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<th>First Year (48 credits)</th>
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<th>Second Year (49 credits)</th>
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<th>Third Year (48 credits)</th>
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<th>Fourth Year (47 credits)</th>
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<td>Fall</td>
<td>Winter</td>
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<tr>
<td>General chemistry CH 231 (4FW) CH Lab 261 (1F)</td>
<td>General chemistry CH 232 (4FW) CH Lab 262 (1W)</td>
<td>General chemistry CH 233 (1S)</td>
<td>General chemistry CH 233 (4FW)</td>
<td>Organic chemistry CH 331 (4W)</td>
<td>Organic chemistry CH 332 (3FW)</td>
<td>Transport I CHE 331 (4F)</td>
<td>Transport II CHE 332 (3W)</td>
<td>Transport III CHE 333 (S)</td>
<td>Bioreactors BIOE 457 (3F)</td>
<td>Engineering selection (3)</td>
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<td>Lifetime fitness HHS 231 (2) and HHS 24X or PAC(1) (3FW)</td>
<td>*English composition WR 121 (3FWS)</td>
<td>*Speech communications COMM 111/114 (3FW)</td>
<td>*Material balances CBE 211 (3F)</td>
<td>*Energy balances CBE 212 (3W)</td>
<td>*Energy balances CBE 212 (4FW)</td>
<td>Process analysis CBE 213 (4S)</td>
<td>Professionalism &amp; engr ethics CBE 320 (3F)</td>
<td>Bioengineering process design BIOE 490 (4W)</td>
<td>Perspectives (3)</td>
<td>BIOE selection (3)</td>
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<td>Anatomy &amp; Physiology BI 231 (3F)</td>
<td>Biology selection (2 or 4)</td>
<td>Anatomy &amp; Physiology BI 231 (3S)</td>
<td>Engineering selection (3)</td>
<td>Technical writing WR 327 (3FW)</td>
<td>DPD* (3)</td>
<td>Engineering selection (3)</td>
<td>BIOE 459 (3F)</td>
<td>Bioseparations BIOE 462 (3W)</td>
<td>Synthesis (3)</td>
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**BIOENGINEERING** Numbers in parenthesis are credit hours per class. Blue-highlighted courses are pre-engineering core.

* Required for admission into the Bioengineering Professional Program. We’ll accept the combination of MTH 253 and MTH 341 as equivalent to MTH 306. CBE 211 and CBE 212 are enforced prerequisites for CHE 311 and CHE 331.

^ Satisfies the WC requirement

**BIOE-DPD must be taken with A/F grading. Only Perspective, Synthesis, HHS 231/24*, PAC and FREE can be taken with S/U grading.**

1. **Biology courses from which students may select (one course only)**
   - Anatomy and Physiology Laboratory (BI 241, Fall) 2 credits or Introductory Microbiology (MB 230, FWS) 4 credits

2. **Engineering courses from which students may select (at least 9 credits).**
   - Solar Technologies (CHE 451) 3 credits
   - Chemical thermodynamics (CHE 312) 3 credits
   - Polymer engineering and science (CHE 445) 4 credits
   - Chemical Process Dynamics and Simulation (CHE 361) 3 credits
   - Process control (CHE 461) 3 credits
   - Conventional & Alternative Energy Systems (CHE 499) 3 credits
   - Dynamics (ENGR 212) 3 credits
   - Strengths of materials (ENGR 213) 3 credits
   - Engineering graphics and 3-D modeling (ENGR 248) 3 credits
   - Bioenergy Systems (BEE 499 or 475) 3 credits
   - Biomaterials (BIOE 451) 3 credits
   - Cell Engineering (BIOE 459) 3 cr

3. **Upper division BIOE courses from which students may select (at least 6 credits).** Note that courses used to satisfy this requirement CANNOT be used to satisfy the engineering science selection above.
   - Biomaterials (BIOE 451) 3 credits
   - Cell Engineering (BIOE 459) 3 credits
   - Bioenergy Lab II (CBE 416) 3 credits
   - Fundamentals of environmental engineering (ENVE 322) 4 credits
   - Water and wastewater characterization (ENVE 421) 4 credits
   - Environmental engineering design (ENVE 422) 4 credits
   - Air pollution control (ENVE 425) 3 credits
   - Fate/transport of organic chemicals in environmental systems (ENVE 431) 3 credits
   - Biosystems Analysis & Modeling (BEE 320) 4 credits
   - Bioremediation (BEE 468) 3 credits
   - Bioconjugation (BIOE 499) 3 credits
   - Bioprocess Engineering (BEE 480) 3 credits
   - Surface Analysis (BIOE 499) 3 credits

*See next page/reverse for BIOE-DPD approved courses (must be taken with A/F grading)
Difference, power and discrimination courses from which students may select (at least 3 credits).

Must obtain ‘C’ or better in one of the following classes (cannot be taken for S/U grading):

- Ecosystem science of Pacific NW Indians (AG 301) 3 credits
- Language in the USA (ANTH 251) 3 credits
- Biological and cultural constructions of race (ANTH 345) 3 credits
- Biological and cultural constructions of race (ANTH 345H) 3 credits
- Sociolinguistics (ANTH 451) 3 credits
- The economics of discrimination (ECON 383) 4 credits
- Studies in difference, power, and discrimination (ENG 420) 3 credits
- Survey of Chicano/a-Latino/a studies III (ES 212) 3 credits
- Contemporary Latino/a culture and issues (ES 213) 3 credits
- Las presencia Mexicana en los Estados Unidos (ES 216) 3 credits
- Survey of African American studies I (ES 221) 3 credits
- Survey of African American studies III (ES 223) 3 credits
- Asian American Studies II: Activism & Empowerment (ES 233) 3 credits
- Native American experience in the 20th century U.S. (ES 243) 3 credits
- Ethnic minorities in Oregon (ES 351) 3 credits
- Ethnicity in film (ES 452) 3 credits
- Multicultural perspectives in natural resources (FW 340) 3 credits
- Public health and women: social and policy issues (H 465) 3 credits
- Lesbian and gay movements in modern America (HST 368) 3 credits
- Languages of Oregon (LING 251) 3 credits
- Disease and society (MB 330) 3 credits
- Ethics of diversity (PHL 280) 4 credits
- The body, medicine and culture (PHL 380) 3 credits
- Gender and race in American political thought (PS 363) 4 credits
- The civil rights movement and policies (PS 375) 4 credits
- Sociology of the family (SOC 312) 3 credits
- Sociology of the family (SOC 312H) 3 credits
- Social inequality (SOC 426) 3 credits
- Multicultural American theatre (TA 360) 3 credits
- Purpose, Structure & Function of Education in a Democracy (TCE 216)
- Twentieth century realities: the U.S. (TCS 200) 3 credits
- Systems of oppression in women's lives (WS 414) 3 credits
- Hate, resistance, and reconciliation (WS 420) 3 credits
- Disney: Gender, Race, Empire (WS 325) 3 credits
- Religion in the United States (HST 210) 4 credits
- Introduction to Queer Studies (WGSS 262) 3 credits