APSTA-GE 2401 Statistical Consulting Research Seminar
Fall 2015

Course Time and Location:
  Time: Weds 12:30-2:30pm
  Loc: TBD
Credits: 3 points
Instructors: Jennifer Hill, Ying Lu
Office Hours: TBD

Course Description and Prerequisites:

This course is designed to assist graduate students in the quantitative methods specific to the design and analysis of their research projects. In this seminar format, under the guidance of one or more statistical faculty members, students will have the opportunity to present and defend their scholarly work-in-progress. They will also be required to critique and provide constructive suggestions for their fellow students. The focus of critiques will be on research methodology and other statistical issues. Students will additionally benefit from being able to observe how the participating faculty diagnose and solve statistical issues that arise in others’ presented work and from this advice in their own work. In essence this course provides training in statistical consulting along with detailed feedback on one’s ongoing research.

The prerequisite for this course is intermediate and advanced quantitative methods course (APSTA-GE.2003, APSTA-GE.2004) or the equivalent as approved by the instructor. In addition, one ‘specialized’ topic in advanced quantitative methods or equivalent is recommended. Examples include multi-level models (APSTA-GE.2040 or APSTA-GE.2042), classification and clustering (APSTA-GE.2011), causal inference (APSTA-GE.2012), missing data (APSTA-GE.2013), applied statistical inference (APSTA-GE 2122).

Grading:
All students are required to attend each class. Students will be required to present their own work once (45 minute presentation) and to play the role of formal discussant once for someone else’s presentation. A short, written prospectus of their proposed research before and after their critique, incorporating insights gained, will be submitted. Students will be additionally required to submit a piece of written work modeled after either the ‘methods’ or the ‘results and discussion’ section of a journal article and to critique (in writing) the written work of one other member of the class. Both the oral and written presentations will be graded on the basis of clarity, depth and completeness, with an emphasis on improvement in quality post-critique.

Reading materials
Paper drafts provided by the class participants. Journal articles/book chapters/software manuals may be assigned as supplementary reading – the exact titles will depend on the students’ research areas.

1 A 1-point option exists for doctoral students who have completed all other program requirements. Contact the instructor for more information.
Class schedule

Each class, including the first, will follow roughly the same format. Each student is expected to present his/her project in detail, followed by guided class discussion. During the discussion, full participation of all students is expected. If time permits, students may have a second chance to present the revised project. In some instances, guest faculty members may join the class to present a "case study" consulting project.

Before the first class in each term, at least one student will be contacted to prepare presentations for the first class (to yield the optimal amount of time for feedback throughout the term). A final paper discussing a revised set of approaches to and findings of the student’s research is due on the day the university designates for the final exam.