Pre-Med Option

B.S.Ch.E. in Chemical Engineering

Pre-Med Option

Degree Requirements

B.S.Ch.E. in Chemical Engineering

Description

The B.S. in chemical engineering provides the student with a fundamental knowledge of chemical engineering science and prepares graduates for a variety of careers in industry and government, or for advanced study in engineering, business, or professional school.

Minimum Total Credit Hours: 128

Goals/Mission Statement

Program Educational Objectives

Graduates from the Department of Chemical Engineering of the University of Mississippi will be: 1. Globally competitive in the professional world; 2. Prepared for leadership and success in their chosen career or in continued education; 3. Equipped with flexible problem-solving skills to address complex professional and societal issues.

Student Outcomes

In accordance with ABET accreditation requirements, BScHE students at the University of Mississippi should demonstrate the attainment of the following student outcomes: (a) an ability to apply knowledge of mathematics, science, and engineering (b) an ability to design and conduct experiments, as well as to analyze and interpret data (c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability (d) an ability to function on multidisciplinary teams (e) an ability to identify, formulate, and solve engineering problems (f) an understanding of professional and ethical responsibility (g) an ability to communicate effectively (h) the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context (i) a recognition of the need for, and an ability to engage in life-long learning (j) a knowledge of contemporary issues (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

Course Requirements

Specific requirements for the standard option in chemical engineering are as follows:

- Writ 101 and 102;
- Math 261, 262, 263, 264, and 353;
- Chem 105, 106, 115, 116, 221, and 225;
- Phys 211, 212, 221, 222;
- an advanced science (defined below);
- Engr 310, 313, 321, and 322;
- an engineering elective (defined below);
- 12 hours of technical electives of 300 or higher course number from engineering, science, or mathematics;
- 3 hours of fine arts
- 6 hours of humanities from the same department
- 6 hours of social science from the same department
- 3 additional hours of humanities, social science, or a general education course as defined by the School of Engineering with the exception that speech and math content courses may not be used to satisfy any of these required 18 credits.

Any of the following will satisfy the advanced science requirement:

- Engr 340, 540
- Ch E 543, 545, 547
- Geol 314,
- G E 415, 450, 503
- Chem 314, 331, 332, 334, 373, 401, 471, 473
- Phys 315, 317, 318, 319, 321, 401, 402
- Bisc 301, 306, 318, 320, 327, 333, 335

Any of the following will satisfy the engineering elective requirement:

- Engr 309, 330, 340, 360, 573
- C E 471, 472
- M E 534

The following alternative courses may satisfy course requirements as specified:

- Alternatives to Ch E 101: Ch E 103 and Ch E 104, or Engr 100
- Alternative to Engr 313: The combination of Manf 251 and Manf 252
- Alternative to Ch E 452: The combination of Manf 451 and Manf 452
- Alternatives for 300-level technical electives:
  - Chem 222
The University of Mississippi is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award certificates and baccalaureate, master's, specialist, and doctoral degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, call 404-679-4500, or visit online at www.sacscoc.org for questions about the accreditation.

http://catalog.olemiss.edu/2020/spring/undergraduate/engineering/chemical-engineering/bs-chem-eng/bsce-premed
**Requirement** | **Hours** | **Description**
---|---|---
3 hrs fine arts | 3 | Student must successfully complete 3 hours in the fine arts. The course may be chosen from art history, art appreciation, and criticism of art, dance, music, and theatre arts. Courses emphasizing the enhancement of skills and performance are not acceptable.

Serial humanities | 6 | Complete 6 hrs (from the same department) of humanities choosing from course work in classics, literature, history, modern language (from the same language), philosophy, religion, Southern Studies, African American Studies, and Gender Studies.

Serial social science | 6 | Complete 6 hours (from the same department) of social sciences choosing from the following; economics, anthropology, political science, psychology, and sociology. Psy 202 and Econ 203 are excluded from these options.

**Major Requirements**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ch E 101 or 103/104 or Engr 100</td>
<td>2</td>
<td>Complete Ch E 101 or Ch E 103/104 or Engr 100 with a passing grade.</td>
</tr>
<tr>
<td>Ch E 251</td>
<td>3</td>
<td>Complete Ch E 251 with a passing grade.</td>
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<tr>
<td>Ch E 307</td>
<td>2</td>
<td>Complete Ch E 307 with a passing grade.</td>
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<tr>
<td>Ch E 308</td>
<td>2</td>
<td>Complete Ch E 308 with a passing grade.</td>
</tr>
<tr>
<td>Ch E 317</td>
<td>3</td>
<td>Complete Ch E 317 with a passing grade.</td>
</tr>
<tr>
<td>Ch E 345</td>
<td>3</td>
<td>Complete Ch E 345 with a passing grade.</td>
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<tr>
<td>Ch E 411</td>
<td>1</td>
<td>Complete Ch E 411 with a passing grade.</td>
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<tr>
<td>Ch E 412</td>
<td>3</td>
<td>Complete Ch E 412 with a passing grade.</td>
</tr>
<tr>
<td>Ch E 417</td>
<td>3</td>
<td>Complete Ch E 417 with a passing grade.</td>
</tr>
<tr>
<td>Ch E 421</td>
<td>3</td>
<td>Complete Ch E 421 with a passing grade.</td>
</tr>
<tr>
<td>Ch E 423</td>
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<td>Complete Ch E 423 with a passing grade.</td>
</tr>
<tr>
<td>Ch E 445</td>
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<td>Complete Ch E 445 with a passing grade.</td>
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<tr>
<td>Ch E 446</td>
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<td>Complete Ch E 446 with a passing grade.</td>
</tr>
<tr>
<td>Ch E 451</td>
<td>4</td>
<td>Complete Ch E 451 with a passing grade.</td>
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<tr>
<td>Ch E 452</td>
<td>3</td>
<td>Complete Ch E 452 with a passing grade.</td>
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</table>

Enroll in a BSChE emphasis

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**Major Requirements II**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
<th>Description</th>
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<tbody>
<tr>
<td>Chem 225</td>
<td>1</td>
<td>Complete Chem 225 with a passing grade.</td>
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<tr>
<td>Chem 221</td>
<td>3</td>
<td>Complete Chem 221 with a passing grade.</td>
</tr>
<tr>
<td>Engr 310</td>
<td>3</td>
<td>Complete Engr 310 with a passing grade.</td>
</tr>
<tr>
<td>Engr 313 or Manf 251/252</td>
<td>3</td>
<td>Complete Engr 313 or Manf 251/252 with a passing grade.</td>
</tr>
<tr>
<td>Engr 321</td>
<td>3</td>
<td>Complete Engr 321 with a passing grade.</td>
</tr>
<tr>
<td>Engr 322</td>
<td>3</td>
<td>Complete Engr 322 with a passing grade.</td>
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</table>

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<thead>
<tr>
<th>Requirement</th>
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<th>Description</th>
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<tbody>
<tr>
<td>Bisc 160</td>
<td>3</td>
<td>Complete Bisc 160 with a passing grade.</td>
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<tr>
<td>Bisc 161</td>
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<td>Complete Bisc 161 with a passing grade.</td>
</tr>
<tr>
<td>Bisc 162</td>
<td>3</td>
<td>Complete Bisc 162 with a passing grade.</td>
</tr>
<tr>
<td>Bisc 163</td>
<td>1</td>
<td>Complete Bisc 163 with a passing grade.</td>
</tr>
<tr>
<td>Chem 222</td>
<td>3</td>
<td>Complete Chem 222 with a passing grade.</td>
</tr>
<tr>
<td>Chem 226</td>
<td>1</td>
<td>Complete Chem 226 with a passing grade.</td>
</tr>
<tr>
<td>REQUIREMENT</td>
<td>HOURS</td>
<td>DESCRIPTION</td>
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<tr>
<td>Chem 471</td>
<td>3</td>
<td>Complete Chem 471 with a passing grade.</td>
</tr>
<tr>
<td>3 hrs Engineering elective</td>
<td>3</td>
<td>Complete one of the following engineering technical electives: Engr 309, Engr 330, Engr 340, Engr 360, Engr 573, CE 471, CE 472, or ME 534.</td>
</tr>
<tr>
<td>2 Bisc 300+ electives</td>
<td>6</td>
<td>Complete two Bisc courses at the 300-level or higher with a passing grade.</td>
</tr>
<tr>
<td>Math 115, 375 or Bisc 300</td>
<td>3</td>
<td>Complete 3 hrs chosen from Math 115, 375, or Bisc 300.</td>
</tr>
<tr>
<td>3 hrs addl hum/soc sci/gen ed</td>
<td>3</td>
<td>Complete an additional 3 credit hours in humanities, social sciences or approved general education courses with a passing grade.</td>
</tr>
</tbody>
</table>