Bachelor of Science in Chemistry - ACS Certified Option

Requirements (108 units)

Total units required for graduation: 180

Requirements for the B.S. in Chemistry - ACS Certified Option (Program Code: CACS)

Lower-division requirements (48)

- **BIOL 200** Biology of the Cell 5
- **CHEM 215** General Chemistry I: Atomic Structure and Chemical Bonding 6
- **CHEM 216** General Chemistry II: Principles of Chemical Reactions 6
- **MATH 211** Basic Concepts of Calculus 4
- **MATH 212** Calculus II 4
- **MATH 213** Calculus III 4
- **MATH 251** Multivariable Calculus I 4
- **PHYS 221** General Physics I 5
- **PHYS 222** General Physics II 5
- **PHYS 223** General Physics III 5

Upper-division requirements (56)

- **CHEM 321** Principles of Organic Chemistry I 5
- **CHEM 322** Principles of Organic Chemistry II 5
- **CHEM 323** Principles of Organic Chemistry III 5

Note: Subject to departmental approval the organic chemistry requirement may be met with the following:

- **CHEM 221A** Organic Chemistry I Lecture
- **CHEM 221B** Organic Chemistry I Lab
- **CHEM 222A** Organic Chemistry II Lecture
- **CHEM 222B** Organic Chemistry II Lab
- **CHEM 223A** Organic Chemistry III Lecture
- **CHEM 223B** Organic Chemistry III Lab
- **CHEM 421** Intermediate Organic Chemistry
- **CHEM 345** Modern Quantitative Analysis 5
- **CHEM 436A** Biochemistry I 4
- **CHEM 436B** Biochemistry I 1
- **CHEM 455** Physical Chemistry I 5
- **CHEM 456** Physical Chemistry II 5
- **CHEM 475** Inorganic Chemistry 5
- **CHEM 545** Instrumental Analysis 6
- **CHEM 576** Chemistry of the Elements 4
- **CHEM 590A** Chemistry Seminar I 1
- **CHEM 590B** Chemistry Seminar II 1

Four additional upper-division units in chemistry. 4

Additional Requirements (4)

Applied mathematics. Four units chosen from:

- **MATH 252** Multivariable Calculus II
- **MATH 270** Elementary Differential Equations
- **MATH 331** Linear Algebra
- **CHEM 599** Undergraduate Comprehensive Examination (covering the major field of study, to be taken during the senior year.) 0

Total Units 108