BACHELOR OF SCIENCE IN BIOMEDICAL ENGINEERING **Catalogue**

Systems and Network Biology Specialization (BME-SNB) **2019-2020**

Student: **Date:**

netID: **Advisor:**

Year 1

Semester 1	Cr	Status	Semester 2	Cr	Status
ENGR 002 - Graphical Communication	2		BME 001 - First Year Design Experience[2]	2	
CHEM 031 - General Chemistry I	4		PHYS 031 - Physics for Engineers I	4	
FWIL (ENGS 001/TAP/HCOL 085)[1]	3		BHSC 034 - Human Cell Biology	4	
MATH 021 - Calculus I	4		MATH 022 - Calculus II	4	
CS 020 - Programming for Engineers	3		CHEM 032 - General Chemistry II	4	
ENGR 050 - First Year Engr Seminar[2]	1				
Total credits	*17*		*Total credits*	*18*	

Year 2

Semester 1	Cr	Status	Semester 2	Cr	Status
EE 100 - Electrical Engr. Concepts I	4		CS 064 - Discrete Structures	3	
CE 001 - Statics	3		CS 110 - Intermediate Programming	4	
ANPS 019 - Human Anatomy & Physiology	4		ANPS 020 - Human Anatomy & Physiology	4	
MATH 121 - Calculus III	4		MATH 271 - Adv Engineering Mathematics	3	
PHYS 125 - Physics for Engineers II	3		BME 081 - Biomedical Engineering Lab I	2	
Total credits	*18*		*Total credits*	*16*	

Year 3

Semester 1	Cr	Status	Semester 2	Cr	Status
CS 124 - Data Structures and Algorithms	3		BME Systems and Network Biology Elective[4]	3	
EE 171 - Signals and Systems	4		BME Systems and Network Biology Elective[4]	3	
STAT 143 - Statistics for Engineering	3		BME Systems and Network Biology Elective[4]	3	
MATH 122 - Applied Linear Algebra	3		BME Systems and Network Biology Elective[4]	3	
BME 151 - Fall BME Workshop	1		BME 152 - Spring BME Workshop	1	
Diversity 1 or 2[3]	3		General Education Elective[3]	3	
Total credits	*17*		*Total credits*	*16*	

Year 4

Semester 1	Cr	Status	Semester 2	Cr	Status
BME SNB Technical Elective[5]	3		BME SNB Technical Elective[5]	3	
BME SNB Technical Elective[5]	3		BME SNB Technical Elective[5]	3	
BME 187 - Capstone Design I	3		BME 188 - Capstone Design II	3	
BME 181 - Biomedical Eng Lab II	2		General Education Elective[3]	3	
Diversity 1[3]	3		General Education Elective[3]	3	
Total credits	*14*		*Total credits*	*15*	

Minimum Total Credits Required for Degree: 131

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 use a TAP class to fulfill this requirement.

2. BME 001 & ENGR 050 aredegree requirements designed for first-year students. Internal and external transfer students may substitute 100-level or higher engineering (BME, CE, EE, ENGR, ME) credits for these requirements.BME BI Technical Elective[5]

3. Required General Education (GenEd) Electives: 9 credits of approved GenEd electives. Students must also take one three-credit D1 course and a second three-credit D1 or D2 course, per University Diversity Requirement.

4. Systems & Network Biology Electives: CHEM 141, CHEM 142, all 200-level BME courses. CE, EE, ENGR, ME, CS, MATH, STAT and life/physical sciences courses with the approval of BME advisor & EBE chair. At least 9 hours must be 100-level or above engineering courses.

5. SNB Technical Electives: All 200-level BME courses,
CE 359, CS 256, CS 302*, CS 352*, EE 207, EE 210, EE 213, MATH 266, MATH 268, MATH 300*, MATH 303*, ME 201, ME 208, ME 209, ME 285, ME 312*, MMG 223, MMG 231, MMG 232, MMG 233, MPBP 323*, PATH 101, PHRM 201, PHRM 240, PHRM 272, STAT 200 & STAT 211. Other courses may be pre-approved by BME advisor & EBE chair. At least 9 credits must be at the 200-level or above. Note that 300-level courses (*) require instructor permission for undergraduate enrollment.*

N.B. The University's Quantitative Reasoning (QR) requirement is built into the Biomedical Engineering curriculum. The University's Sustainability (SU) requirement may be fulfilled by taking an engineering or technical course approved for SU or an SU-approved GenEd Elective.

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 2019-2020 found at http://catalogue.uvm.edu/