Class Times: Thursdays, 3:30-6:30pm.
Classroom: HH250
Course Website: JHSPH CoursePlus website

Faculty: Carey Borkoski, Ph.D.
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  410-516-4624
  Hampton House 382

TA: Arianna Hutcheson
TA Contact Information: ahutche1@ycp.edu
Office hours: TBD

Course Description: This course will provide students with practical hands-on instruction in the analysis of policy-relevant data using the statistical package Stata. It will serve as a bridge between the theory of statistics/econometrics and the practice of social science research. Throughout the term students will learn to investigate a variety of public policy issues using data from the U.S. as well as internationally. The course assumes no prior knowledge of the statistical package Stata, but builds on the knowledge learned in Statistical Analysis for Policymaking I&II and being taught in Statistical Analysis for Policymaking III & IV.

This course also includes a service-learning component where students have the opportunity to apply the analysis skills learned to a “real-world” project with a Community-Based Organization (CBO) in Baltimore. This project will include specific goals and outcomes decided on by the instructor, CBO and students as well as a component of critical reflection carried out by the students with guidance from the instructor.

Service-Learning Definition
“Service-learning is a structured learning experience that combines community service with preparation and reflection. Students engaged in service-learning provide community service in response to community-identified concerns and learn about the context in which service is provided, the connection between their service and their academic coursework, and their roles as citizens.” (Seifer S.D. (1998). Service-learning: Community-campus partnerships for health professions education. Academic Medicine, 73(3): 273-277.

Prerequisites: Statistics for Policymaking I & II

Required Text(s): none

Recommended Text(s): Statistics with Stata, Lawrence Hamilton; A Gentle Introduction to Stata, David Aycock

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Required Materials: A copy IC Stata, [www.stata.com](http://www.stata.com)

Course Format: This course is hands-on and will be held in a computer lab on campus. Students will learn and use Stata during the class sessions. Mastery of this data analysis package and the statistical techniques depends on students’ willingness to participate in class assignments, activities, homework problems and other course requirements. The service-learning component of the course will also require that students work closely with the selected CBO and engage in critical reflection (taking various forms) about the experiences.

Course Learning Objectives:

**Student Learning**
At the end of this course a successful student will:
1. Explain the purpose of various Stata tools, including commands, do files and log files;
2. Perform various statistical operations using Stata;
3. Design a program to conduct a statistical analysis of a data set;
4. Interpret output from Stata and identify the policy significance (if any) in the results.

**Service**
Work with a community based organization to:
1. Outline current data needs including possible measures and outcomes.
2. Examine existing reporting practices.
3. Craft a plan to leverage and/or expand outcome measures.
4. Devise a short-term project to advance the proposed plan.

**Service-Learning**
After participating in the course service-learning project students will know how to:
1. Coordinate with multiple stakeholders to define the role of outcome measures.
2. Gain an awareness of the role of data in a community-based organization.
3. Collaborate with a community-based organization to devise and implement a data-related proposal appropriate for their needs.
4. Navigate the challenges associated with using “real-world” data to achieve agreed upon goals.
5. Identify and leverage the value of the data used to meet the needs of the CBO.

Course Policies:

- **Attendance** – Students are expected to attend each class session.
- **Definition of Participation** – It is critical that students stay on top of the material, review the techniques and commands discussed in lab and practice these techniques outside of class. Students are permitted and encouraged to work together, but each student will ultimately need to complete their own assignments.
- **Late submissions/make-ups** – Late submissions will NOT be accepted without approved prior notice or a doctor’s note documenting the emergency.
- **Use of cell phones/laptops during class** – Cell phone use is not permitted during class.
However, students are permitted to keep their electronic devices on vibrate so that they may be contacted in the case of an emergency. Personal laptops may only be used if accessing Stata or data for your project or assignments for this course.

- **Modes of communication**—Email represents the best way to reach me. I am also happy to talk by phone or meet in person when necessary.

- **Course reading information**—There is no required textbook for this course. If articles are assigned the instructor will provide these through our course website or in hardcopy.

- **Group work guidelines**—Instructor-selected groups will craft individual group guidelines (see separate handout for more details).

- **Grades will be determined as follows:**
  - In-Class Stata Activities/Participation (1-5) 15%
  - Final In-Class Stata Activity 15%
  - Group Presentations (Status Reports) 15%
  - Service-Learning
    - Project 30%
    - Reflection 20%
    - Evaluation 5%

  **Course Grading Scale**
  - A: 90-100
  - B: 80-89
  - C: <80

- **Disability Support Services**
  If you are a student with a documented disability who requires an academic accommodation, please contact Betty H. Addison in the Office of Career Services and Disability Support: dss@jhsph.edu, 410-955-3034, or Room E-1140.

- **Academic Ethics Code**
  The code, discussed in the Policy and Procedure Memorandum for Students, March 31, 2002, will be adhered to in this class:
  [https://my.jhsph.edu/Resources/PoliciesProcedures/ppm/PolicyProcedureMemoranda/Students_01_Academic_Ethics.pdf](https://my.jhsph.edu/Resources/PoliciesProcedures/ppm/PolicyProcedureMemoranda/Students_01_Academic_Ethics.pdf)

  Students enrolled in the Bloomberg School of Public Health of The Johns Hopkins University assume an obligation to conduct themselves in a manner appropriate to the University’s mission as an institution of higher education. A student is obligated to refrain from acts which he or she knows, or under the circumstances has reason to know, impair the academic integrity of the University. Violations of academic integrity include, but are not limited to: cheating; plagiarism; knowingly furnishing false information to any agent of the University for inclusion in the academic record; violation of the rights and welfare of animal or human subjects in research; and misconduct as a member of either School or University committees or recognized groups or organizations.

- **Practicum Information**: If you are seeking to earn MPH practicum hours for this course, you must complete the Practicum Learning Plan Proposal Form in order to appropriately document participation in the course. The form can be located online under the Practicum website. This course fulfills 65 practicum hours.
- **Reporting Service Hours:** At the completion of each week, login to the SOURCE Online Reporting form which can be found at: [https://source.sts.jhu.edu/](https://source.sts.jhu.edu/). To log in, you will need your JHED ID. The first time you fill out the form, make sure to fill out your information on the Introduction page. Each subsequent time you log on go directly to the “Community Involvement Reporting Form.” *This course requires that all students track and report weekly service hours.*

Course Schedule:

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Assignment(s) Due</th>
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</table>
| 1-22 | Lesson 1: Introduction and Overview  
1-Review Syllabus, layout of course  
2- Introduction to Stata – The Environment/Data Sources  
3-Basic Commands (sum, sum if, correlate, scatter, regress) | Guest Speaker – Elizabeth Doerr, Associate Director, SOURCE  
Reflection #1 – Perceptions of Service-Learning  
Group Assignments  
Set-up meeting with CBO’s  
Reflection #2 – Letter to Yourself |
| 1-29 | Lesson 2: Opening, Creating and Saving Data Files in Stata | *In-class Stata Exercise #1*  
Reflection #3 – “Messy Data”  
Revisit - Article, “Learning to Love the Swamp” |
| 2-5  | Lesson 3: Preparing Data for Analysis  
1-More Stata Commands  
2-Variable construction and manipulation *Service-Learning Project* | *In-class Stata Exercise #2*  
Meet with client by 2-7  
Completed Online SOURCE Modules  
– Certificate is due.  
Reflection #4 – Baltimore Video  
(completed in seminar) |
| 2-12 | Lesson 4: Graphs  
1-Histograms/Box Plots  
2-Scatterplots/Line Plots  
3-Graph Editor | *In-class Stata Exercise #3* |
| 2-19 | Lesson 5: Summary Statistics & Tables  
1-Exploratory Data Analysis  
2-Normality  
3-Frequency Tables  
4-Cross Tabulations | Reflection #5 – Working with the Community  
*Article-Difficult Dialogue about Service-Learning (Hui)* |
<p>| 2-26 | <em>Service-Learning Project</em> | Work Plan Due (Refer to S-L Work Plan Document) |</p>
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<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Assignment</th>
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<tbody>
<tr>
<td>3-5</td>
<td>Lesson 6: ANOVA and other comparison methods.</td>
<td>In-class Stata Exercise #4</td>
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<td>Reflection #6– Class “check-in” – Challenges, Opportunities &amp; Questions</td>
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<td>3-12</td>
<td>Service-Learning Project</td>
<td>Progress Report #1 (Use Summary Progress Report Document)</td>
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<td>3-19</td>
<td>SPRING BREAK 3/16 – 3/20</td>
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<td>3-23</td>
<td>Lesson 7: Regression for Continuous Outcomes</td>
<td>In-class Stata Exercise #5</td>
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<td>3-30</td>
<td>Service-Learning Project</td>
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<tr>
<td>4-6</td>
<td>ANOVA, Merging Data</td>
<td>Progress Report #2</td>
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<tr>
<td>4-13</td>
<td>Lesson 8: Regression for Categorical Outcomes (2 lectures) –</td>
<td>In-class Stata Exercise #3</td>
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<td>1-Predicted Probabilities</td>
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<td>2-Transformations</td>
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<td>3-Interactions</td>
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<td>4-Categorical Independent Variables</td>
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<td>5-Hypothesis Testing (Post-Estimation)</td>
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<td>4-20</td>
<td>Service-Learning Project</td>
<td>Final Progress Report</td>
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<td>4-27</td>
<td>Lesson 9: Translating Stata Output into Usable Reports</td>
<td>Final Stata Exercise</td>
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<td>5-4</td>
<td>Service-Learning Project</td>
<td>Evaluation of Service-Learning</td>
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<td>5-11</td>
<td>Wrap-Up</td>
<td>Final Deliverable and Presentation</td>
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**Assignments:**

- **In-Class Exercises** – students are expected to fully participate and complete assigned data analysis exercises in class. The instructor will provide opportunities throughout the semester for students to review and practice skills and techniques learned through various data activities.

- **Group Presentations** – Service-Learning Groups will be asked to provide periodic progress reports on their work with the assigned CBO. (See additional handouts for further instruction.

- **Service-Learning**
  - Online Modules - Prior to beginning the service experience, students must view and complete all of the SOURCE Online Modules that provide background on the history of the relationship between Baltimore and Hopkins and competencies around conducting service within the community. All Online Modules are found at [www.jhsph.edu/SOURCE/Online-Modules](http://www.jhsph.edu/SOURCE/Online-Modules). Please complete the following modules:
    - Module 1: Johns Hopkins & Baltimore, How History Impacts Our Work (45 mins.)
    - Module 2: From Service to Partnership: Principles and Best Practices for Engaging with Community (60 min.)
Module 3: Working in a Community Setting: Essential Competencies (66 mins.)

Once the modules and related quizzes are completed, a certificate will be generated as a PDF. Download this certificate and send to Arianna Hutheson (our class TA). She will forward these to SOURCE. This is due by February 5.

- Reflection Exercises – This portion of the course will include group and individual assignments. Students are expected to fully participate in the group activities and complete the individual reflections on time. Each assignment will come with its own instructions.
- Project – Each group, working with the CBO, will craft a work plan that outlines the project goals, tasks, timeline and other key features of the service-learning activities. Students will be assessed on their ability to work with the CBO, deliver tasks and meet set goals in a timely and complete manner. While the assessment will not be based on the “correctness” of the work, students will receive grades for carrying out all aspects of the agreed upon plan.
- Final Project and Presentation should include:
  - Description of the Project
  - Agreed Upon Work Plan
  - Client Meeting Notes
  - Status Reports
  - Final Deliverable(s)
  - Miscellaneous Section – other materials relevant to the project
- Evaluation – Students will be asked to complete a final evaluation of the service-learning experience (administered by SOURCE) and will receive partial credit towards their final grade for their efforts. The evaluation serves to provide SOURCE with feedback about the organization as well as to assess what students gain from their service-learning experience.

Bloomberg Resources

- Welch Library
  - Online Tutorials and Guides: http://www.welch.jhu.edu/welch_tutorials/
  - Ask your Librarian Tool: http://www.welch.jhu.edu/contact.html
- Writing Support
  - Purdue OWL: http://owl.english.purdue.edu/
- Public Speaking:
  - How to Give an Academic Talk: http://www.cs.berkeley.edu/~jrs/speaking.html
- ESL:
  - Purdue: http://owl.english.purdue.edu/owl/resource/678/01/
  - ESL Network: http://www.esl.net/esl_resources.html
- Citing Sources (AMA): http://ajph.aphapublications.org/misc/ama_references.shtml
- Citing Sources (APA): http://owl.english.purdue.edu/owl/resource/560/02/
- JHSPH Presentation templates: http://www.jhsph.edu/identity/downloadResources/downloadResources.shtml

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• PowerPoint Tips :
  http://www.slideshare.net/guestc68f2ce/presentations-tips-presentation-759091
  http://www.slideshare.net/thecroaker/death-by-powerpoint
  http://www.youtube.com/watch?v=KbSPPFYxx3o
  http://library.humboldt.edu/~ccm/fingertips/pptpointers.html