CRP 3210

Introduction to Quantitative Methods for the Analysis of Public Policy

Class: Tues/Thurs 1:25 – 2:40  Class: SBL 101
Lab: Wed 7:30pm – 10:30pm  Lab: SBL 305
Instructor: Kris Hartley  TA: Lu Liao (ll743@cornell.edu)
Office: TBA (Hours)  Office: TBA (Hours)

Summary
This course equips students with theoretical foundations and methodological tools to design, implement, and evaluate data-informed public policy interventions. Policymakers must employ rigorous analytical methods within environments of complexity, uncertainty, and budgetary constraints. To prepare students for these challenges, this course examines both the conceptual and empirical dimensions of policy analysis. Methods covered include the application of statistical inference and econometrics to forecasting, planning, decision analysis, and program evaluation, among others.

Learning objectives
Upon course completion, you will be able to:
- Analyze policy problems and feasible interventions
- Understand the relative benefits and drawbacks of policy analysis tools
- Apply models using software packages

Course prerequisites
No previous coursework is formally assumed. However, students should possess modest comfort with economic principles and statistics, and preferably a familiarity with and curiosity about public policy issues.

Course materials
Materials (assignments, supplementary readings, PowerPoints, and announcements) will be uploaded in Blackboard prior to class. Students will want to familiarize themselves with content before each class. Readings are drawn from:
- Ragsdale, Cliff. Spreadsheet Modeling & Decision Analysis: A Practical Introduction to Management

Student expectations
- Regular and punctual attendance at lectures and labs is expected. More than six absences will result in a zero for a student’s participation grade. Exceptions are made only in special circumstances.
- Students should comport themselves with consideration for the needs of fellow students and teaching staff, and should refrain from distracting behavior. Mobile phone use is not permitted, and laptop use is permitted only for course-related purposes. I reserve the right to modify these rules at any time.
- Students must observe the university’s Code of Academic Integrity in all matters.
- Students are responsible for being aware of all announcements made in lectures or on Blackboard.

Accommodations for students with disabilities
In compliance with the Cornell University policy and equal access laws, I am available to discuss appropriate academic accommodations that may be required for student with disabilities. Requests for academic accommodations are to be made during the first three weeks of the semester, except for unusual circumstances, so arrangements can be made.
CRP 3210

Introduction to Quantitative Methods for the Analysis of Public Policy

Grading
- 10%: class participation
- 40%: assignments (6)
- 50%: mid-term and noncumulative final exam (2 x 25%)

Important dates
Fall break: 10/08 – 10/11 (No class Tuesday, 10/10)
Mid-term exam: Tuesday, 10/18
Thanksgiving break: 11/23 – 11/27 (No class Thursday, 11/24)
Final exam: TBA

Assignment due dates
Assignment 1: 09/02
Assignment 2: 09/16
Assignment 3: 09/30
Assignment 4: 10/21
Assignment 5: 11/04
Assignment 6: 11/18

Tentative outline of topics (supplemental readings TBA on a weekly basis)

1. Planning logic and analysis
   - Hopkins, Chapters 1-4

2. Decision analysis
   - Stokey and Zeckhauser, Chapter 12.

3. Difference equations
   - Stokey and Zeckhauser, Chapter 4.

4. Demographic forecasting

5. Queues
   - Stokey and Zeckhauser, Chapters 5 & 6; Ragsdale. Chapter 13.

6. Project evaluation and benefit-cost analysis
   - Stokey and Zeckhauser, Chapter 9.

7. Framework for policy analysis

8. Equity planning

9. Linear Programming
   - Stokey and Zeckhauser, Chapter 11; Ragsdale. Chapters 2-4.