Are you interested in studying the evolving reaches of human behavior through data? Looking for a leg-up in a career that requires critical analysis of information? This program teaches you to leverage qualitative evidence in the world around you and to teach the quantitative skill sets that create and confirm data theories.

**Description**

The certificate program in social science research methods prepares students to acquire, manage and analyze a broad range of data on human thought and human behavior. Data can be qualitative (e.g., text, images, sound) or quantitative (e.g., direct observation, surveys, GIS). Data acquisition skills may include the downloading and managing of information from online sources or the primary collection of data in surveys or by direct observation. A key feature of this program is a focus on data analysis so students are able to analyze any data they collect. All students in this program demonstrate skills in statistical analysis plus skills in a selection of methods related to their interests.

**At a Glance**

- **College/School:** The College of Liberal Arts and Sciences
- **Location:** Tempe campus

**Program Requirements**

[Certificate Map (Archives)]

2020 - 2021 Certificate Map

Students must complete 18 credit hours. A minimum of a "C" grade (2.00 on a 4.00 scale) in each course is required.

**Required Course -- 3 credit hours**
CDE 498 / GIS 494: Multivariate Statistics for Social Sciences or STP 452: Multivariate Statistics (3)

Electives (Choose four) -- 12 credit hours

ACO 100: All About Data: Design, Query, and Visualization (CS) (3)
ACT 435: Statistics for Risk Modeling (3)
ACT 450: Actuarial Models and Modeling I (3)
ALA 235: Introduction to Computer Modeling (CS) (3)
AML 253: Introduction to Mathematical Tools and Modeling for the Life and Social Sciences (3)
AML 441: Mathematical Concepts and Tools in Sustainability (3)
ASM 494: Models in Social Evolution (3)
BME 301: Numerical Methods in Biomedical Engineering (2)
BMI 211: Modeling Biomedical Decisions (3)
BMI 311: Modeling Biomedical Knowledge (3)
BMI 312: Modeling Biomedical Data (3)
BMI 461: Advanced Topics in Biomedical Informatics I (3)
BMI 462: Advanced Topics In Biomedical Informatics II (3)
COM 308: Advanced Research Methods in Communication (L) (3)
COM 407: Advanced Critical Methods in Communication (3)
CRJ 303: Statistical Analysis (CS) (3)
ECN 410: Applied Regression Analysis and Forecasting (3)
ECN 416: Game Theory and Economic Behavior (3)
EDP 454: Statistical Data Analysis in Education (CS) (3)
FAS 361 / SOC 391: Research Methods (L or SB) (3)
FAS 498: Advanced Statistics for Social Sciences (3)
GCU 351: Population Geography (SB & G) (3)
GCU 373: Introduction to Geographic Information Science (SG) (4)
GCU 442: Geographical Analysis of Transportation (SB) (3)
GCU 496: Geographic Research Methods (L) (3)
GIS 311: Geographic Information Science III (CS) (4)
GIS 322: Programming Principles in GIS II (3)
GIS 341: Cartography and Georepresentation (CS) (3)
GIS 431: Spatial Databases (3)
GIS 441: Geographics: Interactive and Animated Cartography and Geovisualization (CS) (3)
GIS 461 / PUP 481: Fundamentals of Spatial Optimization (3)
GIS 462: Location Analysis and Modeling (3)
GIS 470: Advanced Statistics for Geography and Planning (CS) (3)
GIS 471: Spatial Statistics for Geography and Planning (3)
GIS 472: Spatial Regression Analysis (3)
GPH 494: Advanced Digital Analysis (3)
HSE 290: Experimental Methods for Human Systems Research (L) (3)
HSE 390: Qualitative Research Methods (L) (3)
IFT 200: Information Modeling, Storage and Retrieval (3)
MKT 352: Marketing Research (L) (3)
POS 301 / SGS 305: Empirical Political Inquiry (SB) (3)
POS 401 / SGS 401: Political Statistics (CS) (3)
PUP 424: Planning Methods (4)
PSY 330: Statistical Methods (CS) (3)
SBS 302: Qualitative Methods (3)
SBS 404: Social Statistics II: Multivariate Analysis (CS) (3)
SOC 389 / SBS 389 / ASB 389: Ethnographic Field Lab (1-6)
SOS 211: Calculus and Probability for the Life and Social Sciences (MA) (3)
STP 280: Probability and Statistics for Researchers (CS) (3)
STP 310: Design and Analysis of Experiments (3)
STP 311: Regression and Time Series Analyses (3)
STP 315: Statistical Computing (3)
STP 420: Introductory Applied Statistics (CS) (3)
STP 421: Probability (3)
STP 425: Stochastic Processes (3)
STP 429: Applied Regression (CS) (3)
STP 450: Nonparametric Statistics (3)
STP 460: Categorical Data Analysis (3)
TWC 301: Fundamentals of Writing for Digital Media (L) (3)
TWC 411: Principles of Visual Communication (L) (3)

**Required Capstone Course -- 3 credit hours**

ASB 499: Individualized Instruction or an equivalent capstone course approved by academic advisor (3)

Depending on a student's undergraduate program of study, prerequisite courses may be needed in order to complete the requirements of this certificate.

**Enrollment Requirements**

A student pursuing an undergraduate certificate must be enrolled as a degree-seeking student at ASU. Undergraduate certificates are not awarded prior to the award of an undergraduate degree. A student already holding an undergraduate degree may pursue an undergraduate certificate as a nondegree-seeking graduate student.

**Contact Information**