

# Data Science B.S. with Bioinformatics Concentration

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

First Year	Units	
	Fall	Spring
MATH 2554 Calculus I (ACTS Equivalency = MATH 2405)	4	
ENGL 1013 Composition I (ACTS Equivalency = ENGL 1013)	3	
BIOL 1543 Principles of Biology (ACTS Equivalency = BIOL 1014 Lecture)	3	
BIOL 1541L Principles of Biology Laboratory (ACTS Equivalency = BIOL 1014 Lab)	1	
DASC 1001 Introduction to Data Science	1	
DASC 1104 Programming Languages for Data Science	4	
MATH 2564 Calculus II (ACTS Equivalency = MATH 2505)		4
CHEM 1103 University Chemistry I (ACTS Equivalency = CHEM 1414 Lecture)		3
CHEM 1101L University Chemistry I Laboratory (ACTS Equivalency = CHEM 1414 Lab)		1
DASC 1204 Introduction to Object Oriented Programming for Data Science		4
DASC 1222 Role of Data Science in Today's World		2
Choose one of the following (recommend ENGL1033)		3
ENGL 1033 Technical Composition II (ACTS Equivalency = ENGL 1023)		
ENGL 1023 Composition II (ACTS Equivalency = ENGL 1023)		
Year Total:	16	17

Second Year	Units	
	Fall	Spring
DASC 2594 Multivariable Math for Data Scientists	4	
DASC 2103 Data Structures & Algorithms	3	
DASC 2113 Principles and Techniques of Data Science	3	
BIOL 2533 Cell Biology	3	
Bioinformatics Elective	3	
DASC 2203 Data Management and Data Base		3
DASC 2213 Data Visualization and Communication		3
INEG 2313 Applied Probability and Statistics for Engineers I or STAT 3013 Introduction to Probability		3
BIOL 2323 General Genetics		3
MGMT 2053 Business Foundations		3

Year Total: 16 15

Third Year	Units	
	Fall	Spring
PHIL 3103 Ethics and the Professions	3	
DASC 3103 Cloud Computing and Big Data	3	
INEG 2333 Applied Probability and Statistics for Engineers II or STAT 3003 Statistical Methods	3	
BIOL 3863 General Ecology or BIOL 3023 Evolutionary Biology	3	
Bioinformatics Elective	3	
DASC 3203 Optimization Methods in Data Science		3
DASC 3213 Statistical Learning		3
ECON 2143 Basic Economics: Theory and Practice		3
Bioinformatics Elective		3
University Core Social Science Elective		3
Year Total:	15	15

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	
Bioinformatics Elective	3	
University Core Fine Arts Elective	3	
DASC 4993 Data Science Practicum II		3
General Education Elective		3
University Core Social Science Elective		3
University Core History/Government Elective		3
Year Total:	14	12

Total Units in Sequence: 120