Class Meets: Wednesdays

Time: 1:00PM – 3:45PM

Room: Innovation 455A

Class website: http://gemini.gmu.edu/cebcp/CRIM_795_fall2011.html

Course Summary:

Randomized experiments are generally considered the most reliable method that researchers can use in linking causes and effects. For this reason, a number of scholars have called randomized studies the "gold standard" for research. But randomized studies continue to be the exception rather than the rule in criminal justice study. In this course, we will contrast randomized designs with other approaches, examining statistical, methodological, ethical and practical concerns. What are the statistical advantages of randomized experimental designs? Why do some researchers believe that randomized studies violate ethical standards in criminal justice? Why are experiments considered to have higher internal validity than non-randomized designs and how do different types of designs compare in terms of external validity? We will also focus on how experiments can be developed and how they are analyzed. What are the practical barriers to experimentation and how can they be overcome? What statistical methods are most appropriate for experimental analysis? How can block randomization or hierarchical modeling be used to develop more powerful or more practical research approaches?

Evaluation:

Grades will be assigned as follows:

Class Participation (20%)
Scholarly Paper (80%)

Recommended Text:

I. Can Criminologists Provide Solid Answers to Policy Questions?: Problems of Bias and Generalizability


II. Controlling for Confounding Causes: Non-Experimental Approaches


III. Controlling for Confounding Causes: Randomized Experiments


IV. Comparing Randomized and Non-Randomized Designs: Should Experiments be Considered the Gold Standard?


V. If Experiments are so Useful, Why are there so Few of Them?: Ethical and Practical Barriers to Experimentation and the Responses of Experimenters

A. Ethical and Practical Barriers


**B. The Response of Experimenters: Overcoming the Barriers**


**VI. Avoiding Experiments Designed for Failure: Treatment Integrity and Statistical Power**


Software Packages for Analysis of Statistical Power

http://www.power-analysis.com/

2) Optimal Design (Software and Manual)
http://sitemaker.umich.edu/group-based/optimal_design_software

VII. Overcoming Implementation Failures


VIII. When Can We Say Treatments Don’t Work?: Recognizing The Limits of Statistical Tests


IX. Designing and Analyzing Experiments: Practical Design Examples.

A. Simple Non-Blocked Designs


B. Block Randomized Designs


7) Weisburd, David and Charlotte Gill (2011). Block randomized trials at places: Rethinking the limitations of small-N experiments.


**C. Reporting Validity**


Resources:


**D. Hierarchical Designs**


1b) **Recommended additional reading:**  


**X. Replication, Meta Analysis, and Multi-Center Designs: Practical Problems and Statistical Analysis**

**A. Replication**


**B. Meta-Analysis**


**C. Multi-Center Clinical Trials**
