DATA SCIENCE

Minimum of **120** credit hours required for a Bachelor of Arts degree.
Last **30** credit hours must be from Maryville University

NAME: _____ REVIEWER: _____ DATE: _____

I. MCORE (36 Hours)	Credits	SEM/YR	Grade	Notes
A. Social Discovery (6)				
CORE 101: Discovering Community	3			
Student Choice	3			
CORE 401: Senior Capstone				In Major: DSCI 498
B. Civic Discovery (6)				
CORE 201: Discovering the Nation	3			
Student Choice	3			
C. Cultural Discovery (6)				
CORE 301: Discovering the World	3			
Student Choice	3			
D. Creative Discovery (9)				
COMP 104: Writing Across the Disciplines II	3			
Student Choice	3			
Student Choice	3			
F. Scientific Discovery (9)				
MATH 102: Everyday Data	3			
Student Choice	3			
Student Choice	3			
Total CORE Hours	**36**			
II. Major Requirements (84 Credit Hours)	**Credits**			**Notes**
A. Other				
COMP 101 Writing Across the Disciplines I	3			
COMM 110 Public Speaking	3			
MATH 151 Calculus I	4			
MATH 152 Calculus II	4			
Electives	21			
B. Data Science Major Courses				
DSCI 200 Foundations of Data Science	3			
DSCI 201 Math Modeling – Excel	3			
DSCI 302 Introduction to R	3			
DSCI 303 Introduction to Python	3			
DSCI 304 Introduction to SQL	3			
DSCI 307 SAS Programming	3			
DSCI 318 Experimental Design	3			
DSCI 408 Machine Learning	3			
DSCI 412 Predictive Modeling	3			
DSCI 417 Big Data Analytics	3			
DSCI 498 Capstone Project	3			Capstone
MATH 251 Calculus III	4			
MATH 316 Applied Linear Algebra	3			
MATH 370 Probability I	3			
MATH 371 Probability II	3			
MATH 372 Mathematical Statistics	3			
Degree Total	**120**			

SAMPLE COURSE PLAN

This is an example of the sequence of course work to complete this major.

Fall of Freshman Year	Credits	Spring of Freshman Year	Credits
CORE 101: Discovering Community	3	CORE 201: Discovering the Nation	3
COMP 101 Writing Across the Disciplines I	3	COMP 104: Writing Across the Disciplines II	3
DSCI 200 Foundations of Data Science	3	DSCI 302 Introduction to R	3
MATH 102 Everyday Data	3	DSCI 304 Introduction to SQL	3
MATH 151 Calculus I	4	MATH 152 Calculus II	4
Total	**16**	**Total**	**16**
Fall of Sophomore Year	**Credits**	**Spring of Sophomore Year**	**Credits**
CORE 301: Discovering the World	3	MATH 371 Probability II	3
MATH 251 Calculus III	4	MATH 316 Applied Linear Algebra	3
MATH 370 Probability I	3	DSCI 408 Machine Learning	3
DSCI 303 Introduction to Python	3	COMM 110 Public Speaking	3
DSCI 201 Math Modeling-Excel	3	MCORE Elective	3
Total	**16**	**Total**	**15**
Fall of Junior Year	**Credits**	**Spring of Junior Year**	**Credits**
DSCI 307 SAS Programming	3	Elective	3
MATH 372 Mathematical Statistics	3	Elective	3
Elective	3	MCORE Elective	3
DSCI 318 Experimental Design	3	MCORE Elective	3
MCORE Elective	3	Elective	3
Total	**15**	**Total**	**15**
Fall of Senior Year	**Credits**	**Spring of Senior Year**	**Credits**
Elective	3	CORE 401: DSCI 498	3
DSCI 417 Big Data Analysis	3	MCORE Elective	3
DSCI 412 Predictive Modeling	3	Elective	3
MCORE Elective	3	Elective	3
MCORE Elective	3		
Total	**15**	**Total**	**12**

Notes:

- Students are encouraged to consider adding a Business minor. For details, visit Maryville University's degree planning sheets:
  https://www.maryville.edu/academicaffairs/degree-planning-sheets/
- Double major or dual degree programs are available in Actuarial Science, Computer Science, Data Science, and Mathematics. For more details, visit Maryville's catalog: https://catalog.maryville.edu/content.php?catoid=24&navoid=2138#2maj_2deg
- The Business Administration Minor (https://catalog.maryville.edu/preview_program.php?catoid=24&poid=4395) is recommended.
- Students who have earned 75 or more credit hours with a GPA of 3.0 or higher are encouraged to apply for Early Access graduate programs: www.maryville.edu/apply
- Recommended elective courses that support the Data Science Major:
  - DSCI 301 Math Modeling-VBA
  - DSCI 314 Text Mining
  - DSCI 419 Deep Learning
  - MATH 505 Statistical Modeling I