

# Data Science B.S. with Social Data Analytics Concentration

## Data Science B.S. with Social Data Analytics Concentration Eight-Semester Program

First Year	Units	
	Fall	Spring
MATH 24004 Calculus I (ACTS Equivalency = MATH 2405) (Satisfies General Education Outcome 2.1) <sup>1</sup>	4	
ENGL 10103 Composition I (ACTS Equivalency = ENGL 1013) (Satisfies General Education Outcome 1.1)	3	
DASC 10003 Introduction to Data Science	3	
DASC 11004 Programming Languages for Data Science	4	
MATH 25004 Calculus II		4
ECON 21403 Basic Economics: Theory and Practice (Satisfies General Education Outcome 3.3)		3
ENGL 10303 Technical Composition II (ACTS Equivalency = ENGL 1023) (Satisfies General Education Outcome 1.2)		3
DASC 12004 Introduction to Object Oriented Programming for Data Science		4
DASC 12203 Role of Data Science in Today's World		3
Year Total:	14	17
Second Year	Units	
	Fall	Spring
DASC 25904 Multivariable Math for Data Scientists	4	
STAT 30133 Introduction to Probability <sup>4</sup> or INEG 23203 Probability and Stochastic Processes for Industrial Engineers	3	
DASC 22103 Data Visualization and Communication	3	
DASC 21103 Principles and Techniques of Data Science	3	
State Minimum Core U.S. History or Government Elective (Satisfies General Education Outcome 4.2) <sup>2</sup>	3	
SEVI 20503 Business Foundations (Data Science Majors-only section)		3
STAT 30043 Statistical Methods <sup>4</sup> or INEG 23104 Statistics for Industrial Engineers I		3-4
State Minimum Core Natural Science Elective with Lab (Satisfies General Education Outcome 3.4) <sup>2</sup>		4
DASC 22003 Data Management and Data Base		3

SOCI 10103 General Sociology (ACTS Equivalency = SOCI 1013) (Satisfies General Education Outcomes 3.3, 4.1, and 4.2) <sup>5</sup>		3
Year Total:	16	16

Third Year	Units	
	Fall	Spring
DASC 21303 Data Privacy & Ethics (Satisfies General Education Outcome 5.1)	3	
DASC 31003 Big Data Analytics with Cloud Computing	3	
State Minimum Core Natural Science Elective with Lab (Satisfies General Education Outcome 3.4) <sup>2</sup>	4	
SOCI 33004 Social Data and Analysis	4	
SOCI 33103 Social Research	3	
DASC 32003 Optimization Methods in Data Science		3
DASC 32103 Statistical Learning		3
SOCI 42503 Social Impact of Data Analytics		3
State Minimum Core Social Sciences Elective (Satisfies General Education Outcomes 3.2 and 3.3) <sup>2</sup>		3
Year Total:	17	12

Fourth Year	Units	
	Fall	Spring
DASC 48902 Data Science Practicum I	2	
DASC 41103 Machine Learning	3	
DASC 41203 Social Problems in Data Science and Analytics	3	
Social Data Analytics Elective	3	
Social Data Analytics Elective	3	
DASC 49903 Data Science Practicum II (Satisfies General Education Outcome 6.1)		3
General Education Electives <sup>3</sup>		4
State Minimum Core Fine Arts Elective (Satisfies General Education Outcome 3.1) <sup>2</sup>		3
Social Data Analytics Elective		4
Year Total:	14	14

**Total Units in Sequence: 120**

<sup>1</sup> Students have demonstrated successful completion of the learning indicators identified for learning outcome 2.1, by meeting the prerequisites for MATH 24004.

<sup>2</sup> Students must complete the State Minimum Core requirements (<http://catalog.uark.edu/undergraduatecatalog/gened/stateminimum/>) as outlined in the Catalog of Studies. The courses that meet the state minimum core also fulfill many of the university's General Education requirements (<http://catalog.uark.edu/undergraduatecatalog/gened/stateminimum/>), although there are additional considerations to satisfy the general education learning outcomes. Students are encouraged to consult with their academic adviser when making course selections.

<sup>3</sup> Students are required to complete 40 hours of upper-division courses (3000-4000 level). It is recommended that students consult with their adviser when making course selections.

<sup>4</sup> Data Science Statistics and Computational Analytics Concentration students are advised to select STAT 30133/STAT 30043 to meet the prerequisites required in the concentration.

<sup>5</sup> SOCI 10103 General Sociology is a required course for the Social Data Analytics Concentration. The course may also be used to meet three hours toward the State Minimum Core Social Science requirements. As such, students may complete three hours of general education electives in lieu of an additional State Minimum Core Social Science requirement for a total of 7 hours of general education electives.