College of Natural Sciences

## BACHELOR OF SCIENCE IN STATISTICS AND DATA SCIENCE

Four-year Degree Suggestion (for planning purposes only)

Currently enrolled students should meet with their academic advisor

FIRST-YEAR FALL	<u> 16</u>	FIRST-YEAR SPRING	16
SDS 313 Introduction to Data Science	3	SDS 315 Statistical Thinking	3
M 408C Differential & Integral Calculus 1 C, F	4	M 408D Seq, Series, & Multivar Calculus <sup>1</sup>	4
RHE 306 Rhetoric & Writing <sup>C</sup>	3	C S 303E Elements of Computers and Prog <sup>C</sup>	3
UGS 302/303 First-year Signature C, *	3	HIS Core Requirement <sup>C, *</sup>	3
Elective	3	Science & Tech I Core Requirement <sup>C</sup>	3
SECOND-YEAR FALL	16	SECOND-YEAR SPRING	15
SDS 431 Probability & Statistical Inference	4	SDS 334 Intermediate Statistical Methods	3
M 340L Matrices & Matrix Calculations	3	Major Breadth Requirement (LD)	3
or 341 Linear Algebra and Matrix Theory		HIS Core Requirement <sup>C, *</sup>	3
Major Breadth Requirement (LD)	3	Science & Tech I Core Requirement <sup>C</sup>	3
GOV 310L American Government C, *	3	C S 313E Elements of Software Design (Elective)	3
E 316L/M/N/P Literature <sup>c, *</sup>	3		
THIRD-YEAR FALL	15	THIRD-YEAR SPRING	15
SDS 336 Practical Machine Learning	3	Approved SDS Elective	3
C S 327E Elements of Databases <sup>2</sup>	3	Major Breadth Requirement (UD)	3
Major Breadth Requirement (UD)	3	Visual & Performing Arts Core Requirement <sup>C</sup>	3
GOV 312L Issues & Policies in Amer Gov C, *	3	Elective	3
Elective	3	Elective	3
FOURTH-YEAR FALL	15	FOURTH-YEAR SPRING	12
SDS 354 Advanced Statistical Methods	3	SDS 357 Case Studies in Data Science F	3
Social & Behavioral Sciences <sup>C</sup>	3	Elective	3
Approved SDS Elective	3	Elective	3
Elective	3	Elective	3
Elective	3		

## **SKILLS & EXPERIENCE FLAGS**

Cultural Diversity in the U.S.
Ethics
Global Cultures
Independent Inquiry (SDS 357)
Quantitative Reasoning (M 408C/K/N/L/S)
Writing – 2 courses (SDS 357)

## **LEGEND**

- <sup>C</sup> Core curriculum requirement
- Course carries skills and experience flag
- Course may carry skills and experience flag
- LD Lower Division
- **UD** Upper Division

## **APPROVED SDS ELECTIVES**

- SDS 364 Bayesian Statistics
- SDS 366 Data Visualization
- SDS 368 Statistical Theory
- STA 372T.21 Time Series Forecasting
- SDS 375 Topic Sports Analytics

Catalog: 2024-2026

<sup>&</sup>lt;sup>1</sup> M408C and M 408D may be replaced by one of the following three-semester calculus sequences: (1) M 408K, 408L, and 408M; or (2) M 408N, 408S, and 408M. In these sequences, the third calculus course may count as elective hours or breadth requirement if Mathematics is selected as breadth field of study.

 $<sup>^2</sup>$  C S 313E Elements of Software Design must be taken prior to C S 327E Elements of Databases and may count as elective hours or breadth requirement if Computer Science is selected as breadth field of study.