

# Undergraduate Certificate in Data Science

We are awash in data, models, and predictions. This flood of data has opened up seemingly unlimited possibilities: it allows businesses to make informed recommendations for their clients, health officials to use text and image processing to track and classify health information, or community organizers to help spread the news and civic information through social networks. Whatever your field of study, you need to deal with data. This interdisciplinary data science certificate prepares students to harness data and help realize some of its many possibilities. Students will receive training in mathematics, computation, and statistics; data collection, management, description, and analysis; communication and project management; and ethics, problem-solving, and judgment and decision making.

Code	Title	Hours
Data Science Core		
Choose one of the following		3-6
PSYC/POLS/ ECON/SOC 199	Data I: Dealing with Data	
EECS 138	Introduction to Computing: _____ (and an introductory statistics course including PSYC 210, ECON 426, MATH 365, POLS 306, SOC 380)	
Choose one of the following		3
PSYC/ECON/ POLS 399	Data 2: Foundations of Data Science	
MATH 582	Computational Data Science	
Data Science in Context (choose one of the following)*		3
JMC 308	Ethics in a Wired World	
COMS 320	Communication on the Internet	
COMS 335	Mass Media and Politics	
COMS 420	Communication, Technology and Globalization	
COMS 607	Political Campaigns	
COMS 620	Communication and New Technology	
PHIL 325	Philosophy of Computation, AI, and Robots	
PHIL 330	Belief and the Social	
PHIL 375	Moral Issues in Computer Technology	
PHIL 551	Philosophy of Economics	
POLS 316	Public Opinion and American Democracy	
Data Science Connectors (Choose one of the following)*		3
ANTH 310	Fundamentals of Archaeology	
ASTR 596	Observational Astrophysics	
BIOL 370	Introduction to Biostatistics	
COMS 356	Introduction to Behavioral Research Methods in Communication	
ECON 513	Behavioral Economics	
ECON 526	Introduction to Econometrics	
ECON 716	Econometric Forecasting	
ENGL 545	Methodologies in Digital Humanities, Honors	

EVRN 460	Field Ecology
GEOG 311	Introductory Cartography and Geovisualization
GEOG 316	Methods of Analyzing Geographical Data
JMC 309	Data Storytelling
PHIL 310	Introduction to Symbolic Logic
PHSX 216	General Physics I Laboratory
PHSX 236	General Physics II Laboratory
POLS 306	Political Science Methods of Inquiry
POLS 426	Political Polling and Survey Research
PSYC/ECON 513	Behavioral Economics
PSYC 620	Experimental Psychology: Sensation, Perception, and Cognition
PSYC 622	Experimental Psychology: Social Behavior
PSYC 625	Experimental Psychology: Methods in Psychophysiology and Neuroscience
SOC 280	Introduction to Social Research
SOC 455	Society and the Economy

\*Note: Individual courses, including special topics courses, can be approved as counting toward this requirement per the data science steering committee. They may contact the current chair of the data science steering committee to evaluate its potential inclusion as an elective course towards the certificate.

For more information see: [data.ku.edu](https://data.ku.edu) (<https://data.ku.edu/>)