

**BACHELOR OF SCIENCE IN DATA SCIENCE**

**Catalogue**

**Student:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**2021-2022**

**netID:** \_\_\_\_\_

**Advisor:** \_\_\_\_\_

**Year 1**

Semester 1	Cr	Status	Semester 2	Cr	Status
QD: MATH 1234 - Calculus I	4		QD: MATH 1248 - Calculus II	4	
QD: STAT 1870 - Intro to Data Science	3		WIL (ENGL 1001, HCOL 1000) <sup>2</sup>	3	
CEMS 1500 - CEMS First Year Seminar	1		Diversity 1 or 2 <sup>2</sup> (D1/D2)	3	
QD: CS 1210 - Computer Programming I	3		Sustainability 1 <sup>2</sup> (SU)	3	
Humanities Elective <sup>1</sup>	3		QD: MATH 2055/CS 1640 - Fund of Math/Discr Strct	3	
<i>Total credits</i>	<i>14</i>			<i>16</i>	

**Year 2**

Semester 1	Cr	Status	Semester 2	Cr	Status
QD: MATH 2522 or 2544 - (Applied) Linear Algebra	3		QD: STAT 2510 or 5510 - Applied Prob/Prob Theory	3	
Natural Science Sequence <sup>3</sup>	4		Natural Science Sequence <sup>3</sup>	4	
QD: CS 2100 - Intermediate Programming	4		QD: CS 2240 - Data Structures and Algorithms	3	
QD: STAT 1410/ STAT 2430	3		Diversity 1 <sup>2</sup> (D1)	3	
			QD: STAT 3010 - Stat Computing & Data Analysis	3	
<i>Total credits</i>	<i>14</i>		<i>Total credits</i>	<i>16</i>	

**Year 3**

Semester 1	Cr	Status	Semester 2	Cr	Status
MATH Elective (1XX)	3		MATH Elective (1XX)	3	
Social Science Elective <sup>1</sup>	3		CS Elective (1XX)	3	
QD: CS 3040 - Database Systems	3		QD: STAT 3880 - Statistical Learning	3	
Data Science Elective <sup>4</sup>	3		Data Science Elective(2XX) <sup>4</sup>	3	
QD: STAT 3210 - Statistical Methods II	3		QD: STAT 5290 - Survival/Logistic Regression	3	
<i>Total credits</i>	<i>15</i>		<i>Total credits</i>	<i>15</i>	

**Year 4**

Semester 1	Cr	Status	Semester 2	Cr	Status
QD: STAT 3870 - Data Science I	3		STAT 4810 - Capstone	3	
QD: CS 3240 - Algorithm Design & Analysis	3		Data Science Elective(2XX) <sup>4</sup>	3	
Data Science Elective(2XX) <sup>4</sup>	3		Free Elective	3	
Professional Development Elective <sup>1</sup>	3		Free Elective	3	
Free Elective	3		Free Elective	3	
<i>Total credits</i>	<i>15</i>		<i>Total credits</i>	<i>15</i>	

**Minimum Total Credits Required for Degree: 120**

**\*\*Utilize degree audit or re-numbering widget ([bit.ly/UVMWidget](http://bit.ly/UVMWidget)) to confirm courses.\*\***

1. Refer to the CEMS Program Electives for approved Humanities, Social Science, and Professional Development elective courses (<https://www.uvm.edu/cems/cems-program-electives>).
2. Students must fulfill the University Requirements - Diversity (D1/D2), Sustainability (SU), Foundational Writing & Information Literacy (WIL), and Quantitative Reasoning (QD).
3. Refer to the catalogue for approved Natural Science courses.
4. Data Science Electives: Choose 12 Credits in Data Science (DS) electives selected from the list of approved courses in MATH/STAT/CS/CSYS/NR, with at least 9 of these credits at the 200-level (or above): Options include CS 2300, 2480, 2660, 2670, 3050, 3240, 3280, 3540; CS/CSYS 6020, 6520; MATH 2248, 2678, 5775, 3766, 5788; MATH/CS 3737; MATH/CSYS 6701, 6713; STAT 2830, 3240, 5310, 5350, 3410, 6300, 6870; STAT/CS 3880; NR 2430; CEE 7920; CEE/CSYS/STAT 7980. Additional courses, including special topics courses, may be granted approval if appropriate (consult faculty advisor)

**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 2021-2022 found at <http://catalogue.uvm.edu/>**