# A Suggested Course Plan for: Chemical (Petroleum)

## First Year

### Fall Semester
- **GE A**
- **WRIT 150**
- **MATH 125** (GE F)
- **CHEM 105aL** (GE E)
- **ENGR 102**

### Spring Semester
- **CHE 120** (MATH 125, CHEM 105aL)
- **CHE 205**
- **MATH 126** or **MATH 129**
- **CHEM 105bL** (GE E)
- **PHYS 151L** (GE E)

## Second Year

### Fall Semester
- **CHEM 330**
- **CHEM 322aL**
- **MATH 226** or **MATH 229**
- **PHYS 152L**
- **WRIT 340**

### Spring Semester
- **GE B**
- **CHEM 300L**
- **MATH 245**
- **CHE 350**
- **CHE 476**

## Third Year

### Fall Semester
- **CHEM 430a**
- **CHE 405**
- **CHE 442**
- **PTE 461**
- **PTE 463L**

### Spring Semester
- **GE B**
- **CHE 444aL**
- **PTE 464L**
- **CHE 443**
- **CHEMISTRY ELECTIVE**

## Fourth Year

### Fall Semester
- **GE D**
- **CHE 444bL**
- **CHE 445**
- **CHE 485**
- **PTE 465L**

### Spring Semester
- **GE C**
- **CHE 446**
- **CHE 460L**
- **CHE 480**
- **CHEMISTRY ELECTIVE**

### Mathematics (16 Units)
- **MATH 125**: Calculus I
- **MATH 126** or **MATH 129**: Calculus II
- **MATH 226** or **MATH 229**: Calculus III
- **MATH 245**: Mathematics of Phys. and Engr.

### Physics (8 Units)
- **PHYS 151L**: Mechanics and Thermodynamics
- **PHYS 152L**: Electricity and Magnetism

### Chemistry (24 Units)
- **CHEM 105AL**: General Chemistry
- **CHEM 105BL**: General Chemistry
- **CHEM 300L**: Analytical Chemistry
- **CHEM 322AL**: Organic Chemistry
- **CHEM 430A**: Physical Chemistry I
- **CHEMISTRY ELECTIVE**: CHEM 322bL or 430b

### General Education (32 Units)
- **GE A** The Arts (1 Course)
- **GE B** Humanistic Inquiry (2 Courses)
- **GE C** Social Analysis (2 Courses)
- **GE D** Life Sciences (1 Course)
- **GE E** Physical Sciences (1 Course)
- **GE F** Quantitative Reasoning (1 Course)
- **GE G, H** Global Perspectives (2 Courses)*
- **GESM** General Education Seminar (1 Course)*

### Writing (7 Units)
- **WRIT 150**: Writing and Critical Reasoning
- **WRIT 340**: Advanced Writing

### Engineering (60 Units)
- **CHE 120**: Intro. to Chemical Engineering
- **CHE 205**: Numerical Methods in Chemical Engineering
- **CHE 330**: Chemical Engr. Thermodynamics
- **CHE 350**: Intro. to Separation Processes
- **CHE 405**: Probability and Statistics for CHE
- **CHE 442**: Chemical Reactor Analysis
- **CHE 443**: Viscous Flow
- **CHE 444A**: Chemical Engineering Lab
- **CHE 444B**: Chemical Engineering Lab
- **CHE 445**: Heat Transfer in CHE Processes
- **CHE 446**: Mass Transfer in CHE Processes
- **CHE 460L**: Chemical Process Dynamics
- **CHE 476**: Chemical Engineering Materials
- **CHE 480**: Chem. Process and Plant Design
- **CHE 485**: Computer Aided Process Design
- **ENGR 102**: Engineering Freshman Academy
- **ISE 460**: Engineering Economy
- **BUAD 301**: Technical Entrepreneurship

### Optional Electives:
- **CHEMISTRY ELECTIVE**: Consult with your academic advisor to explore optional elective courses. These courses are not required.

### Special Notes
- Courses with this symbol may be satisfied with AP, IB or A-Level exams. See page 17 for more information.

- GE: Engineering students are encouraged to satisfy GE G and GE H with a course that also satisfies a Core Literacy. GE H may be satisfied by exam. Additionally, your GESM course should be taken in categories A, B, C, or D only. See pp. 16-17 for more information and consult your advisor for detailed assistance.

- Optional Electives: Consult with your academic advisor to explore optional elective courses. These courses are not required.