Effective May 2018

**Additional College of the Environment Requirements:**

1. 10 cr I&S outside of BSE and major
2. 10 cr NW outside of BSE and major

**General Electives** may be used to fulfill these requirements. Remaining requirements are met within the major.

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### Suggested Course Sequencing

<table>
<thead>
<tr>
<th>Autumn</th>
<th>Winter</th>
<th>Spring</th>
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</thead>
<tbody>
<tr>
<td>Chem 142</td>
<td>Chem 152</td>
<td>Chem 162</td>
</tr>
<tr>
<td>Math 124</td>
<td>Math 125</td>
<td>Math 126</td>
</tr>
<tr>
<td>Gen ST 199</td>
<td>BSE 201</td>
<td>ENGL 131</td>
</tr>
<tr>
<td>BSE 150</td>
<td>BSE 202</td>
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<td></td>
<td><strong>General Electives</strong> may be used to fulfill these requirements. Remaining requirements are met within the major.</td>
<td></td>
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</tbody>
</table>

### Engineering Topics & Business Option Electives

**Engineering Topics (min 15 crs):** CSE 142*, 143; CHEM E 326*, 341, 355, 375, 436*, 455, 480, 481; MSE 170, 310, 362, 463, 471, 475; CEE 220, 354, 357, 480, 482, 487, 490, 493, 494; A A 210; E E 215; IND E 337; M E 230

*Recommended for CHEM E double degree applicants

**Business Option (must be declared, will appear on transcript, additional credits required (12 crs):** ESRM 320 (5) (required), ESRM 321 (5) (required); Choose one: I BUS 300 (5), MKTG 301 (4), MKTG 335 (4), MKTG 450 (4), ESRM 400 (3), MGMT 300 (4), MGMT 401 (4), MGMT 403 (4), ACCTG 215 (5), ACCTG 225 (5), SEFS 519 (5), OPMGT 301 (4).

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### Academic Progress Policy

All BSE students are expected to maintain satisfactory progress with the department and the University.

http://www.sefs.washington.edu/academicPrograms/undergrad/bse/BSEAcademicProgressPolicy.pdf

Notes:

+ Requires 2.0 minimum grade. *STAT 390* or IND E 315*
**Program Focus**

The BSE program focuses on the development of process engineers who optimize the manufacture of value added products from sustainable natural resources. Students learn the fundamentals of science and engineering related to the conversion of biomass to fuels, chemicals, and pulp and paper products. The BSE program has a strong research component.

BSE graduates begin careers in manufacturing, engineering, technical service and management training. Positions include process engineer, technical sales engineer, product development engineer, environmental engineer or scientist and research engineer as well as many other specialties that require a fundamental chemical engineering background.

**Accreditation**

The BSE program is accredited by the Engineering Accreditation Commission of ABET, www.abet.org. The Bioresource Science and Engineering Program is an engineering major based in the School of Environmental and Forest Sciences in the College of the Environment.

**Sample Areas of Research**

- High-speed chemical analysis of biomass
- Use of natural non-wood products to make paper and other bio-products
- Bioconversion of lignocellulosic biomass to ethanol
- Biofuel and bioenergy options from wood
- Surface and colloid science in bioprocessing
- Fiber composites
- Sensor development for biorefineries
- Fiber production from agriculture residues
- Bioconversion of biomass to fuels and chemicals
- Life cycle assessment of biofuel systems
- Thermal conversion of biomass to fuels and chemicals
- Supercritical processes in biorefineries
- Production of unique nano-carbon structures from biomass

**Admission:**

BSE is a capacity-constrained major. Applications for incoming freshmen are due November 15th. Current UW and transfer students apply through the College of Engineering online application.

**Prospective UW students:**

www.washington.edu/admissions

**Program/study options:**

Research, internships, honors, scholarships, and graduate study for qualified applicants.

**Career/job information:**

BSE students are supported by the Washington Pulp and Paper Foundation (https://depts.washington.edu/wppf) for scholarships, internships and a path to full time employment.

**School of Environmental and Forest Sciences**

UNIVERSITY of WASHINGTON  
College of the Environment

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