

BS Engineering – Bioprocess Engineering (BIOE) Concentration – 2019

Engineering: 43 core hours + 22 concentration hours

Math/Science : 33 hours

General: 27 hours

FRESHMAN

SOPHOMORE

JUNIOR

SENIOR

Fall

Spring

Fall

Spring

Fall

Spring

Fall

Spring

ENGR 1012 (2)
Engineering Graphics

Dashed border denotes minimum grade of C required

ENGR 2022 (3)
Statics

* ENGR 2450 (3)
Dynamics

ENGR 3420 (2)
Engineering Economics

P/C ENGR 3000 (2)
Engineering Design/PM II

ENGR 4010 (2)
Capstone Design I

ENGR 4020 (2)
Capstone Design II

P/C: MATH 1083 or higher

P/C: PHYS 2350
P: MATH 2152*

MATH 3307

MATH 2152 *

ENGR 2000

ENGR 3420
BIOE 3013 & 3250

ENGR 1000 (1)
Intro to Engineering

ENGR 1016 (2)
Introduction to Engineering Design

ENGR 2000 (1)
Engineering Design/PM I

ENGR 3800 (3)
Quality Control for Engineers

ENGR 3024 (3)
Mechanics of Materials

ENGR 3034 (4)
Thermal and Fluid Systems

BIOE 4006 (2)
Bioprocess Engr. Validation And Quality

Concentration-specific courses are only offered in the semester shown on this sheet.

Bold border denotes class with lab

ENGL 2201
CHEM 1150

CHEM 1150*,1151

ENGR 2022*
ENGR 2070

ENGR 2450
P/C: MATH 2154

BIOE 3250
MATH 3307

MATH 1083 or higher
MATH 1083 or Placement test

ENGR 2050 (3)
Computer Applications in Engineering

ENGR 2070 (3)
Materials and Processes

CHEM 1160/1161 (4)
General Chemistry II

* **CHEM 2750/2753 (4)**
Organic Chemistry I

BIOE 3250 (3)
Bioprocess Engineering Systems

BIOE 4010 (3)
Bioprocess Separation Engineering

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

P/C: PHYS 2360

BIOE 3013

MATH 3307

MATH 2171 (4)
Calculus I

* MATH 2152 (3)
Calculus II

* MATH 2153 (3)
Calculus III

MATH 2154 (4)
Linear Algebra & Diff. Eqns.

P/C ENGR 2514 (4)
Circuit Analysis

ENGR 3050 (3)
Sensors Measurements and Controls

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.

BIOL 1050/1051 (4)
General Biology or **1100/1101**
Prin. of Biology I

CHEM 1150/1151 (4)
General Chemistry I

MATH 3307 (3)
Engineering Statistics

ENGR 2050

P/C: CHEM 2750 & 2753
P: ENGR 2450*
BIOE 3013 (3)
Microbiology For Engineers

Humanities/ Fine Arts Elective (3)

Humanities/ Fine Arts Elective (3)

MATH 2152

ENGL 1100 (3)
Composition

ENGL 2201 (3)
Writing about the Disciplines

PHYS 2350 (4)
University Physics I

PHYS 2360 (4)
University Physics II

HLTH 1000 (2)
Health in Modern Society

Humanities/ Fine Arts Elective (3)

Social Sciences Elective (3)

P/C = pre- or co-requisite
* = C or better required

Diversity: At least one elective course must be designated as GD (Global Diversity) and at least one elective course must be designated as DD (Domestic Diversity).

*Humanities/Fine Arts: Must complete at least one course in the humanities and one course in fine arts.
Social Sciences: Must complete courses in at least two different areas.*

KINE 1000 (1)
Lifetime Physical Activity

Social Sciences Elective (3)

Credit hours per Semester

Cumulative Credit hours

17

15/32

17/49

18/67

16/83

14/97

14/111

14/125

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