**Curriculum for the B.S. degree in Chemistry with ACS certification**

### Introductory Chemistry Courses

**9 credits**
- CHY 105 (1 cr) Majoring in Chemistry
- CHY 121 (3 cr)/CHY 123 (1 cr) Introduction to Chemistry with lab
- CHY 122 (3 cr)/CHY 124 (1 cr) Molecular Basis for Chemical Change with lab

### Foundation Chemistry Course Work

**25 credits**
- CHY 242 (5 cr) Principles of Quantitative Analysis
- CHY 251 (3cr)/CHY 253 (2 cr) Organic Chemistry I with lab
- CHY 252 (3 cr)/CHY 254 (2 cr) Organic Chemistry II with lab
- CHY 298 (1 cr) Introduction to Research
- CHY 431 (3 cr) Structure and Mechanism in Biological Chemistry
- CHY 461 (3 cr) Advanced Inorganic Chemistry
- CHY 471 (3 cr) Physical Chemistry I

### In Depth Chemistry Courses

**21-22 credits**
- CHY 393 (3 cr) Undergraduate Seminar in Chemistry
- CHY 475 (3 cr) Physical Chemistry III
- CHY 491 (3 cr) Advanced Integrated Lab
- CHY 498 (3 cr) Undergraduate Research
- CHY 499 (3 cr) Undergraduate Thesis

Plus **two** chemistry electives chosen from:
- CHY 423 (3 cr) Introductory Polymer Chemistry
- CHY 443 (3 cr) Instrumental Analysis
- CHY 450 (3 cr) Introduction to Molecular Modeling
- CHY 453 (4 cr) Intermediate Organic Chemistry with lab
- CHY 462 (3 cr) Organometallic Chemistry
- CHY 472 (3 cr) Physical Chemistry II
- CHY 477 (3 cr) Nanoscience
- CHY 483 (3 cr) Introductory Wood Chemistry

(500 level courses may be taken with permission)

### Cognate Courses

**30 credits**
- PHY 111 or PHY 121 (4 cr) Physics I
- PHY 112 or PHY 122 (4 cr) Physics II
- MAT 126 (4 cr) Calculus I
- MAT 127 (4 cr) Calculus II
- MAT 228 (4 cr) Calculus III
- MAT 258 (4 cr) Differential Equations
- COS 125, 211, 215 or 220 (3 cr) Computer Programming
- CMJ 102, 103, or 106 (3 cr) Speech Communication

### Electives: 35 credits
(used to fulfill the remainder of the general education requirements as necessary)

**Total Credits = 120**

Chemistry is a good major to combine with specialized interests in sub-disciplines such as medicine, pharmacy, education, environmental chemistry, nanotechnology, or business. For Concentrations or Tracks in a specialized field: choose 18 credits from a list of approved courses in a sub-discipline.

For students planning to go to graduate school in chemistry: it is recommended that students take additional upper level courses in chemistry, including graduate (500-level) courses.