BACHELOR OF SCIENCE IN DATA SCIENCE **Catalogue**

Student: **Date:** **2023 - 2024**

netID: **Advisor:**

Year 1

Semester 1	Cr	Status	Semester 2	Cr	Status
MA: MATH 1234 - Calculus I*	4		MA: MATH 1248 - Calculus II *MATH 1234*	4	
QD: STAT 1870 - Intro to Data Science	3		MA: MATH 2055 - Fundamentals of Mathematics *MATH 1234* **OR** CS 1640 - Discrete Structures *MATH 1234, CS 1210*	3	
QD: CS 1210 - Computer Programming I	3		Catamount Core (WIL1): ENGL 1001 - Written Expression	3	
CEMS 1500 - CEMS First Year Seminar	1		Catamount Core (Diversity 1 or Diversity 2)	3	
Catamount Core (AH Arts & Humanities)	3		Catamount Core (SU Sustainability)	3	
Total credits	*14*		*Total credits*	*16*	

Year 2

Semester 1	Cr	Status	Semester 2	Cr	Status
CS 2100 - Intermediate Programming *CS 1210*	4		STAT 2510 - Applied Probability *MATH 1248* **OR** STAT 5510 - Probability Theory *See catalogue*	3	
QD: STAT 1410 - Basic Statistical Methods 1* **OR** QD: STAT 2430 - Statistics for Engineering* *MATH 1234*	3		STAT 3010 - Stat Computing & Data Analysis *STAT 1410 or STAT 2430 or STAT 3210*	3	
MA: MATH 2522 - Applied Linear Algebra *MATH 1248* **OR** MA: MATH 2544 - Linear Algebra *MATH 1248; Coreq: MATH 2248 or MATH 2055*	3		STAT 2830 - Basic Statistical Methods 2** *STAT 1410 or STAT 2430 or STAT 3210*	3	
Catamount Core (AH Arts & Humanities)	3		CS 2240 - Data Struc & Algorithms *CS 2100*	3	
N2: Natural Science (w/ Lab) Sequence	4		N2: Natural Science (w/ Lab) Sequence	4	
Total credits	*17*		*Total credits*	*16*	

Year 3

Semester 1	Cr	Status	Semester 2	Cr	Status
STAT 3210 - Advanced Statistical Methods *STAT 2830; Recommended: STAT 3010*	3		Data Science Elective (3400 or above)	3	
CS 3540 - Machine Learning *STAT 2510 or STAT 5510; MATH 2522 or MATH 2544* **OR** CS/STAT 3880 - Statistical Learning *STAT 3210*	3		Data Science Elective (3400 or above)	3	
CS 3040 - Database Systems *CS 2240*	3		CS Elective (2000 level or above)	3	
Data Science Elective	3		Catamount Core (GC Global Citizenship)	3	
Catamount Core (S1 Social Science)	3		Catamount Core (S1 Social Science)	3	
Total credits	*15*		*Total credits*	*15*	

Year 4

Semester 1	Cr	Status	Semester 2	Cr	Status
STAT 3870 - Data Science I - Pinnacle *CS 1210; STAT 1410 or STAT 2430; CS 2100; Recommended: MATH 2522 or MATH 2544*	3		STAT 4810 - Capstone Experience *CS 1210; STAT 3210 or STAT 5210; STAT 3010 or STAT 5010* **OR** STAT 3996 or CS/MATH 4996 - Undergraduate Honors Thesis	3	
CS 3240 - Algorithm Design & Analysis *CS 2240; Pre/Coreq: CS 2250; STAT 2430 or STAT 2510*	3		CS 3920 - Senior Seminar	1	
Professional Development Elective	3		Data Science Elective (3400 or above)	3	
Catamount Core (Diversity 1)	3		Free Elective	3	
Catamount Core (WIL2 Writing & Information Literacy 2)	3		Free Elective	2	
Total credits	*15*		*Total credits*	*12*	

Minimum Total Credits Required for Degree: 120

This document is an advising tool and should be used in combination with a student's degree audit, as well as the published Catalogue for 2023-2024 found at http://catalogue.uvm.edu/

Prerequisite courses are listed below the course name in italics. Prerequisites listed are only for courses, as relevant to your specific degree program, and may have other registration restrictions. Please refer to the catalogue.

* Grade of C- or higher required

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Data Science Elective: Please refer to your degree audit to see course options.

Natural Science (w/ Lab) Sequence: Students may choose Biology (BIOL 1400 & BIOL 1450), Chemistry (CHEM 1400 & CHEM 1450) or Physics (PHYS 1600 & PHYS 1650)

Catamount Core: Students may take courses that fulfill more than one Catamount Core requirement, but they must still take at least 40 unique credits of courses that have been approved to fulfill Catamount Core requirements.