

Data Science B.S. with Biomedical and Healthcare Informatics Concentration

Data Science B.S. with Biomedical and Healthcare Informatics Concentration Eight- Semester Program

First Year	Units	
	Fall	Spring
MATH 2554 Calculus I (ACTS Equivalency = MATH 2405) (Satisfies General Education Outcome 2.1) ¹	4	
Satisfies General Education Outcome 3.4:		
CHEM 1103 University Chemistry I (ACTS Equivalency = CHEM 1414 Lecture) & CHEM 1101L University Chemistry I Laboratory (ACTS Equivalency = CHEM 1414 Lab)	4	
ENGL 1013 Composition I (ACTS Equivalency = ENGL 1013) (Satisfies General Education Outcome 1.1)	3	
DASC 1003 Introduction to Data Science	3	
DASC 1104 Programming Languages for Data Science	4	
MATH 2564 Calculus II (ACTS Equivalency = MATH 2505)		4
Satisfies General Education Outcome 3.4:		
PHYS 2054 University Physics I (ACTS Equivalency = PHYS 2034) (Satisfies General Education Outcome 3.4)		4
ENGL 1033 Technical Composition II (ACTS Equivalency = ENGL 1023) (Satisfies General Education Outcome 1.2)		3
DASC 1204 Introduction to Object Oriented Programming for Data Science		4
DASC 1223 Role of Data Science in Today's World		3
Year Total:	18	18

Second Year	Units	
	Fall	Spring
DASC 2594 Multivariable Math for Data Scientists	4	
STAT 3013 Introduction to Probability ⁴ or INEG 2323 Probability and Stochastic Processes for Industrial Engineers	3	
DASC 2213 Data Visualization and Communication	3	
DASC 2113 Principles and Techniques of Data Science	3	
BMEG 2614 Introduction to Biomedical Engineering	4	
SEVI 2053 Business Foundations (Data Science Majors-only section)		3

STAT 3003 Statistical Methods ⁴ or INEG 2314 Statistics for Industrial Engineers I		3-4
DASC 2203 Data Management and Data Base		3
CHEM 1123 University Chemistry II (ACTS Equivalency = CHEM 1424 Lecture)		3
Year Total:	17	12

Third Year	Units	
	Fall	Spring
DASC 2133 Data Privacy & Ethics (Satisfies General Education Outcome 5.1)	3	
DASC 3103 Cloud Computing and Big Data	3	
BIOL 2213 Human Physiology (ACTS Equivalency = BIOL 2414 Lecture)	3	
ECON 2143 Basic Economics: Theory and Practice (Satisfies General Education Outcome 3.3)	3	
State Minimum Core Social Sciences Elective (Satisfies General Education Outcomes 3.2 and 3.3) ²	3	
DASC 3203 Optimization Methods in Data Science		3
DASC 3213 Statistical Learning		3
BMEG 3801 Clinical Observations and Needs Finding		1
State Minimum Core Fine Arts Elective (Satisfies General Outcome 3.1) ²		3
State Minimum Core Social Sciences Elective (Satisfies General Education Outcomes 3.3 and 4.1) ²		3
Year Total:	15	13

Fourth Year	Units	
	Fall	Spring
DASC 4892 Data Science Practicum I	2	
DASC 4113 Machine Learning	3	
DASC 4123 Social Problems in Data Science and Analytics	3	
Concentration Elective Course	1	
Concentration Elective Course	3	
DASC 4993 Data Science Practicum II (Satisfies General Education Outcome 6.1)		3
Concentration Elective Course		3
Concentration Elective Course		3
State Minimum Core U.S. History or Government Elective (Satisfies General Education Outcome 4.2) ²		3
General Elective Course ³		2-3
Year Total:	12	15

Total Units in Sequence: 120

¹ Students have demonstrated successful completion of the learning indicators identified for learning outcome 2.1, by meeting the prerequisites for MATH 2554.

² 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/generaleducation/>), 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.

³ 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.

⁴ Data Science Statistics and Computational Analytics Concentration students are advised to select STAT 3013/STAT 3003 to meet the prerequisites required in the concentration.