### Requirements Effective Fall 2023
Min. Grad. Req: 120 Hrs, 30 UD Hrs., 2.0 GPA Institutional & Cumulative

**CHEMISTRY**

<table>
<thead>
<tr>
<th>NAME</th>
<th>I.D.#</th>
<th>Expected Grad Date</th>
<th>B.S. Degree</th>
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#### General Education Requirements
- 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]
- ENGL 207 College Writing II (CSE) [3]
- COMM 105 Fundamentals of Communication [3]
- HIST 200 Western Civilization [3]
- Approved Social Science Course* [3]
- Approved Humanities Courses* [6]
  - Select 3 hours from two different areas:
    - Fine Arts, Literature, Philosophy, SPAN 212 [3-8]
  - Elementary Foreign Language I and II (FREN 101 & 102 or SPAN 111 & 112) OR Approved International Culture course* [3-
- *See [olivet.edu/registrar](http://olivet.edu/registrar) for approved list of courses

#### Major: 32-59 hours – 2.000 required in major
- BIOL 125 Biology I [4]
- CHEM 103 General Chemistry I [4]
- CHEM 104 General Chemistry II [4]
- CHEM 301 Quantitative Analysis [4]
- CHEM 311 Organic Chemistry I [5]
- CHEM 312 Organic Chemistry II [5]
- CHEM 482 Physical Chemistry Survey [4]
- CHEM 495 Chemistry Seminar (taken each year) [1-2]
- CHEM 498 Research in Chemistry [1-4]

**A. GENERAL CONCENTRATION**
- CHEM 320 Inorganic Chemistry [3]
- CHEM 335 Biochemistry [4]
- CHEM 410 Instrumental Analysis [4]
- CHEM 493 Advanced Physical Chemistry [4]

**Required Supporting Courses:**
- MATH 147 Calculus I [4]
- MATH 148 Calculus II [4]
- MATH 261 Calculus III [4]
- MATH 241 Statistics [3-4]
  - MATH 351 Linear Algebra OR MATH 357 Differential Equations [3-4]
- PHYS 201 General Physics I [4]
- PHYS 202 General Physics II [4]

**B. BIOCHEMISTRY CONCENTRATION**
- BIOL 319 Genetics [4]
- BIOL 484 Molecular and Cell Biology [4]
- CHEM 335 Biochemistry [4]
- CHEM 436 Advanced Biochemistry [4]

**And one of the following:**
- BIOL 356 Microbiology [4]
- CHEM 410 Instrumental Analysis OR CHEM 493 Advanced Physical Chemistry [4]

**Required Supporting Courses:**
- MATH 147 Calculus I [4]
- MATH 241 Statistics [4]
- One Year of Physics [8]

**Recommended Supporting Course:**
- MATH 148 Calculus II [4]

**C. FORENSICS CONCENTRATION**
- BIOL 380 Toxicology [4]
- CHEM 335 Biochemistry [4]
- CHEM 340 Drug Chemistry [3]
- CHEM 410 Instrumental Analysis [4]

**Required Supporting Courses:**
- CJUS 243 Intro to Criminal Justice [3]
- CJUS 343 Criminal Law [3]
- CJUS 360 Criminal Procedure [3]
- CJUS 410 Crime Scene Investigation [3]
- MATH 147 Calculus I [4]
- MATH 241 Statistics [4]
- PHYS 201 General Physics I [4]
- PHYS 202 General Physics II [4]

**Recommended Supporting Course:**
- MATH 148 Calculus II [4]

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*See reverse for additional requirements*
D. EARTH & ENVIRONMENTAL CHEMISTRY CONC.

3  CHEM 320 Inorganic Chemistry
4  CHEM 410 Instrumental Analysis
4  ESS 105 Dynamic Earth
4  ESS 302 Mineral Science
4  ESS 385 Earth & Environmental Chemistry

Choose 2 of the following:
3  ESS 109 Earth’s Oceans & Atmosphere
3  ESS 332 Water Resource Issues
3  Au Sable Institute: CHEM 332 (Env. Chem)

Required Supporting Courses:
4  MATH 147 Calculus I
4  MATH 241 Statistics
8  One Year of Physics

Recommended Supporting Courses:
4  BIOL 380 Toxicology
0.5  ENVI 395 Env. Seminar: Env. Law