Curriculum for the B.S. degree in Chemistry with a Concentration in Pre-Pharmacy

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

Foundational 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
(26 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
CMJ 102, 103 or 106 (3 cr) Fundamentals of Public Communication

Concentration in Pre-Pharmacy:
(31 credits)
BIO 100 (4 cr) Basic Biology with lab
BIO 200 (4 cr) Biology of Organisms with lab
BMB 300 (3 cr)/BMB 315 (1 cr) General Microbiology with lab
BIO 208 (4 cr) Anatomy and Physiology with lab
BIO 377 (3 cr)/BIO 378 (2 cr) Medical Physiology with lab
BMB 322 (3 cr)/BMB 323 (1 cr) Biochemistry with lab
MAT 232 (3 cr) Principles of Statistical Inference
PSY 100 (3 cr) General Psychology

Electives: 17 credits (used to fulfill the remainder of the general education/Honors and specific pharmacy school requirements as necessary).

Recommended Electives:
ENG XXX (3 cr) English Elective
NUR 303 (3) Pathophysiology
SOC 101 (3 cr) Introduction to Sociology
ECO 120 or 121 (3 cr) Principles of Microeconomics or Principles of Macroeconomics
POS XXX or HTY XXX (3 cr) Political Science or History Elective
PSY 3XX or SOC.3XX (3 cr) Psychology or Sociology Elective
Humanities or Social Science Elective (3 cr)

Total Credits = 120

Students can earn a BS degree in Chemistry certified by the American Chemical Society by selecting three additional advanced chemistry courses and one semester of differential equations.