# Engineering (Chemical)

<table>
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<tr>
<th>NAME</th>
<th>I.D.#</th>
<th>Expected Grad Date</th>
<th>Degree</th>
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## General Education Requirements

- **3** THEO 110 Intro to Christianity  
- **3** BLIT 210 Christian Scriptures  
- **3** CMIN 310 Christian Living  
- **3** Approved Stewardship Course*  
- **3** ENGL 109 College Writing I  
- **3** COMM 105 Fundamentals of Communication  
- **3** HIST 200 Western Civilization  
- **3** Approved Social Science Course*  
- **6** Approved Humanities Courses*  
  - Select 3 hours from two different areas:  
    - Fine Arts, Literature, Philosophy, Modern Languages  
    - Elementary Foreign Language I and II OR Approved International Culture course*  
- **3-4** BIOL 201 or approved biological science course*  

*See [olivet.edu/registrar](http://olivet.edu/registrar) for approved list of courses

## Required Supporting Courses:

- **4** CHEM 103 General Chemistry I  
- **4** CHEM 104 General Chemistry II  
- **4** MATH 147 Calculus I  
- **4** MATH 148 Calculus II  
- **4** MATH 261 Calculus III  
- **3** MATH 357 Differential Equations  
- **4** PHYS 201 General Physics I  
- **4** PHYS 202 General Physics II

## Major: 58-60 hours – 2.000 required in major

- **3** ENGR 101 Engineering Design I  
- **3** ENGR 401 Senior Design Project I/Tech Comm  
- **2** ENGR 402 Senior Design Project II/Exprmt Dsgn  
- **3** ENGR 403 Engineering Economics

*PLUS completion of the following concentration:

### A. Chemical Concentration

- **5** CHEM 311 Organic Chemistry I  
- **5** CHEM 312 Organic Chemistry II  
- **3** ENGR 102 Engineering Design II  
- **3** ENGR 107 Computational Engineering OR COMP 150 Programming: Control Structures  
- **4** ENGR 212 Engineering Mechanics OR  
  - **3** ENGR 213 Statics and  
    - **3** ENGR 215 Dynamics OR  
    - **3** ENGR 216 Mechanics of Materials  
- **3** ENGR 220 Electrical Circuits & Systems  
- **4** ENGR 323 Automatic Controls  
- **4** ENGR 361 Material and Energy Balances  
- **4** ENGR 362 Chemical Engineering Thermodynamics  
- **4** ENGR 363 Transport Phenomena  
- **3** ENGR 461 Mass Transfer & Staging Operations  
- **3** ENGR 462 Kinetics & Reactor Design

**All required Engineering and supporting Math and Science courses must be completed with a grade of C or better to be eligible for graduation.**