibility**
Students who have disabilities which they believe entitle them to accommodations under the Americans with Disabilities Act should register with the Services for Students with Disabilities (SSWD) office. To request accommodations, students must schedule an appointment with an SSWD coordinator. Students should contact SSWD at least four weeks before their first semester or term at Loyola. Returning students should schedule an appointment within the first two weeks of the semester or term. The University policy on accommodations and participation in courses is available at: [http://www.luc.edu/sswd/](http://www.luc.edu/sswd/)

**Harassment (Bias Reporting)**
It is unacceptable and a violation of university policy to harass, discriminate against or abuse any person because of his or her race, color, national origin, gender, sexual orientation, disability, religion, age or any other characteristic protected by applicable law. Such behavior threatens to destroy the environment of tolerance and mutual respect that must prevail for this university to fulfill its educational and health care mission. For this reason, every incident of harassment, discrimination or abuse undermines the aspirations and attacks the ideals of our community. The university qualifies these incidents as incidents of bias.

In order to uphold our mission of being Chicago's Jesuit Catholic University-- a diverse community seeking God in all things and working to expand knowledge in the service of humanity through learning, justice and faith, any incident(s) of bias must be reported and appropriately addressed. Therefore, the Bias Response (BR) Team was created to assist members of the Loyola University Chicago community in bringing incidents of bias to the attention of the university. If you believe you are subject to such bias, you should notify the Bias Response Team at this link: [http://webapps.luc.edu/biasreporting/](http://webapps.luc.edu/biasreporting/)