

Applied Quantitative Methods and Social Analysis, MS (Online)

The Master of Science in Applied Quantitative Methods and Social Analysis is an interdisciplinary, flexible, and innovative degree that focuses on quantitative research methods for social analysis strategies and techniques. The program integrates the interdisciplinary perspectives and methodological and analytical tools across the College of Social Sciences and Humanities. The program seeks to educate ambitious social scientists and analysts primed to deploy computational tools for social analysis and tackle social science questions of equity, hierarchy, social organization, and social systems. The 21st-century economy will increasingly demand a workforce capable of collecting, processing, analyzing, and interpreting large-scale data on human attributes, personal preferences, social attributes, and political behavior. In response, this program provides students with rigorous training in quantitative research and social science methods to address important questions of social inquiry. Emphasizing public dissemination of findings, the program is designed to prepare students to inform policymakers, decision makers in the private and public sectors, and the broader community. These skills prepare graduates to pursue analytical or research careers in corporations, nonprofits, and public services or to continue their education.

Students in this degree program will have the opportunity to gain advanced training in statistical analysis and research methodology aligned to key areas of strength in CSSH, including data analytics in the social sciences, computational social science, network analysis in the social sciences, statistical methods in the social sciences, information ethics for social analysis, geospatial analysis, and the digital humanities. Students will also have the opportunity to stack a range of graduate certificate programs into the master's degree.

The program will take advantage of various co-op opportunities—positions such as policy analysts, network scientists, econometricians, and crime analysts—that provide students with a professional environment to integrate quantitative skills and social analysis. The learning opportunities in professional settings (private sector, government, or nonprofit sector) reinforce the development of advanced quantitative skills and their applied nature to contemporary social issues. Ultimately, the Master of Science in Applied Quantitative Methods and Social Analysis will position students to enter the labor force with the competitive advantage of these experiences and skills.

CSSH Graduate Programs General Regulations (<https://catalog.northeastern.edu/graduate/social-sciences-humanities/general-regulations/>)

Program Requirements

Complete all courses and requirements listed below unless otherwise indicated.

Required courses for this program may be offered at multiple campuses and through various instructional methods (<https://catalog.northeastern.edu/graduate/academic-policies-procedures/instructional-methods/>). Students are responsible for reviewing each section's instructional method and campus when registering.

Core Requirements

Code	Title	Hours
Core Requirements		
INSH 6300	Research Methods in the Social Sciences	4
INSH 6500	Statistical Analysis	4

Required Concentration

Complete one of the following concentrations:

- Computational Social Science (p. 2)
- Data Analytics in the Social Sciences (p. 2)

ELECTIVES

Code	Title	Hours
Complete 12 semester hours from the following (concentration courses may not be double counted as elective courses):		
CRIM, ECON, INSH, POLS, PPUA, and/or SOCL at the 5000 level or higher		
The following may also count as electives toward the program:		
ARTG 6460	Human-Centered AI	
CS 5047	Exploring AI Trends and Tools	
HLTH 5800	AI Across the Health Sciences	
JRNL 6460	AI in Media Industries	
PHIL 5110	Responsible AI	

Optional Co-op Experience

Code	Title	Hours
INSH 6964 and EESH 6000	Co-op Work Experience and Professional Development for Co-op	

Program Credit/GPA Requirements

32 total semester hours required

Minimum 3.000 GPA required

COMPUTATIONAL SOCIAL SCIENCE CONCENTRATION

Code	Title	Hours
Concentration Requirements		
DA 5030	Introduction to Data Mining/Machine Learning	4
INSH 5301	Introduction to Computational Statistics	4
INSH 5302	Information Design and Visual Analytics	4
or PPUA 5262	Big Data for Cities	
or PPUA 5263	Geographic Information Systems for Urban and Regional Policy	

DATA ANALYTICS IN THE SOCIAL SCIENCES CONCENTRATION

Code	Title	Hours
Concentration Requirements		
DA 5020	Collecting, Storing, and Retrieving Data	4
or DA 5030	Introduction to Data Mining/Machine Learning	
INSH 5301	Introduction to Computational Statistics	4
INSH 5302	Information Design and Visual Analytics	4