Curriculum for the B.S. degree in Chemistry

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 (3 cr)/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  
(12 credits)  
CHY 393 (3 cr) Undergraduate Seminar in Chemistry  
CHY 491 (3 cr) Advanced Integrated Lab  
CHY 498 (3 cr) Undergraduate Research  
CHY 499 (3 cr) Undergraduate Thesis

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  
COS 125, 211, 215 or 220 (3 cr) Computer Programming or MAT 232 (3 cr) Principles of Statistical Inference  
CMJ 102, 103, or 106 (3 cr) Speech Communication

Chemistry is an excellent major to combine with other fields such as medicine, pharmacy, education, art, environmental science, law, nanotechnology, or business. The B.S. degree allows flexibility in the schedule so that students have time for the necessary courses in another field.

For students planning to go to graduate school in chemistry or closely related field, it is recommended that additional upper level courses in chemistry be taken. Possible courses include:

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 475 (3 cr) Physical Chemistry III  
CHY 477 (3 cr) Nanoscience  
CHY 483 (3 cr) Introductory Wood Chemistry  
(500 level courses may be taken with permission)

Electives: 44 credits (used to gain significant background in another field and to fulfill the remaining general education requirements as necessary)

Total Credits = 120