

**BACHELOR OF SCIENCE IN COMPUTER SCIENCE**

**Catalogue**

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

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

**2020-2021**

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

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

**Year 1**

Semester 1	Cr	Status	Semester 2	Cr	Status
CS 1XXX - 1080 Intro to Web Site Development	3		CS 2100 - Intermediate Programming <sup>6</sup>	4	
CS 1210 - Computer Programming I <sup>6</sup>	3		CS 1640 - Discrete Structures	3	
FWIL (ENGS 1001/HCOL 1000) <sup>1</sup>	3		MATH 1248 - Calculus II	4	
MATH 1234 - Calculus I	4		Diversity 1 or 2 <sup>3</sup>	3	
CEMS 1500 - CEMS First Year Seminar	1		Natural Science elective (non-lab) <sup>7</sup>	3	
CS 1500 - Seminar for New CS Majors <sup>2</sup> [Opt]	[1]				
<i>Total credits</i>	<i>14-15</i>		<i>Total credits</i>	<i>17</i>	

**Year 2**

Semester 1	Cr	Status	Semester 2	Cr	Status
CS 2240 - Data Structures and Algorithms	3		CS 2250 - Computability and Complexity	3	
CS 2210 - Computer Organization	3		CS 2300 - Advanced Programming	3	
MATH 2248/2522 or 2544/2678 <sup>5</sup>	3-4		STAT 2510 - Applied Probability	3	
STAT 2430 - Statistics for Engineering	3		MATH 2248/2522 or 2544/2678/3201 <sup>5</sup>	3-4	
Natural Science elective (with lab) <sup>7</sup>	4		Sustainability (SU)	3	
<i>Total credits</i>	<i>16-17</i>		<i>Total credits</i>	<i>15-16</i>	

**Year 3**

Semester 1	Cr	Status	Semester 2	Cr	Status
CS 3010 - Operating Systems	3		CS ≥ 2xxx	3	
Diversity 1 <sup>3</sup>	3		CS ≥ 3xxx	3	
CS ≥ 2xxx	3		CS ≥ 3xxx	3	
Free Elective <sup>4</sup>	3		Free Elective <sup>4</sup>	3	
Free Elective <sup>4</sup>	3		Free Elective <sup>4</sup>	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
CS 3240 - Algorithm Design and Analysis	3		CS ≥ 3xxx	3	
CS 3920 - Senior Seminar	1		Capstone Experience <sup>8</sup>	3	
Free Elective <sup>4</sup>	3		Free Elective <sup>4</sup>	3	
Free Elective <sup>4</sup>	3		Free Elective <sup>4</sup>	3	
Free Elective <sup>4</sup>	3		Free Elective <sup>4</sup>	3	
<i>Total credits</i>	<i>13</i>		<i>Total credits</i>	<i>15</i>	

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

1. Foundational Writing and Information Literacy (FWIL) is a University requirement. Students must take either ENGS 001 or HCOL 085 (only for students enrolled in the Honors College). Students transferring from the College of Arts and Sciences can a TAP class to fulfill this requirement.
  2. CS 050 is recommended for new majors taking CS 021 or CS 110, but is not required.
  3. Students must take one three-credit D1 course and a second three-credit D1 or D2 course, per University Diversity Requirement.
  4. Free Electives: Students may use free elective credits to pursue coursework germane to their interests. Students are encouraged to work with their advisor(s) to select courses that complement their curricula and support their academic and career goals. Students should select one course that meets the University Sustainability Requirement (SU).
  5. Students select two of the following math electives: MATH 121, MATH 122 or MATH 124, MATH 173, MATH 271.
  6. Grade of C- or higher required in CS 021 and CS 110.
  7. Refer to the catalogue for approved Natural Science courses.
  8. Students may choose one of the following courses: CS 202, 205, 206, 211, 225, 226, 228, 254, and 275.
- N.B. Students must achieve a minimum GPA of 2.00 in all courses with a CS prefix. The minimum 2.00 GPA also includes cour without a CS prefix that are substituted for a CS course requirement.
- N.B. The University's Quantitative Reasoning (QR) requirement is built into the Computer Science curriculum.

**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 2020-2021 found at <http://catalogue.uvm.edu/>**