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| **General Education Components[[1]](#footnote-1) (15 semester hours)** | | |
| GEC | Courses consistent with career goals | 15 s.h. |
| **Statistics Elective (3 semester hours)**  *(Choose one)* | | |
| STAT:2020  STAT:3510  CBE:3020 | Probability and Statistics for Engineering and Physical Sciences  Biostatistics  Applied Statistics for Chemical and Natural Resources Engineering (offered Spring semester) | 3 s.h.  3.s.h.  3 s.h. |
| **Advanced Chemistry/Science Electives[[2]](#footnote-2) (6 semester hours)** | | |
|  | Advanced Chemistry Course *(Recommended: BIOC:3110)* | 3 s.h. |
|  | Advanced Science Course | 3 s.h. |

**Free Electives (12 semester hours)**

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| **Required Course**  CBE:5210  **Engineering Electives**  CBE:3998  CBE:4215  CBE:5215  CBE:5199 | | Bioseparations  (*offered Spring semester of even years*)  Individual Investigations (*usually research*)  Upstream Biotechnology Processes (*Highly Recommended)[[3]](#footnote-3)*  Advanced Biochemical Engineering (*last offered Sp2013*)  Contemporary Topics (*biochemical eng. topics*) | 3 s.h.  1-3 s.h.  3 s.h.  1-3 s.h. |
| BME:5430  BME:2400  CEE:5154 | | Biotransport (*offered Fall semesters*)  Cell Biology For Engineers[[4]](#footnote-4)  Environmental Microbiology | 3 s.h.  3 s.h.  3 s.h. |
| ENGR:2995 | | Intro to AI and Machine Learning in Engineering | 3 s.h. |
| **Science Electives**  BIOC:3120  BIOC:3130  BIOC:3140  BIOL:1411  BIOL:1412  MICR:2157  MICR:2158  3000-level or higher | | Biochemistry and Molecular Biology I  Biochemistry and Molecular Biology II  Experimental Biochemistry  Foundations of Biology  Diversity of Form and Function  General Microbiology  General Microbiology Laboratory  Advanced Biological Sciences, Biochemistry, Chemistry,  And/or Microbiology courses. | 3 s.h.  3 s.h.  2 s.h.  4 s.h.  4 s.h.  3 s.h.  2 s.h. |
|  |

1. <https://www.engineering.uiowa.edu/current-students/academic-information/general-education-component>. Discuss with your CBE faculty advisor if you have questions about your GEC requirement. [↑](#footnote-ref-1)
2. <https://cbe.engineering.uiowa.edu/undergraduate-program/undergraduate-handbook/chemical-engineering-curriculum#Advanced%20Chemical%20Science%20Electives>. Discuss with your CBE faculty advisor if you have questions about your advanced chemistry/science electives. [↑](#footnote-ref-2)
3. This is a hands on course offered at the Center For Biocatalysis and Bioprocessing that is generally offered during the Winter and Summer sessions over a ~2 week period. [↑](#footnote-ref-3)
4. This course will be listed as BME:2110 in Fall 2018, but will change to BME:2400 in Spring 2019 and thereafter. This course requires BIOL:1411 as a pre-requisite. [↑](#footnote-ref-4)