

B.S. in Chemical Engineering with Biochemical Emphasis

Freshman Year

First Semester	Credits	Second Semester	Credits
FR ENG 1100 Study & Careers in Engineering	1	MECH ENG 1720 Intro to Engineering Design	3
CHEM 1100 Lab Safety	1	COMP SCI 1500, 1972/1982, or 1570/1580	4
CHEM 1310 General Chemistry I Lecture	4	CHEM 1320 General Chemistry II Lecture	3
CHEM 1319 General Chemistry I Lab	1	MATH 1215 Calculus II	4
ENGLISH 1120 Exposition & Argumentation	3	PHYSICS 1135 Engineering Physics I	4
HIST 1200, 1300, 1310, or POL SCI 1200	3		
MATH 1214 or 1211 Calculus I or I-B	4		
	17		18

Sophomore Year

CHEM ENG 2100 Material & Energy Balances	4	CHEM ENG 2110 Thermodynamics I	3
CHEM 2210 Organic Chemistry I Lecture	4	ENGLISH 3560 Technical Writing (Comp II)	3
MATH 2222 Calculus III	4	MATH 3304 Differential Equations	3
PHYSICS 2135 Engineering Physics II	4	Science Elective (Lecture)	3
		Science Elective (Lab)	1
		STAT 3113 Applied Engineering Statistics	3
	16		16

Junior Year

CHEM ENG 3101 Transport	4	CHEM ENG 3131 Separations	3
CHEM ENG 3111 Numerical Computing	3	CHEM ENG 3141 Process Operations	3
CHEM ENG 3120 Thermodynamics II	3	CHEM ENG 3150 Reactor Design	3
SP&M S 1185 Principles of Speech	3	CHEM ENG 5250 Isolation & Purification (Spring)	3
Science Elective (Lecture)	3	Science Elective (Lecture)	3
Science Elective (Lab)	1	Science Elective (Lab)	1
	17		16

Senior Year

CHEM ENG 4091 Design I	3	CHEM ENG 4097 Design II	3
CHEM ENG 4201 Biochem Separations & Control Lab (Fall Only)	3	CHEM ENG 4110 ChE Process Dynamics & Control	3
CHEM ENG 4210 Biochem Reactors (Fall Only)	3	CHEM ENG 4220 Biochem Reactors Lab (Spring Only)	3
CHEM ENG 4241 Process Safety	3	CHEM ENG 4311 Ethics (CHEM ENG 2310)(Spring Only)	1
CHEM ENG 4301 Materials (CHEM ENG 2300)	1	ECON 1100 or 1200 Micro/Macro Economics	3
Upper Level Humanities or Social Science	3	Humanities or Social Science Elective	3
	16		16

Total 132

Science Elective Options: A minimum of 12 credit hours in Science Electives are required. Select three courses from CHEM 2220 CHEM 4610, CHEM 4620, BIO SCI 2213, BIO SCI 3313, and BIO SCI 4323; and a minimum of two laboratory courses from CHEM 2229 or CHEM 2219 CHEM 4619, BIO SCI 2219, BIO SCI 3319, and BIO SCI 4329.

<http://chemeng.mst.edu>