### Requirement Sheet Key

- **= Upper-Division Admission Requirements
- *= Pre-requisite may be in progress at time of application
- **= Contact department adviser if Biol 180 is full during fall quarter
- ***= Students are strongly encouraged to complete BIOEN 215 prior to application to the department

## Mathematics (24-25 Credits)

- Math 124 (5cr) – Calculus I
- Math 125 (5cr) – Calculus II
- Math 126 (5cr) – Calculus III
- Math 307 (3cr) – Differential Equations [pr: Math 125]
- Math 308 (3cr) – Matrix Algebra [pr: Math 126]
- (AMATH 351/352 may substitute for Math 307/308)
- IND E 315 (3cr) – Prob. & Statistics [pr: Math 307]
- (Math/Stat 390 may substitute for IND E 315)

## Natural Sciences (44 Credits)

- Chem 142 (5cr) – General Chemistry with lab
- Chem 152 (5cr) – General Chemistry with lab
- Chem 162 (5cr) – General Chemistry with lab
  (Chem 144 or 145 series can substitute for 142 series)
- Chem 237* (4cr) – Organic Chemistry [pr: Chem 162] -Or-
- Phys 121 (5cr) – Mechanics with lab [pr: Math 124]
- Phys 122* (5cr) – Electro/Oscillatory with lab [pr: Math 125]
- Biol180** (5cr) – Intro Biology
- Biol 200* (5cr) – Intro Biology [pr: Biol 180, Chem 152]
- Biol 220 (5cr) – Intro Biology [pr: Biol 200, Chem 152]

## Written & Oral Communications (5 Credits)

- English Comp (5cr) – English Composition

## Visual, Literary & Performing Arts/Individuals & Society (VLPA/I&S) (24 Credits)

Minimum 10 credits in VLPA required.
Minimum 10 credits in I&S required.
Remaining 4 credits can be either VLPA or I&S.
Minimum 3 credits in Diversity (DIV) required.

## Engineering Fundamentals (4 Credits)

- AMATH 301* (4cr) – Beg. Scientific Computing

### BioE Core Courses (45 Credits)

- BIOEN 215 (3cr)** – Intro to BioE Problem Solving
- BIOEN 315 (3cr) – Biochemical & Molecular Bioengineering
- BIOEN 316 (4cr) – Biomedical Signals and Sensors
- BIOEN 317 (2cr) – Biomedical Signals and Sensors Lab
- BIOEN 325 (3cr) – Biotransport I
- BIOEN 326 (3cr) – Solid and Gel Mechanics
- BIOEN 327 (2cr) – Fluids and Materials Lab
- BIOEN 335 (3cr) – Biotransport II
- BIOEN 336 (3cr) – Bioengineering Systems and Control
- BIOEN 337 (2cr) – Mass Transport and Systems Lab
- BIOEN 345 (4cr) – Failure Analysis of Human Physiology
- BIOEN 401 (3cr) – BioE Capstone Fundamentals

*Students must complete one of the two following options*
- BIOEN 402 (10cr) – BioE Capstone Design
- Or-
- BIOEN 403,404,405 (10cr) – BioE Capstone Design

### BioE Senior Electives (15 Credits)

Students complete one concentration: Molecular and Materials Bioengineering; Cells, Tissues, and Systems; Diagnostics and Therapeutic Instrumentation. See website or contact advising for a list of acceptable courses. The department offers a degree option in NanoMolecular Engineering. See website for details.

### Approved Engineering Electives (9 Credits)

See BioE Advising for a list of acceptable courses. Extra Bioengineering senior elective credit may fulfill this requirement.

### Free Electives (14-15 Credits)

### Total Credits Required for Graduation (180 Credits)

#### Early Admission Requirements

1. Early Admission is an option for Autumn Quarter Only.
2. Students must be enrolled at UW-Seattle.
3. Math 124, 125 & 126 or equivalent.
4. Chem 142, 152 & 162 or equivalent.
5. 5 credits of English Composition.
6. 15 credits of the above 30 must have been completed at UW.
7. Running Start students should consult w/ a BioE adviser.

#### Application Deadlines

- Early Admission – July 1st
- Upper Division Admission – February 1st

Last revised December 2016
# Bioengineering Sample Curriculum

University of Washington

depts.washington.edu/bioe

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<thead>
<tr>
<th>Freshman – Autumn Quarter</th>
<th>Freshman – Winter Quarter</th>
<th>Freshman – Spring Quarter</th>
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<tbody>
<tr>
<td>MATH 124 – Calculus I</td>
<td>MATH 125 – Calculus II</td>
<td>MATH 126 – Calculus III</td>
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<tr>
<td>CHEM 142 – Chem &amp; Lab I</td>
<td>CHEM 152 – Chem &amp; Lab II</td>
<td>CHEM 162 – Chem &amp; Lab III</td>
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<tr>
<td>BIOEN 215 – Intro to BioE</td>
<td>English Comp.</td>
<td>AMATH 301 -Scientific Computing*</td>
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<td>Problem Solving</td>
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<tbody>
<tr>
<td>BIOL 180 – Intro Biology I</td>
<td>BIOL 200 – Intro Biology II*</td>
<td>BIOL 220 – Intro Biology III</td>
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<td>PHYS 122 – Electro &amp; Lab I*</td>
<td>MATH 308 – Matrix Algebra</td>
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<td>BIOEN 316 – Biomed Signals &amp; Sens</td>
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<td>BIOEN 317 - Biomedical Signals and Sensors Lab</td>
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<td>BIOEN 335 – Biotransport II</td>
<td>BIOEN 345 – Failure Analysis of Human</td>
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<td>BIOEN 326 – Solid and Gel Mech.</td>
<td>BIOEN 336 – BioEn Sys. &amp; Control</td>
<td>Physiology</td>
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<td>Lab</td>
<td>BIOEN Sr. Elective</td>
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*Bold face* courses are required for upper-division admission.

*May be in-progress during quarter of admission

Students planning on attending medical school are encouraged to meet with an advisor to discuss additional requirements.

For more information contact:
Engineering Advising
Office: 301 Loew Hall
Box 352180, Seattle, WA 98195-2180
Phone: (206) 543-1770    Email: engradv@uw.edu

or-
Clay Schwenn and Holly Williams
Bioengineering Advising
Office: Foege Hall, N107
Box 355061, Seattle, WA 98195-5061
Phone: (206) 685-2022    Email: bioeng@uw.edu

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