



**CHEM 1010 (F) Introduction to Chemistry.** This course develops the student's understanding of chemical principles at an introductory level and the application of quantitative problem solving to these principles. It also develops the understanding of how chemistry relates to current technical issues in society ..... 4 s.h.

**CHEM 1020 (S) Chemistry for the Health Sciences.** A survey of topics in chemistry that is relevant to the health sciences. Includes some topics in general chemistry such as solution equilibrium, kinetics, and buffer systems as well as a survey of organic chemistry. Three hours of lecture, three hours of laboratory each week..... 4 s.h.

**CHEM 1110 (F) General Chemistry I.** This course develops the student's Understanding of the fundamental principles of chemistry and the application of quantitative problem solving to these principles. The course also provides a foundation of chemical knowledge needed for further study in many key areas of science..... 4 s.h.

**CHEM 1120 (S) General Chemistry II.** Atomic and molecular structure, chemical bonding, the kinetic-molecular theory, oxidation-reduction, and equilibria. Introduction to kinetics, nuclear chemistry, electrochemistry, organic, and biochemistry. Three hours of lecture, three hours of laboratory each week..... 4 s.h.  
Prerequisite: CHEM 1110

**CHEM 2110, 2120 (F, S) Organic Chemistry.** A study of the structure, functional groups, syntheses, reactions of organic compounds, introduction to spectroscopy, and reaction mechanism. Three hours of lecture, four hours of laboratory each week..... 4, 4 s.h.  
Prerequisites: CHEM 1110, 1120

**CHEM 3000 (A/F-E) Analytical Chemistry I.** Theory and methods of volumetric and gravimetric analysis with an introduction to instrumental methods of analysis. Two hours of lecture, six hours of laboratory each week ..... 4 s.h.  
Prerequisites: CHEM 1110, 1120

**CHEM 3200 (A/S-O) Analytical Chemistry II.** Theory and methods of instrumental analysis and separation. Two hours of lecture, six hours of laboratory each week..... 4 s.h.  
Prerequisite: CHEM 1110, 1120

**CHEM 3300 (D) Advanced Organic Chemistry.** This course covers topics in organic chemistry more advanced than those covered in CHEM 2120. The lecture will focus on topics such as stereochemistry, reaction mechanisms, organic reactive intermediates, and/or organic synthesis ..... 4 s.h.  
Prerequisites: CHEM 2110, 2120

**CHEM 3500 (D) Forensic Chemistry.** This course approaches the challenges, methods, and analyses of forensic science from a fundamental, chemical perspective. Topics include drug analysis, arson investigation, and the analysis of paint and residue

samples (e.g. gunshot). The course objective is to train students in chemical tools that are in current commercial use..... 4 s.h.  
Prerequisites, CHEM 1110, 1120, 2110, 2120, 3000, or permission of instructor

**CHEM 3600 (D) Inorganic Chemistry.** A study of the principles of inorganic chemistry. Topics include atomic theory, chemical bonding, the periodic system, acid base theories, complex ions, and organometallics..... 4 s.h.  
Prerequisite: CHEM 1110, 1120, 2110

**CHEM 3800/3830 (D) Internship/Cooperative Education.** For a complete description of Internships and Cooperative Education, see the Off-Campus Internship section under Experiential Learning.

**CHEM 3900 (D) Special Topics.** Open only to advanced students with the consent of the department.....credit to be arranged

**CHEM 4000 (A/F-O) Physical Chemistry I.** Theoretical principles of gases, liquids, solids, atomic and molecular structure, elementary thermodynamics and thermo-chemistry, solutions, reaction kinetics, chemical equilibria, phase rule, colloidal systems, catalysis, electrochemistry, photochemistry, and radiochemistry. Three hours of lecture, six hours of laboratory ..... 5 s.h.  
Prerequisites: CHEM 1110, 1120; PHYS 2210, 2220 and MATH 2350, 2360

**CHEM 4200 (A/S-E) Physical Chemistry II.** Theoretical principles of gases, liquids, solids, atomic and molecular structure, elementary thermodynamics and thermo-chemistry, solutions, reaction kinetics, chemical equilibria, phase rule, colloidal systems, catalysis, electrochemistry, photochemistry, and radiochemistry. Three hours of lecture, six hours of laboratory ..... 5 s.h.  
Prerequisites: CHEM 1110, 1120; PHYS 2210, 2220 and MATH 2350, 2360

**CHEM 4930 Chemistry Capstone.\*** In order to meet the college requirement of comprehensive assessment, chemistry majors will enroll in this 1 credit course the last semester of their senior year. The course will be an independent study which is designed to help each student review the chemistry content from their four years of study. There will be a letter grade assigned, and as with every other major requirement, the student will be required to pass the course (C- or higher) in order to graduate. Student performance will be evaluated based upon a series of exams and a final..... 1 s.h.  
\*Not designed for transfer

**CHEM 4990 Comprehensive Assessment.** Undergraduate level. All candidates for a degree from King are required to demonstrate competency in their major field. Students with more than one major must demonstrate competency in each of their major fields. For a B.A. or B.S. in Chemistry students must earn a passing grade on the Chemistry Department Comprehensive Assessment Exam ..... 0 s.h.