

B.A. Degree Major Requirements: 46-47 units

A. General Track

Required Lower-Division Courses: 25-26 units

CHM 005, 006 General Chemistry I, II (4,4)

MA 009, 010 Elementary Calculus I, II (4,4)

One of the following combinations (9-10)

PHY 011, 013 Physics for Life Sciences I, II (4,4)

PHY 014 Physics for Life Sciences Laboratory (1)

OR

PHY 021, 023 General Physics I, II (4,4)

PHY 022, 024 General Physics Laboratory I, II (1,1)

Required Upper-Division Courses: 21 units

CHM 101, 102 Organic Chemistry I, II (4,4)

CHM 121 Introductory Analytical Chemistry (3)

CHM 195 Seminar (2)

One of the following combinations: (4)

CHM 130 Physical Chemistry I (3)

CHM 132 Physical Chemistry Laboratory I (1)

OR

CHM 135 Introductory Physical Chemistry (3)

CHM 132 or 133 Physical Chemistry Laboratory I or II (1)

Upper-Division CHM Elective (4)

A four-year Fast-Track plan is available using this track that allows a student to receive a B.A. degree and a secondary teaching credential in chemistry. See the department chair or the education department for details.

B. Chemical Engineering 3-2/3-3 Program Track

Required Lower-Division Courses: 34 units

CHM 005, 006 General Chemistry I, II (4,4)

MA 009, 010 Elementary Calculus I, II (4,4)

MA 019 Multivariable Calculus (4)

PHY 021, 023 General Physics I, II (4,4)

PHY 022, 024 General Physics Laboratory I, II (1,1)

PHY 040 Differential Equations (4)

~~22~~

Required Upper-Division Courses: ~~21~~ units

CHM 101, 102 Organic Chemistry I, II (4,4)

CHM 121 Introductory Analytical Chemistry (3) ~~(4)~~

CHM 122 Advanced Analytical Chemistry (2)

CHM 125 Analog and Digital Instrumental Analysis (4)

CHM 130 Physical Chemistry I (3)

CHM 132 Physical Chemistry Laboratory I (1)

Highly Recommended Courses:

- MA 020 Linear Algebra (4)
 CS 010 Introduction to Computer Science I (4)

Requirements for a Minor: 20 units**Required Lower-Division Courses: 8 units**

- CHM 005, 006 General Chemistry I, II (4,4)

Required Upper-Division Courses: 12 units

- CHM 101, 102 Organic Chemistry I, II (4,4)
Upper-Division CHM Elective (4)

Preparation for Teaching Chemistry at the Secondary Level

Students wishing to teach at the high school or junior high level should complete the requirements for a B.A. major, following the general track. In order to complete a fifth-year Credential Program at Westmont, students should also complete four or more of the following (minimum of 12 units) prior to applying to the program.

- KNS 156 Health Education for the Classroom Teacher (2)
 ENG 106 Language Acquisition (4)
 ED 101 Explorations in Teaching: Secondary (4)
 ED 105 Perspectives on Cultural Diversity and Education (4)
 ED 130 Special Education for the Classroom Teacher (2)
 ED 161 Computers for the Classroom Teacher: Secondary (2)

In many cases, it is possible to complete requirements for the major and the Westmont Credential Program in four years. Such a “fast-track” schedule requires early planning, ideally beginning in the first year. Students wishing to complete such a program should refer to more specific advising materials available on the department web-page.

All students wishing to explore secondary teaching are also strongly encouraged to consult with faculty advisors in the Department of Education as early in their undergraduate program as possible, in addition to their major advisor.

Lower-Division Course Descriptions

CHM 001 Introductory General Chemistry (4) Three lectures and one four-hour laboratory per week. The periodic table, atomic structure, and other fundamentals of chemistry, including laboratory.