

Quantitative Social Science Learning Compact

Quantitative Social Science (QSS) is a burgeoning interdisciplinary field that combines quantitative analysis skills with a variety of substantive social science disciplines. The quantitative social science program provides students across the social sciences with the core skills and tools required to conduct sophisticated quantitatively oriented social science research. Designed to accompany the substantive core courses of another social science AOC, this program of study emphasizes the practical methodological components of quantitative data analysis, including research design, applied statistics, programming, and mathematical foundations.

Quantitative Social Science is not just the study of how to do data analysis, but also the study of why data analysis should be done, what its possibilities are, and its limitations. Students who study quantitative social science will emerge with a better understanding of how decisions with data get made, how to interpret the profusion of data in our increasingly digital society, how different social science fields utilize data to understand their areas of study, and how to communicate effectively and clearly with data.

This joint program of study will be of particular interest to students hoping to pursue careers in social fields requiring quantitative analysis skills such as jobs in state or federal government, consulting, media and communications, and as analysts in marketing, business, social work, and politics. Many of these careers look for both a social science degree and data analysis skills. Additionally, this joint AOC may be helpful for those interested in graduate school in the social sciences, where sophisticated quantitative skills are increasingly expected as prerequisites for admission.

Student Learning Outcomes

1. **Quantitative & Statistical Methods:** Students will have an understanding of quantitative analyses conducted in social science research and be able to conduct data analysis using descriptive, inferential, and visual statistical methods using appropriate tools.
2. **Programming & Computational Skills:** Students will learn basic programming skills and be able to utilize appropriate tools for programming tasks, data management, and statistical methods.
3. **Quantitative Integration & Research Design:** Students will demonstrate the ability to understand social science research methodology and integrate quantitative analysis with substantive social science theory and data across multiple fields.
4. **Mathematics:** Students will demonstrate the ability to understand the mathematical underpinnings of statistical models.
5. **Data Communication & Practice:** Students will learn how to describe the implications of their research to a non-expert audience and will demonstrate strong written and oral communication skills when presenting the results of their research.

Measures to track student progress

The QSS faculty will track student progress toward satisfactorily completing the QSS joint area of concentration using the following methods:

1. Satisfactory evaluations in required courses
 2. A review of academic performance during the 5th semester with the Provisional Area of Concentration form
 3. A review of academic performance during the 6th semester with the Thesis Prospectus form
- Measures to demonstrate each graduate’s competencies**
1. Oral baccalaureate exam and the written thesis project as measures of evidence to demonstrate student competencies
 2. Narrative evaluations from required coursework

Mapping of Learning Outcomes to Requirements

Requirement	Learning Outcome				
	Statistics	Computation	Integration	Math	Practice
<i>Course Requirements</i>					
One Level I Applied Stat	X	X		X	X*
Two Level II Applied Stat	X	X	X	X*	
Intro. to Programming					X
Second Computation Course	X*		X*		
Research Design in Soc Sci		X*			
Mathematics for Soc Sci	X				
Two Electives		X	X		
<i>Additional Requirements</i>					
Language: R & Python					
Distribution					
Research Project					

**our electives provide the opportunity for higher level focus in any of the five areas*