There are two tracks to the Bioprocess Engineering Minor, the Engineering Track and the Biological Track (located on the reverse of this page.) Please select one for completion.

**Engineering Track**

**Required Courses (10 Credits)**
- BL2100 Principles of Biochemistry (3) or CH4710 Biomolecular Chemistry I (3)
- CM2120 Fund of Chem Engg 2 (3) or CM2200 Intro to Minerals and Materials (3) or ENVE3501 Env Engg Fundamentals (3) or ENVE3503 Environmental Engineering (3)
- CM4125 Bioprocess Engineering Lab (1)
- CM4710 Biochemical Processes (3)

**Elective Courses (6 Credits)**
- BL3210 General Microbiology (4) or BL3310 Environmental Microbiology (3)
- BL4000 Research in Biology (1-3) *
- BL4010 Biochemistry I (3)
- BL4020 Biochemistry II (3)
- BL4220 Applied & Industrial Microbiology (3)
- BL4820 Biochemical Laboratory Techniques I (2)
- CH4110 Pharmaceutical Chem: Drug Action (3)
- CH4120 Pharmaceutical Chem: Drug Design (3)
- CH4720 Biomolecular Chemistry II (3)
- CM4000 Undergrad Research in Chem Eng (1-3)*
- CM4550 Industrial Chemical Production (3)
- CM4770 Analytical Microdevice Tech (3)
- CM4780 Biomanufacturing & Biosafety (3)
- CM4990 Special Topics in CM (1-3)*

*Topic must be approved by the Department Chair
Interdisciplinary Minor in Bioprocess Engineering (continued)

Biological Track

Required Courses (14 Credits)

_____ BL2100 Principles of Biochemistry (3)
_____ BL3210 Microbiology (4)
_____ BL4220 Applied and Industrial Microbiology (3)
_____ CM2200 Intro to Minerals and Materials (3) or
   CM4710 Biochemical Processes (3) or
   ENVE3501 Env Engg Fundamentals (3) or
   ENVE3503 Environmental Engineering (3)
_____ CM4125 Bioprocess Engineering Lab (1)

Elective Courses (2 Credits)

_____ BL4000 Undergrad Research in Biological Sciences (1-3)*
_____ BL4010 Biochem I (3)
_____ BL4020 Biochem II (3)
_____ BL4820 Biochem Lab I (2)
_____ CM2200 Intro to Minerals and Materials (3)
_____ CM4000 Undergrad Research in Chem Eng. (1-3)*
_____ CM4710 Biochemical Processes (3)
_____ CM4770 Analytical Microdevice Technologies (3)
_____ CM4780 Biomanufacturing & Biosafety
_____ CM4990 Special Topics in CM (1-3)*

* Topic must be approved by Department Chair

Credits Required = 16
Total Credits _______

Courses listed in this minor have the following prerequisites (shown in parenthesis). Concurrency is illustrated by the letter C: BL2100 ((BL1020 or BL1040 or BL2400 and CH1112 or (CH1150 and CH1151)), BL3210 ((BL1020 or BL1040) and (BL2100 or CH4710)), BL4010 ((BL1020 or BL1040 or BL2010) and BL2100 and (CH2410 and CH2420)), BL4020 (BL4010), BL4820 (BL4010 (C) or
CH4710 (C)), CH4110 (BL4010 or CH4710), CH4120 (CH2420), CH4710 (CH2420), CH4720 (BL4010 or CH4710), CM2120 (CM2110),
CM4125 (CM4710 (C) or BL3210 or BL3310), CM4550 (CH2410 and CM3510 (C)), CM4710 (CM3110 (C))

Student Signature Date Minor Advisor Signature Date

Academic Year 2014-15