APPLIED STATISTICS UNDERGRADUATE CERTIFICATE ELECTIVES

Approved Electives

For the most current lists of approved courses in these categories, please consult the Data Scholarship Program.

Introductory Statistics

Code	Title	Credit Hours
3, 4, or 5 on the Advanced Placement Statistics Exam		
ANTH 4713	Statistical Concepts in Anthropology	3
BIOL 2913	Intro to Quantitative Biology	3
COMM 2513	Introduction to Statistics	3
ECON 2843	Elements of Statistics	3
PHCH 3313	Health Data and Statistics	3
PSY 2003	Understanding Statistics	3
P SC 2013	Introduction to Political Analysis	3
SOC/P SC 3123	Social Statistics	3
S WK 2223	Statistics for Social Work	3
GEOG 3923	Quantitative Methods	3
METR 4313	Statistical Meteorology	3

Intermediate Statistics

Code	Title	Credit Hours
ECON 4223	Econometric Analysis	3
MATH 4743	Introduction to Mathematical Statistics	3
MATH 4773	Applied Regression Analysis	3
PSY 3003	Advanced Undergraduate Statistics	3

Research Methods/Experimental Design/Linear Algebra

Code	Title	Credit Hours
BIOL 4913	Quantitative Biology	3
MATH 3333	Linear Algebra I	3
PSY 3114	Research Methods: Applications and Experimental Design	4
SOC 3133	Methods of Social Research	3
S WK 4083	Undergraduate Social Work Research Methods I	3
S WK 4093	Undergraduate Social Work Research Methods II	3

Statistical Computing

Code	Title	Credit Hours
BIOL 4783	Introduction to Python Programming for Data Analytics	3
C S 1213	Programming for Non-Majors with Python	3
C S 1313	Programming for Non-Majors with C	3
C S 1321	Java for Programmers (note course does not meet the 3 credit hours required)	1
C S 1323	Introduction to Computer Programming for Programmers	3
C S 1324	Introduction to Computer Programming for Non-Programmers	4
METR 1313	Introduction to Programming for Meteorology	3
PSY 2503	Computing for Behavioral Sciences	3
ASTR 3190	Topics in Astronomy (topic: Introduction to Research)	3
LIS 4643	Introduction to Data Analytics	3

Applied Statistics Experience/Advanced Elective

Capstone-like course (CAS 4983), Internship, Mentored Research Experience, or Advanced Elective with a major applied statistical component and a written project report.

Most of the advanced electives require instructor permission and many disciplinary-specific prerequisites that should be met or specifically discussed with the instructor prior to enrollment.

To fulfill this requirement, the course must include a data-related project with a written report. Students will submit a DSP Project Experience Course Approval Form for approval before the end of the free add/drop period. Alternatively, an additional course can be taken from among listed courses in the previous categories AND that includes a substantial project that includes data analysis, visualization, and interpretation and a discussion of any ethical considerations with respect to the topic and data. In this case, students will submit a DSP Project Experience Course Approval Form to describe the project in the course.

Code	Title	Credit Hours
BIOL 4943	Multivariate Analysis	3
BIOL 4913	Quantitative Biology	3
MATH 4743	Introduction to Mathematical Statistics	3
CAS 4630	CAS Internship	3
CAS 4990	Independent Study (with DSP faculty affiliate or with approved applied statistical research component)	3
DSP 4983	Data Analytics and Applied Statistics Research Experience	3
MATH 4753	Applied Statistical Methods	3
MATH 4773	Applied Regression Analysis	3
MATH 4793	Advanced Applied Statistics	3
MATH 4803	Topics in Mathematics	3
PSY 4023	Measurement in Psychology	3
GIS 4923	Spatial Statistics	3