

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 24004 Calculus I (ACTS Equivalency = MATH 2405) (Satisfies General Education Outcome 2.1) ¹	4	
Satisfies General Education Outcome 3.4:		
CHEM 14103 University Chemistry I (ACTS Equivalency = CHEM 1414 Lecture) & CHEM 14101 University Chemistry I Laboratory (ACTS Equivalency = CHEM 1414 Lab)	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
Satisfies General Education Outcome 3.4:		
PHYS 20304 University Physics I (ACTS Equivalency = PHYS 2034) (Satisfies General Education Outcome 3.4)		4
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:	18	18

Second Year	Units	
	Fall	Spring
DASC 25904 Multivariable Math for Data Scientists	4	
STAT 30133 Introduction to Probability ⁴ 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	
BMEG 26104 Introduction to Biomedical Engineering	4	
SEVI 20503 Business Foundations (Data Science Majors-only section)		3

STAT 30043 Statistical Methods ⁴ or INEG 23104 Statistics for Industrial Engineers I		3-4
DASC 22003 Data Management and Data Base		3
CHEM 14203 University Chemistry II (ACTS Equivalency = CHEM 1424 Lecture)		3
Year Total:	17	12

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	
BIOL 24103 Human Physiology (ACTS Equivalency = BIOL 2414 Lecture)	3	
ECON 21403 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 32003 Optimization Methods in Data Science		3
DASC 32103 Statistical Learning		3
BMEG 38001 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 48902 Data Science Practicum I	2	
DASC 41103 Machine Learning	3	
DASC 41203 Social Problems in Data Science and Analytics	3	
Concentration Elective Course	1	
Concentration Elective Course	3	
DASC 49903 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 24004.

- 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 30133/STAT 30043 to meet the prerequisites required in the concentration.