Interdisciplinary Minor in Bioprocess Engineering

IMBE

Name (please print): _______________________________________________________________________ (Last)                                                   (First)                                              (Middle) Student M# ___________________________Primary Major: _____________________________    ______________

Minor Advisor Signature         Student Signature                                 Date                                      Academic Year 2016 -17

Required Courses (9 – 15 credits)

Engineering Course (Select one course, 3 credits)

_____ CM 2110 Fund of Chem Engg (3) Prereqs: CH 1112 or (CH 1150 and CH 1151)
_____ CM 2200 Intro to Minerals and Materials (3) Prereqs: none
_____ ENVE 3501 Env Engg Fundamentals (3) Prereqs: MA 2160 and CH 1112 or (CH 1150 and CH 1151)
_____ ENVE 3503 Environmental Engineering (3) Prereqs: MA2160 and CH 1112 or (CH 1150 and CH 1151)

Biochemistry Course (Select one course, 3 credits)

_____ BL 2100 Principles of Biochemistry (3) Prereqs: BL 1020 or BL 1040 or (BE 2400 and CH 1112 or (CH 1150 and CH 1151))
_____ CH 4710 Biomolecular Chemistry I (3) Prereqs: CH 2420

Applied Biochemistry Courses (Select 3 or more credits)

_____ CM 4710 Biochemical Processes (3) Prereqs: CM 3110(C)
_____ BL 4120 Environmental Remediation and Toxicology (3) Prereqs: BL 1020 or BL 1040
_____ BL 4220 Applied and Industrial Microbiology (3) Prereqs: BL 3210 or BL 3310

Elective Courses (select remaining credits from course list below 3 - 9 credits)

_____ BL 3210 General Microbiology (4) Prereqs: (BL 1020 or BL 1040) and (BL 2100 or CH 4710)
_____ OR BL 3310 Environmental Microbiology (3) Prereqs: BL 1040 or BL 3070 or BL 3080
_____ BL 4000 Research in Biology (1-6) Prereqs: none
_____ BL 4010 Biochemistry I (3) Prereqs: (BL 1020 or BL 1040 or BL 2010) and BL 2100 and (CH 2410 or CH 2420)
_____ BL 4020 Biochemistry III (3) Prereqs: BL 4010
_____ BL 4820 Biochem Lab Techniques I (2) Prereqs: BL 4010(C) or CH 4710(C)
_____ CH 4110 Pharmaceutical Chemistry: Drug Action (3) Prereqs: BL 4010 or CH 4710
_____ CH 4120 Pharmaceutical Chemistry: Drug Design (3) Prereqs: CH 2420
_____ CH 4140 Pharmaceutical Analysis (3) Prereqs: CH 2410
_____ CH 4720 Biomolecular Chemistry II (3) Prereqs: BL 4010 or CH 4710
_____ CM 4040 UG Research in Bioengineering (1-6) Prereqs: none
_____ CM 4080 UG Research in Biofuels (1-6) Prereqs: none
_____ CM 4125 Bioprocess Engineering Lab (1) Prereqs: CM 4710(C) or BL 3210 or BL 3310
_____ CM 4770 Analytical Microdevice Technologies (3) Prereqs: PH 2200
_____ CM 4780 Biomanufacturing and Biosafety (3) Prereqs: BL 2100 or CH 4710 or CM 4040 or CM 4080 or CM 4710 or (CM 3110(C) and BL 1040)

Total Credits Required – 18*
*A minimum of 9 credits are required at the 3000-level or higher

Minor Advisor Signature        Student Signature        Date        Academic Year 2016-17