

# Chemistry - Science with Chemistry Concentration

## Associate in Science

*Minimum of 61 Credits*

Chemistry students probe molecular structure to understand atoms and how they come together to form various substances. Students learn how to determine which elements are present in materials and how to alter their structures through chemical changes. Courses cover topics such as atomic structure, structure and bonding, electrochemistry, thermodynamics, radioactivity, and synthesis. An associate degree in science with a chemistry concentration gives a student the solid academic foundation needed to continue studying at a four-year college or university. After graduation, career opportunities can be found in education, pharmacology, petroleum analysis, research, patent development, substance analysis, geology, medicine, nutrition and other industries.

Course #	Course Name	Credits	Type	Prerequisites
<i>Suggested Freshman 1st Semester</i>				
SCL 1001	SUCCESS IN COLLEGE AND LIFE	1	Life Skills	None
ENGL 1113	ENGLISH COMPOSITION I	3	Gen Ed	(R) (W), Adequate reading and writing assessment scores or LS 0033 College Writing II, either taken within the last year, with strong encouragement for immediate continuation.
CHEM 1115	(C) GENERAL CHEMISTRY I	5	Major	(R) (W), MATH 1513 or MATH 1533 or both MATH 0123 and High School Chemistry or CHEM 0123 or CHEM 1123
MATH 1513	COLLEGE ALGEBRA --OR--		Gen Ed	(R), MATH 0123 or adequate Math Placement Test Score, either within the last year.
MATH 1533	PRE-CALCULUS AND ANALYTIC GEOMETRY --OR--		Gen Ed	(R) (W), MATH 0123, or adequate Math Placement Test Score, either within the last year.
MATH 1613	TRIGONOMETRY --OR--		Gen Ed	Pre or Corequisite: (R), MATH 1513 or MATH 1533 or adequate Math Placement Test Score
MATH 1743	CALCULUS I FOR BUSINESS, LIFE SCIENCES, AND SOCIAL SCIENCES --OR--		Gen Ed	(R), MATH 1513 or adequate Math Placement Test Score
MATH 2104	CALCULUS AND ANALYTIC GEOMETRY I	3-4	Gen Ed	(R) (W), MATH 1533 and MATH 1613 or adequate Math Placement Test Score
BIO	BIOLOGICAL SCIENCE	3-4	Gen Ed	
<i>Suggested Freshman 2nd Semester</i>				
ENGL 1213	ENGLISH COMPOSITION II	3	Gen Ed	(R) (W), ENGL 1113 English Composition I taken within the last year, with strong encouragement for immediate continuation.
MATH 1613	TRIGONOMETRY --OR--		Gen Ed	Pre or Corequisite: (R), MATH 1513 or MATH 1533 or adequate Math Placement Test Score
MATH 1743	* CALCULUS I FOR BUSINESS, LIFE SCIENCES, AND SOCIAL SCIENCES --OR--		Gen Ed	(R), MATH 1513 or adequate Math Placement Test Score
MATH 2104	CALCULUS AND ANALYTIC GEOMETRY I --OR--		Gen Ed	(R) (W), MATH 1533 and MATH 1613 or adequate Math Placement Test Score
MATH 2214	CALCULUS AND ANALYTIC GEOMETRY II	3-4	Gen Ed	(R) (W), MATH 2104 or equivalent within the last year
CHEM 1215	(C) GENERAL CHEMISTRY II	5	Major	(R) (W), CHEM 1115 and either MATH 1513 or MATH 1533. A grade of "C" or better in CHEM 1115 is strongly recommended.
HUM	HUMANITIES ELECTIVE	3	Gen Ed	
<i>Suggested Sophomore 1st Semester</i>				
CHEM 2114	ORGANIC CHEMISTRY I	4	Support	(R) (W), CHEM 1215. A grade of "C" or better in CHEM 1215 is strongly recommended.
PHYS 1114	COLLEGE PHYSICS I --OR--		Gen Ed	(R) (W), MATH 1513 or higher or APPM 1223, within the last two years or Evaluation by Instructor.
PHYS 2014	ENGINEERING PHYSICS I	4	Gen Ed	(R) (W), MATH 2104 (or at least 4 hours of calculus) within the last year or Evaluation by Instructor Prerequisite or Corequisite: MATH 2214
SOC SC	SOCIAL SCIENCE ELECTIVE	3	Gen Ed	
HUM	HUMANITIES ELECTIVE	3	Gen Ed	
<i>Suggested Sophomore 2nd Semester</i>				
POLSC 1113	AMERICAN FEDERAL GOVERNMENT	3	Gen Ed	(R) (W)
HIST 1483	U.S. HISTORY TO THE CIVIL WAR --OR--		Gen Ed	(R) (W)
HIST 1493	U.S. HISTORY SINCE THE CIVIL WAR	3	Gen Ed	(R) (W)
CHEM 2124	(C) ORGANIC CHEMISTRY II	4	Major	(R) (W), CHEM 2114. A grade of "C" or better in CHEM 2114 is strongly recommended.
CHEM 2122	(C) ORGANIC CHEMISTRY LABORATORY	2	Major	(R) (W) CHEM 2114 with a grade of "C" or better.
SUPP ELEC	SUPPORT ELECTIVE	5	Support	

Major Courses: (20 credit hours) (C)CHEM 1115; (C)CHEM 1215; (C)CHEM 2114; (C)CHEM 2122; (C)CHEM 2124

General Education Courses: (35-37 credit hours) English: ENGL 1113; ENGL 1213; History: HIST 1483 or HIST 1493; Political Science: POLSC 1113; Physics: PHYS 1114 or PHYS 2014; Biological Science: Four credit hours; Humanities: Six credit hours; Social Sciences: Three credit hours; Mathematics: Six to eight credit hours chosen from MATH 1513; MATH 1533; MATH 1613; MATH 1743\*; MATH 2014 or MATH 2214

Life Skills Courses: (1 credit hour) Life Skills: SCL 1001

Support Courses: (5 credit hours) Chosen from CHEM 2990; MATH; PHYS\*\*; BIO; or ECON

Notes: This program is designed for students planning to continue their education at a four-year college or university. See University Parallel/Transfer Programs for information and requirements in the general information section of the catalog.

(C) Indicates a grade of "C" or higher must be achieved.

\*MATH 1743 is appropriate for pre-pharmacy students only.

\*\*Either PHYS 1214 or PHYS 2114 are strongly recommended for students pursuing a career in chemistry, medicine, dentistry, or forensic science.