CRP 3270 / 6270

REGIONAL ECONOMIC IMPACT ANALYSIS

This course defines the context of a regional economy, taking systems approach to sustainable development planning. We will be introduced to the techniques of input-output analysis and will learn how to use social accounting models to evaluate social and environmental impacts. We will use international datasets and will also learn IMPLAN, a software and database designed to quantify the impact of exogenous forces on U.S. regions. Examples of exogenous forces include out-migration of population, natural disasters, financial flows, or the introduction of new activities. Policy choices, such as new housing construction or an increase in the local sales tax, also affect the entire region beyond the originally intended subjects. The methods to be discussed enable practicing professionals to integrate environmental and social dimensions of planning into the framework of economic impact analysis.

LEARNING GOALS

Upon completion of this course, students will:

- understand the principles of regional impact analysis
- gain the skills to estimate the local impact of an exogenous shock and run what-if scenarios in IMPLAN and spreadsheet models
- be able to critically assess the methods that planners, economic developers, and other professionals use to evaluate policies and influence decision-making
- develop the abilities to identify real-world problems for which the tools of regional analysis are appropriate

PREREQUISITES

- Primarily lower-level linear algebra and principles of macroeconomics.

TEXTBOOKS


I will place the texts on course reserve at the Fine Arts Library. Journal articles can be downloaded for free from the Library Gateway, [http://www.library.cornell.edu/](http://www.library.cornell.edu/), or through the website provided in the Course Outline below. There may also be handouts distributed throughout the course.
**Final Grade**

Your final grade is determined according to the following scheme:

- 10 percent – class attendance and participation
- 40 percent – homework assignments
- 10 percent – group project and others
- 40 percent – final project

**Course Requirements**

- **Class participation**
  Students are expected to come to every class, and to be actively involved in class discussions. Regular class participation counts toward 10 percent of your final grade. To ensure satisfactory progress, expect to spend 5-6 hours a week, including class attendance, lab exercises, readings, and homework preparations. More time maybe required to achieve more than satisfactory result.

- **Homework assignments**
  There will be approximately five assignments during the semester. In assignments 2-4 IMPLAN is the main computational platform, whereas in the last assignment MS Excel is used to compute SAM multipliers. Assignments maybe deposited to the instructor’s mailbox (at W. Sibley B01), slid under the instructor’s office door, or submitted to the course assistant. Late submissions are subject to 10% discount per day (weekends count as 2 days).

**Regrades:** All regrade requests must be done *in writing*. Please attach to your work a note explaining why you think the grade you have received is not appropriate. Note that a request to check for arithmetic error in adding up points will be granted right away and does not constitute a regrade request.

- **Final project**
  For the final project, you may pick one *NY State county* and use the IMPLAN data to evaluate the impact of an exogenous shock. The lab computers have the IMPLAN data for all 62 NYS counties. The project report should include a background research on the history, population, and characteristics of that county’s local economic structure. The analytical part should include the simulation of the impact of an exogenous shock or public policy, for example:
    - promotion of tourism activities to revive a distressed economy;
    - property tax breaks for homeowners.
  The report is evaluated based on the topic originality and whether it has clear planning/policy implications.
  Alternatively, you may use the I-O/SAM data for a (non U.S.) country and for which the data are available. Examples of international datasets that past students had used for final projects include those for Colombia, China, Germany, Indonesia, Mexico, and South Korea. The International Food Policy Research Institute ([http://www.ifpri.org/datasets](http://www.ifpri.org/datasets)) has links to free SAM data for many developing countries.

- **Computer Support**
  Lab sessions are offered on Tuesdays (starting at 7:30 pm) of selected weeks, usually in the same week that a problem set or the final project is due. Lab time will be devoted to
understanding and applying IMPLAN, a computer simulation software and data system for regional impact analysis at the national, state, county, and zip-code level. All labs are in the West Sibley 3rd floor Jones Lab (Room SBL 305).

You must have access to the computer lab to use the IMPLAN software and data files. For more information about IMPLAN, visit their website at http://www.implan.com

Blackboard
I will post most of the course materials, including announcements, homework assignments, homework solutions, reading materials, and other handouts to the course website on Blackboard.

Policy on laptops & cell phones
Laptops may be used for note-taking and participating in exercises during class. They should not be used for reading or sending e-mail or engaging in other diversions. Cell phones should be turned off at all times during class. No texting during class is permitted.

Code of academic integrity
All academic work must meet the standards contained in the “Cornell University Code of Academic Integrity” (http://cuinfo.cornell.edu/Academic/AIC.html). Students are responsible for informing themselves about those standards before completing any academic work. The individual assignments and term paper, in particular, are your own work and responsibility.

IMPORTANT DATES
Fall Break 10/11 – 10/14 (No class Tuesday Oct. 14th)

Thursday, 11/13
Tentative no class (annual meetings of the Regional Science Association)
And/or
Thursday, 11/30
Tentative no class (annual meetings of the Association of Collegiate Schools of Planning)

Thanksgiving Recess 11/26 – 11/30 (No class Thursday Nov. 27th)

Term Paper
Due Date and Time: TBA.

The following due dates for homework assignments are subject to change.

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<tr>
<th>Assignment</th>
<th>Tentative due date</th>
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<tbody>
<tr>
<td>Homework 1</td>
<td>F 09/12</td>
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<tr>
<td>Homework 2</td>
<td>F 09/26</td>
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<td>Homework 3</td>
<td>F 10/10</td>
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<td>Homework 4</td>
<td>F 10/31</td>
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<td>Homework 5</td>
<td>F 11/21</td>
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TENTATIVE OUTLINE OF TOPICS (May change to accommodate student needs)
The following outline is meant to be a general guidance. I may make additional changes or amendments as the semester progresses.

Introduction
Readings:

Conceptualizing a Spatial Economy
Readings:

Macro Models of Output Determination
Readings:

Input-Output Model
Readings:
- Miller and Blair, Chapters 1 and 2.

Review of Matrix Algebra
Readings:

Social Accounting Matrix
Readings:
- Thorbecke, Erik, Chapter 7 in Isard et al.

SAM Multipliers
Reading:
- Miller and Blair, Section 11.11 in Chapter 11.
**Evaluation: Which Multipliers to Use**
Reading:
- Miller and Blair, Chapter 6.

**Environmental Models**
Reading:
- Miller and Blair, Chapter 10

**Putting IMPLAN to Work**
Readings:
- *IMPLAN Pro*, Chapter 17, Case Studies 1, 2, 3, 4.