

Computational and Systems Biology Track, 2017-2018

Freshman	Credits
CHEM 1127Q – General Chemistry	4
MATH 1131Q – Calculus I	4
CSE 1010 – Introduction to Computing for Engineers	3
ENGL 1010 – Sem in Academic Writing OR ENGL 1011 Sem in Writing Through Lit	4
ENGR 1000 – Orientation to Engineering	1
	16
CHEM 1128Q – General Chemistry	4
MATH 1132Q – Calculus II	4
BIOL 1107 – Principles of Biology	4
ENGR 1166 – Foundations of Engineering (BME section)	3
	15
Sophomore	
PHYS 1501Q – Physics for Engineers I	4
MATH 2110Q – Multivariable Calculus	4
CE 2110 – Applied Mechanics I	3
PNB 2264 – Human Physiology & Anatomy	4
STAT 3025Q – Statistical Methods (Calculus Level)	3
	18
PHYS 1502Q – Physics for Engineers II	4
BME 3120 – LabView Basics for Engineers	1
MSE 2101 – Materials Science & Engineering I	3
ECE 2001 – Electrical Circuits	4
MATH 2410Q – Elementary Differential Equations	3
MATH 2210Q – Applied Linear Algebra	3
	18
Junior	
BME 3401 – Introduction to Computational and Systems Biology	3
ECE 3101 – Signals and Systems	3
Content Area 1 (not in PHIL)	3
CSE 1729 – Introduction to Principles of Programming	3
MCB 2210 – Cell Biology	3
STAT 3965 or MATH 3170 – Elementary Stochastic Processes	3
	18
BME 3900 – Junior Design	3
Content Area 2 (Social Science)	3
MCB 2400 – Human Genetics or MCB 2410 – Genetics	3
BME Elective	3
Track Elective	3
	15
Senior	
BME 4900 – Biomedical Engineering Design I	3
PHIL 1104 – Philosophy and Ethics	3
Content Area 2 (Social Science, not same department as Junior Year)	3
BME 4400 – Dynamical Modeling of Biochemical Networks	3
BME Elective	3
	15
BME 4910W – Biomedical Engineering Design II	3
Content area 4 (Diversity)	3
Content area 4 (International)	3
BME 4401 – Computational Foundations of Systems Biology	3
Track Elective	3
	15
Total Credits	130

CSB Track Electives, 2017-2018	
CSE 2050 Data Structures & Intro to Algorithms	
CSE 2300W Digital Logic Design	
CSE 2500 Introduction to Discrete Systems	
CSE 3500 Algorithms & Complexity	
CSE 3802 Numerical Methods in Scientific Computation	
CSE 4095 Special Topics in CSE	Requires BME Dept Approval
CSE 4099 Independent Study in CSE	Requires BME Dept Approval
ECE 3111 Systems Analysis & Design	
CHEG 2103 Introduction to Chemical Engineering	
CHEG 3145 Chemical Engineering Analysis	

CSB BME Electives, 2017-2018	
BME 3100 Physiological Modeling	
BME 4300 Physiological Control Systems	
BME 4800 Bioinformatics	
BME 4985 Special Topics in BME	Requires BME Dept Approval
BME 4999 Independent Study in BME	Requires BME Dept Approval