CHEMICAL ENGINEERING: PRE-MEDICAL, BSCH

Requirements for Students Matriculating in or before Academic Year 2022-2023. Learn more about University Academic Regulation 3.1 (http://catalog.okstate.edu/university-academic-regulations/#matriculation).

Minimum Overall Grade Point Average: 2.00
Total Hours: 131

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ENGL 1113</td>
<td>Composition I</td>
<td>3</td>
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<tr>
<td>or ENGL 1313</td>
<td>Critical Analysis and Writing I</td>
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<tr>
<td>Select one of the following:</td>
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<td>3</td>
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<tr>
<td>ENGL 1213</td>
<td>Composition II</td>
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<tr>
<td>ENGL 1413</td>
<td>Critical Analysis and Writing II</td>
<td></td>
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<tr>
<td>ENGL 3323</td>
<td>Technical Writing</td>
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American History & Government
Select one of the following:
- HIST 1103 Survey of American History
- HIST 1483 American History to 1865 (H)
- HIST 1493 American History Since 1865 (DH)
- POLS 1113 American Government

Analytical & Quantitative Thought (A)
- MATH 2144 Calculus I (A)
- MATH 2153 Calculus II (A)
- MATH 2163 Calculus III

Hours Subtotal 40

Social & Behavioral Sciences (S)
Select 3 hours from any course designated (S) ²

Hours Subtotal 48

Controlled Electives
Advanced Chemical Science
Select three hours from the following:
- BIOL 3023 General Genetics
- or MICR 3033 Cell and Molecular Biology
### CHE 3202
Interdisciplinary Design and Build for Chemical Systems I

### CHE 3211
Interdisciplinary Design and Build for Chemical Systems II

### CHE 4073
Introduction to Tissue Engineering

### CHE 4133
Introduction to Catalysis and Photocatalysis

### CHE 4283
Bioprocess Engineering

### CHE 4293
Biomedical Engineering

### CHE 4323
Electrochemical Engineering

### CHE 4343
Environmental Engineering

### CHE 4493
Introduction to Molecular Modeling and Simulation

### CHE 4523
Introduction to Colloid Processing

### CHE 4533
Colloidal and Interfacial Phenomena

### CHE 4543
Introduction to Chemical Engineering Data Science

### CHE 4603
Introduction to Membrane Separations

### CHE 4753
Introduction to Applied Numerical Computing for Scientists and Engineers

### CHE 4773
Introduction to Computational Fluid-Particle Dynamics

#### Bioengineering/Bioscience Electives
Select 3 hours of the following: 3

<table>
<thead>
<tr>
<th>Course Code</th>
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<tbody>
<tr>
<td>BAE 3113</td>
<td>Biological Applications in Engineering</td>
</tr>
<tr>
<td>BAE 4413</td>
<td>Food Engineering</td>
</tr>
<tr>
<td>BIOC 3223</td>
<td>Physical Chemistry for Biologists</td>
</tr>
<tr>
<td>BIOC 3653</td>
<td>Survey of Biochemistry</td>
</tr>
<tr>
<td>BIOC 3713</td>
<td>Biochemistry I</td>
</tr>
<tr>
<td>BIOC 3723</td>
<td>Biochemistry and Molecular Biology Laboratory</td>
</tr>
<tr>
<td>BIOC 4113</td>
<td>Molecular Biology</td>
</tr>
<tr>
<td>BIOL 3023</td>
<td>General Genetics</td>
</tr>
<tr>
<td>BIOL 3214</td>
<td>Human Anatomy</td>
</tr>
<tr>
<td>CHE 4283</td>
<td>Bioprocess Engineering</td>
</tr>
<tr>
<td>CHE 4293</td>
<td>Biomedical Engineering</td>
</tr>
<tr>
<td>CHE 5283</td>
<td>Advanced Bioprocess Engineering</td>
</tr>
<tr>
<td>CHE 5293</td>
<td>Advanced Biomedical Engineering</td>
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</table>

**Hours Subtotal** 6

**Total Hours** 131

1. Humanities courses - should select one from ENGL and one ART, ENGL, FLL, MUSI, PHIL or TH to also meet medical school requirements.

2. Social & Behavioral Sciences courses – should select from ANTH, PSYC, or SOC to also meet medical school requirements.

### Graduation Requirements

1. A minimum GPA of 2.00 is required in all CHE coursework.

2. Must Receive a "C" or better in the following CHE courses: CHE 2023, CHE 2033, CHE 3013, CHE 3113, CHE 3123, CHE 3333, CHE 3473, and CHE 4002.

3. The major engineering design experience, capstone course, is satisfied by CHE 4124 Chemical Engineering Design I and CHE 4224 Chemical Engineering Design II.

### Additional State/OSU Requirements

- At least: 60 hours at a four-year institution; 30 hours completed at OSU; 15 of the final 30 or 50% of the upper-division hours in the major field completed at OSU.
- Limit of: one-half of major course requirements as transfer work; one-fourth of hours earned by correspondence; 8 transfer correspondence hours.
- Students will be held responsible for degree requirements in effect at the time of matriculation and any changes that are made, so long as these changes do not result in semester credit hours being added or do not delay graduation.
- Degrees that follow this plan must be completed by the end of Summer 2028.