# Minor in Sustainable Biomaterials (FSBM)

**Academic Year 2019-20**  
**College of Forest Resources and Environmental Science**

**Credits Required:** 18

### Required Courses: 6 Credits

- **FW 3097 Forest Biomaterials** (3)  
  Prereqs: none
- **ENG 4510 Sustainable Futures I** (3)  
  May not be Freshman or Sophomore

### Core Elective Course: Choose One

- **CEE 4233 Structural Timber Design** (3)  
  Prereqs: CEE3202
- **EC 4640 Natural Resource Economics** (3)  
  Prereqs: (EC2001 or EC3002 or FW4080) and UN1015 and (UN1025 or Modern Lang - 3000 +)
- **FW 1035 Wood Anatomy and Properties** (4)  
  Prereqs: none
- **SS 3313 Sustainability Science, Policy, and Assessment** (3)  
  Prereqs: UN1015 and (UN1025 or Modern Language - 3000 level or higher)

### Elective Courses: Choose 9 credits, not already completed

- **CEE 4233 Structural Timber Design** (3)  
  Prereqs: CEE3202
- **CEE 4506 Application of Sustainability Principles to Engineering Practice** (3)  
  Prereqs: CEE3501 or CEE3503
- **CEE 4993 Engineering with Developing Communities** (2)  
  Prereqs: (ENG2120 or MEEM2150) and (CEE3620)
- **CH 3540 Biophysical Chemistry** (3)  
  Prereqs: (BL1020 or BL1040) and CH1122 or (CH1160 and CH1161) and MA2160 and PH2200
- **CH 3541 Biophysical Chemistry Laboratory** (2)  
  Prereqs: (CH3540)
- **CH/CM 4610 Introduction to Polymer Science** (3)  
  Prereqs: CH1122 or (CH1160 and CH1161)
- **CM 3979 Alternative Energy Technologies and Processes** (1)  
  Prereqs: CH1112 or (CH1150 and CH1151) and (MA1160 or MA1161)
- **CM 4080 Undergraduate Research in Biofuels Engineering** (1-3)  
  Prereqs: none
- **CMG 3250 Structural Analysis and Design** (3)  
  Prereqs: CMG 2120 or MET 2120
- **CMG 4800 Sustainable Construction** (3)  
  Must have Junior or Senior standing
- **EC/GE 4620 Energy Economics** (3)  
  Prereqs: EC2001 and UN1015 and (UN1025 or Modern Language - 3000 level or higher)
- **EC 4640 Natural Resource Economics** (3)  
  Prereqs: (EC2001 or EC3002 or FW4080) and UN1015 and (UN1025 or Modern Lang - 3000 +)
- **EC 4650 Environmental Economics** (3)  
  Prereqs: (EC2001 or EC3002) and UN1015 and (UN1025 or Modern Language - 3000 Level +)
- **ENG 3505 Modeling Laboratory for Sustainable Systems** (1)  
  Prereqs: ENG1505 and ENG2505 and ENG4510(c)
- **ENG 4505 Systems Analysis, Modeling, and Design** (3)  
  Prereqs: ENG3505 and ENG4510
- **FA 2190 Art and Nature** (3)  
  Prereqs: none
- **FW 3010 Practice of Silviculture** (4)  
  Prereqs: FW 2010 and FW2051
- **FW 3098 Adding Value to Biomaterials** (2)  
  Prereqs: none
- **FW 3110 Natural Resource Policy** (3)  
  Prereqs: none
- **FW 3116 Ethnobotany** (3)  
  Prereqs: UN1015 and (UN1025 or Modern Language - 3000 level or higher)
- **FW 3150 Timber Harvesting** (2)  
  Prereqs: FW2051
- **FW 3765 Maple Syrup Management and Culture** (1)  
  Prereqs: UN1015 and (UN1025 or Modern Language - 3000 level or higher)
- **FW 4080 Forest Economics & Finance** (3)  
  Prereqs: none
- **MSE 4777 Distributed Additive Manufacturing Open-Source 3-D Printing** (3)  
  Must be enrolled in the College of Engineering; Must have Junior or Senior standing
- **SS 3300 Environmental Problems** (3)  
  Prereqs: UN1015 and (UN1025 or Modern Language - 3000 level or higher)
- **SS 3313 Sustainability Science, Policy, and Assessment** (3)  
  Prereqs: UN1015 and (UN1025 or Modern Language - 3000 level or higher)
- **SS 3650 Environmental Policy and Politics** (3)  
  Prereqs: UN1015 and (UN1025 or Modern Language - 3000 level or higher)
- **SS 4390 Seminar in Sustainability Issues** (3)  
  Prereqs: UN1015 and (UN1025 or Modern Language - 3000 level or higher)

**Total Credits Required = 18**

---

**Student Name and ID Number**

**Student Signature**

**Date**

**Academic Advisor Signature**

**Date**