

Credit hours required for graduation: 123

FRESHMAN YEAR
FALL SEMESTER

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|--------------------------|--|----|
| CBE 101 | Introduction to Chemical Engineering and Biological Engineering ⁽¹⁾ | 1 |
| CHEM 121 (or 131) | General Chemistry I ⁽¹⁾ (or Principles of Chemistry) | 3 |
| CHEM 123L | General Chemistry I Laboratory ⁽¹⁾ | 1 |
| ENGL 110 (or 112 or 113) | Accelerated Composition ⁽¹⁾ (or Composition II or Enhanced Composition) | 3 |
| MATH 162 | Calculus I ⁽¹⁾ | 4 |
| | Core Humanities Elective ⁽²⁾ | 3 |
| Total Semester Hours: | | 15 |

SPRING SEMESTER

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| CHEM 122 (or 132) | General Chemistry II ⁽¹⁾ (or Principles of Chemistry) | 3 |
| CHEM 124L | General Chemistry II Laboratory ⁽¹⁾ | 1 |
| ENGL 120 | Composition III | 3 |
| MATH 163 | Calculus II ⁽¹⁾ | 4 |
| PHYC 160 | General Physics ⁽¹⁾ | 3 |
| | Core Social and Behavioral Science Elective ⁽²⁾ | 3 |
| Total Semester Hours: | | 17 |

SOPHOMORE YEAR
FALL SEMESTER

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| CBE 251 | Chemical Process Calculations ⁽³⁾ | 3 |
| CHEM 301 | Organic Chemistry | 3 |
| CHEM 303L | Organic Chemistry Laboratory | 1 |
| MATH 264 | Calculus III | 4 |
| PHYC 161 | General Physics | 3 |
| Total Semester Hours: | | 14 |

SPRING SEMESTER

| | | |
|-----------------------|--|----|
| CBE 253 | Chemical & Biological Engineering Computing ⁽³⁾ | 3 |
| CBE 302 | Chemical Engineering Thermodynamics ⁽³⁾ | 3 |
| ECON 105 | Introductory Macroeconomics | 3 |
| MATH 316 | Applied Ordinary Differential Equations | 3 |
| | Core Second Language Elective ⁽²⁾ | 3 |
| Total Semester Hours: | | 15 |

JUNIOR YEAR⁽⁴⁾
FALL SEMESTER

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| CBE 311 | Introduction to Transport Phenomena ⁽³⁾ | 3 |
| CBE 317 | Numerical Methods for Chemical and Biological Engineering ⁽³⁾ | 2 |
| CBE 318L | Chemical Engineering Laboratory I ⁽³⁾ | 1 |
| CBE 361 | Biomolecular Engineering ⁽³⁾ | 3 |
| ENGL 219 | Technical and Professional Writing | 3 |
| CHEM 311 | Physical Chemistry | 3 |
| Total Semester Hours: | | 15 |

SPRING SEMESTER

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| CBE 312 | Unit Operations ⁽³⁾ | 3 |
| CBE 321 | Mass Transfer ⁽³⁾ | 3 |
| CBE 319L | Chemical Engineering Laboratory II ⁽³⁾ | 1 |
| CBE 371 | Introduction to Materials Engineering ⁽³⁾ | 3 |
| ENG 301 | Fundamentals of Engineering: Dynamics | 1 |
| ENG 302 | Fundamentals of Engineering: Electronic Circuits | 1 |
| CHEM 312 | Physical Chemistry | 3 |
| Total Semester Hours: | | 15 |

SENIOR YEAR⁽⁵⁾
FALL SEMESTER

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|-----------------------|--|----|
| CBE 418L | Chemical Engineering Laboratory III ⁽³⁾ | 1 |
| CBE 454 | Process Dynamic and Control ⁽³⁾ | 3 |
| CBE 461 | Chemical Reactor Engineering ⁽³⁾ | 3 |
| CBE 486 | Introduction to Statistics and Design of Experiments ⁽³⁾ | 2 |
| CBE 493L | Chemical Engineering Design ⁽³⁾ | 3 |
| CHEM 431, 471 or 471 | Advanced Inorganic Chemistry, Adv T: Polymer Science, or Adv T: Chemistry and Physics at the Nanoscale | 3 |
| Total Semester Hours: | | 15 |

SPRING SEMESTER

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|-----------------------|---|----|
| CBE 419L | Chemical Engineering Laboratory IV ⁽³⁾ | 1 |
| CBE 451 | Senior Seminar ⁽³⁾ | 1 |
| CBE 494L | Advanced Chemical Engineering Design ⁽³⁾ | 3 |
| | Technical Elective ⁽⁶⁾ | 3 |
| | Technical Elective - Engineering ⁽⁶⁾ | 3 |
| | Core Fine Arts Elective ⁽²⁾ | 3 |
| | Core Humanities Elective ⁽²⁾ | 3 |
| Total Semester Hours: | | 17 |

(1) Admission to the BSChE degree program requires completion of all math, science, and engineering courses listed in the freshman year with a grade of "C" or better and a minimum 2.5 GPA average in those courses, completion of ENGL 110 or the equivalent with a "C" or better, and a minimum UNM cumulative GPA of a 2.20.

(2) A list of acceptable core humanities, social/behavioral science, fine arts and second language electives can be found here: <http://unmcore.unm.edu/>. These courses may be taken whenever convenient. A grade of "C" or better is required.

(3) CBE Core Courses must be taken in the order and semester in which they are listed on this sheet in order to avoid a delay in graduation. A grade of "C-" or better is required.

(4) Students must file an application for the B.S.Ch.E. degree prior to the completion of 95 credit hours of applicable courses.

(5) Students are encouraged to take the Fundamentals of Engineering (FE) Examination during their senior year. This is the first formal step toward professional registration.

(6) Technical electives are chosen with the consultation of the student's faculty advisor to ensure that they support the student individual academic, career, and/or research goals. A list of approved technical electives can be found on the CBE website: <http://cbe.unm.edu/students/cbe-student-forms.html>