**Academic Year 2018-19**  
**Minor in Polymer Science and Engineering (ECMM)**  
**Department of Chemical Engineering**  
**Credits Required: 18**

**Introduction to Polymers Course (Select one course, 3 credits)**
- BE 4300 Polymeric Biomaterials (3) **Prereqs:** BE3800
- CM/CH 4610 Introduction to Polymer Science (3) **Prereqs:** CH1122 or (CH1160 and CH1161)
- MSE 4110 Introduction to Polymer Engineering (3) **Prereq:** MSE2100

**Chemistry or Engineering Courses (Select one set of classes, 3 - 6 credits)**
- CH 2410 Organic Chemistry I (3) **Prereqs:** CH1122 or (CH1160 and CH1161)
- and CH 2420 Organic Chemistry II (3) **Prereqs:** CH2410
- CM 3110 Transport/Unit Operations I (3)  
  **Prereqs:** CM2120 and (MA3520 or MA3521 or MA3530 or MA3560) and MA3160 and PH2100
- ENG 3200 Thermodynamics/Fluid Mech (4)  
  **Prereqs:** MA2160 and (CH1112 or (CH1150 and CH1151)) and PH2100 and ENG1102
- MEEM 3201 Intro Fluid Mechanics & Heat Transfer (4)  
  **Prereqs:** MEEM2201 and MEEM2911 and (MA3520 or MA3521 or MA3530 or MA3560)
- MSE 3110 Materials Processing II (4) **Prereqs:** MSE2110 and MSE3100 and (MA3520 or MA3521 or MA3530 or MA3560)

**Elective Courses (Select remaining 9 - 12 credits)**
- BE 3300 Biomechanics I: Statics and Dynamics (3)  
  **Prereqs:** BE2400 and (MA2321 or MA2320 or MA2330) and (MA3521 or MA3520 or MA3530) and BL2010  
  or MEEM 2150 Mechanics of Materials (3) **Prereq:** MEEM 2110
- BE 4335 Smart Polymers (3) **Prereqs:** BE3350 and BE3800
- CH/CHEM 4620 Polymer Chemistry (3) **Prereqs:** CH2420
- CH 4710 Biomolecular Chemistry I (3) **Prereqs:** CH2420
- CM 4060 UG Research in Polymer Engg (1-6) **Prereqs:** none
- CM/CH 4631 Polymer Sci Lab (2) **Prereqs:** CH4610(C) or CM4610(C) or BE4300(C) or MY4600(C)
- CM 4650 Polymer Rheology (3)  
  **Prereqs:** (CM3110 or MEEM3210 or ENG3200 or MSE3100 or CE3600) and (MA3520 or MA3521 or MA3530 or MA3560)
- CM 4655 Polymer Rheology Lab (1) **Prereqs:** CM4610(C) or CH4610(C) or CM4650(C) or BE4300(C) or MY4600(C)
- MEEM 4170 Failure of Materials in Mech (3) **Prereq:** MEEM3501 or MEEM3400
- MEEM 4635 Design with Plastics (3) **Prereqs:** MSE2100 and MEEM2150 and (MEEM3210 and MEEM3230(C) or CM3110)
- MSE 4430 Composite Materials (3) **Prereqs:** MSE2100
- XX xxxx Undergraduate Research (1-6) **Topic must be approved by academic advisor**

**Total Credits Required: 18**