

# Computational Social Science, Minor

This minor introduces and develops the essential skills for employing mathematical, formal, and computational methods in the social sciences. Students completing this minor will have a grasp of the fundamentals necessary for pursuing more in-depth studies in the emerging fields of computational social science and big data. The foundational courses emphasize skills in probability, statistics, and introductory programming. Other courses focus on the application of formal and computational methods in the social sciences including digital analysis of texts, maps, and networks. An additional elective provides breadth in social scientific studies of computation or the foundational principles of logic and computation.

## Minor Requirements

Complete all courses listed below unless otherwise indicated. Also complete any corequisite labs, recitations, clinicals, or tools courses where specified.

### Foundational Courses

Code	Title	Hours
MATH 2280	Statistics and Software	4
or CRIM 3700	Analyzing and Using Data on Crime and Justice	
or ECON 2350	Statistics	
or SOCL 2320	Statistical Analysis in Sociology	
or POLS 2400	Quantitative Techniques	
or PSYC 2320	Statistics in Psychological Research	
INSH 1500	Digital Methods for Social Sciences and Humanities	4
or CS 2500	Fundamentals of Computer Science 1	
or DS 2000	Programming with Data	
and DS 2001	and Data Science Programming Practicum	

### Applications of Computational Approaches in the Social Sciences

Code	Title	Hours
Complete two courses from the following:		8
<i>(Students may complete a capstone project under the direction of a faculty member in lieu of an application course.)</i>		
COMM 2105	Social Networks	
DS 3000	Foundations of Data Science	
or DS 4200	Information Presentation and Visualization	
or DS 4300	Large-Scale Information Storage and Retrieval	
or DS 4400	Machine Learning and Data Mining 1	
INSH 2102	Bostonography: The City through Data, Texts, Maps, and Networks	
MISM 2301	Management Information Systems	
or MISM 2510	Fundamentals of Information Analytics	
PHIL 2001	Ethics and Evolutionary Games	
POLS 3310	Public Opinion, Voting, and Elections	
PPUA 5262	Big Data for Cities	

### Elective in Social Inquiry, Computation, and Logic

Code	Title	Hours
Complete one course from the following:		4
CS 2800	Logic and Computation	
ECON 4681	Information Economics and Game Theory	
IS 2000	Principles of Information Science	
MATH 3081	Probability and Statistics	
PHIL 1115	Introduction to Logic	
or MATH 1215	Mathematical Thinking	
PHIL 4515	Advanced Logic	
SOCL 4528	Computers and Society	

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**GPA Requirement**

2.000 GPA required in the minor