

BSE – Bioprocess Engineering (BIOE) Concentration

FRESHMAN

SOPHOMORE

JUNIOR

SENIOR

Bold border denotes class with lab

Dashed border denotes minimum grade of C required

Engineering
39 core hours +
26 concentration hours

Note: This chart is for planning purposes only. It is the student's responsibility to ensure that requirements as detailed in the Undergraduate Catalog are met.

Math/Science
32 hours

General
31 hours

ENGR 1012 (2)
Engineering Graphics

C: MATH 1083 or higher

ENGR 1000 (1)
Introduction to Engineering

ENGR 1016 (2)
Intro to Eng Design

ENGR 2050 (3)
Computer Applications in Engineering

MATH 1083 or higher

MATH 2151 (3)
Calculus I

MATH 1083 or Placement test

MATH 2152 (3)
Calculus II

BIOL 1050/1051 or 1100/1101 (4)
General Biology I

CHEM 1150/1151 (4)
General Chemistry I

ENGL 1100 (3)
Composition

Social Sciences Elective (3)

ENGL 2201 (3)
Writing About the Disciplines

MATH 3307 (3)
Engineering Statistics

MATH2152

Credit hours per Semester
Cumulative Credit hours

16

15/31

17/48

18/66

ENGR 2022 (3)
Statics

C: PHYS 2350
P: MATH 2152

ENGR 2000 (1)
Engineering Design/PM I

MATH 3307

ENGR 2070 (3)
Materials and Processes

ENGL 2201
CHEM 1150

MATH 2153 (3)
Calculus III

ENGR 2050

PHYS 2350 (4)
University Physics I

PHYS 2360 (4)
University Physics II

MATH 3307 (3)
Engineering Statistics

Social Sciences Elective (3)

18/66

ENGR 2450 (3)
Dynamics

ENGR 3800 (3)
Quality Control for Engineers

CHEM 1160/1161 (4)
General Chemistry II

CHEM 1150/1151

MATH 2154 (4)
DEQ and Linear Algebra

PHYS 2360 (4)
University Physics II

MATH 3307 (3)
Engineering Statistics

Social Sciences Elective (3)

ENGR 3024 (3)
Mechanics of Materials

ENGR 2070
ENGR 2022

ENGR 2514 (4)
Circuit Analysis

C: MATH 2154,
C: PHYS 2360

CHEM 2650/2651 (5)
Organic Chemistry

C: MATH 2154,
C: PHYS 2360

ENGR 3420 (2)
Engineering Economics

MATH 2152

BIOE 3016 (2)
Microbiology For Engineers

P: MATH 2154, ENGR 2450
C: CHEM 2650/2651

ECON 2113 (3)
Microeconomics

KINE 1000 (1)
Lifetime Physical Activity

16/82

ENGR 3000 (2)
Engr Design & PM II

ENGR 2000
P/C: ENGR 3420

ENGR 3050 (3)
Sensors, Measurements And Controls

MATH 2154

BIOE 3250 (3)
Bioprocess Engineering

BIOE 3016

ENGR 3012 (4)
Thermal and Fluid Systems

MATH 2154
ENGR 2450

BIOE 4006 (2)
Bioprocess Engineering Validation

MATH 3307

ECON 2113 (3)
Microeconomics

KINE 1000 (1)
Lifetime Physical Activity

16/98

ENGR 4010 (2)
Senior Capstone Design I

ENGR 3000
ENGR 3420
BIOE 3016
BIOE 3250

BIOE 4010 (3)
Bioprocess Separation Engineering

BIOE 4020 (3)
Bioprocess Plant Design, Sim. & Anlys.

MATH 3307

BIOE 4006 (2)
Bioprocess Engineering Validation

HLTH 1000 (2)
Health in Modern Society

PHIL 2274 or 2275 (3)
Ethics

Humanities/ Fine Arts Elective (4)

16/114

ENGR 4020 (2)
Senior Capstone Design II

BIOE 4020 (3)
Bioprocess Plant Design, Sim. & Anlys.

BIOE 4020 (3)
Bioprocess Plant Design, Sim. & Anlys.

BIOE 4006 (2)
Bioprocess Engineering Validation

Humanities/ Fine Arts Elective (3)

Social Sciences Elective (3)

Social Sciences Elective (3)

14/128

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