

CHEMISTRY (CHM)

CHM107 / Chemistry and Society

3 Credits / 3.0 Periods for Lecture

A survey of chemistry and its impact on society and the environment.

Prerequisites: None. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM107LL

Division: Physical Sciences and Engineering

CHM107LL / Chemistry and Society Laboratory

1 Credit / 3.0 Periods for Laboratory

Laboratory experience in support of CHM107. Prerequisites or

Corequisites: CHM107. Course Notes: General Education Designation:

Natural Sciences (Quantitative) - [SQ] in combination with: CHM107

Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

Division: Physical Sciences and Engineering

CHM130 / Fundamental Chemistry

3 Credits / 3.0 Periods for Lecture

A survey of the fundamentals of general chemistry. Emphasis on essential concepts and problem solving techniques. Basic principles of measurement, chemical bonding, structure and reactions, nomenclature, and the chemistry of acids and bases. Preparation for students taking more advanced courses in chemistry. Designed to meet needs of students in such diverse areas as agriculture, nursing, home economics, physical education and water technology. Prerequisites: A grade of C or better in [(CHM100, or MAT090, or MAT091, or MAT092, or higher level mathematics course, or satisfactory math placement) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101 as indicated by appropriate reading placement)], or permission of the Instructor, or Department or Division Chair. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM130LL



SUN# CHM 1130

Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

Division: Physical Sciences and Engineering



CHM130AA / Fundamental Chemistry with Lab**4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

A survey of the fundamentals of general chemistry. Emphasis on essential concepts and problem solving techniques. Basic principles of measurement, chemical bonding, structure and reactions, nomenclature, and the chemistry of acids and bases. Preparation for students taking more advanced courses in chemistry. Designed to meet needs of students in such diverse areas as agriculture, nursing, home economics, physical education and water technology. Prerequisites: A grade of C or better in [(CHM100, or MAT090, or MAT091, or MAT092, or higher level mathematics course, or satisfactory math placement) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101 as indicated by appropriate reading placement)], or permission of the Instructor, or Department or Division Chair. Course Notes: Student may receive credit for only one of the following: CHM130 and CHM130LL, or CHM130AA.

Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

Division: Physical Sciences and Engineering

CHM130LL / Fundamental Chemistry Laboratory**1 Credit / 3.0 Periods for Laboratory**

Laboratory experience in support of CHM130. Prerequisites or Corequisites: A grade of "C" or better in CHM130. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM130



SUN# CHM 1130

Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

Division: Physical Sciences and Engineering

**CHM138 / Chemistry for Allied Health****3 Credits / 3.0 Periods for Lecture**

Elements of fundamental and organic chemistry. Includes the general chemical behavior of inorganic matter and the structure of organic and biochemical systems. Course designed for specific allied health programs at MCCD. May not be applicable to other allied health programs or transferable. Prerequisites: A grade of C or better in (CHM100 or MAT090 or MAT091 or MAT092 or higher or satisfactory math placement), or one year of high school chemistry taken within the last five years with a grade of C or better, or permission of the Instructor, or Department or Division Chair.

Division: Physical Sciences and Engineering

CHM138LL / Chemistry for Allied Health Laboratory**1 Credit / 3.0 Periods for Laboratory**

Laboratory experience in support of CHM138, Chemistry for Allied Health. Prerequisites: None. Corequisites: CHM138.

Division: Physical Sciences and Engineering

CHM150 / General Chemistry I**4 Credits / 4.0 Periods for Lecture**

Detailed study of principles of chemistry for science majors and students in pre-professional curricula. Prerequisites: A grade of C or better in [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course, or satisfactory placement), or permission of the Instructor, or Department or Division Chair. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM151LL. Completion of all prerequisites within the last two years is recommended. Student may receive credit for only one of the following: CHM150 and CHM151LL, or CHM151 and CHM151LL, or CHM150AA, or CHM151AA.

Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

Division: Physical Sciences and Engineering

CHM150AA / General Chemistry I**5 Credits / 3.0 Periods for Laboratory, 4.0 Periods for Lecture**

Detailed study of principles of chemistry for science majors and students in pre-professional curricula. Prerequisites: A grade of C or better in [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course, or satisfactory placement), or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of all prerequisites within the last two years is recommended. Student may receive credit for only one of the following: CHM150 and CHM151LL, or CHM151 and CHM151LL, or CHM150AA, or CHM151AA.

Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

Division: Physical Sciences and Engineering

CHM151 / General Chemistry I**3 Credits / 3.0 Periods for Lecture**

Detailed study of principles of chemistry for science majors and students in pre-professional curricula. Prerequisites: A grade of C or better in [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course, or satisfactory placement), or permission of the Instructor, or Department or Division Chair. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM151LL. Arizona Shared Unique Number SUN#: CHM 1151. Completion of all prerequisites within the last two years is recommended. Student may receive credit for only one of the following: CHM150 and CHM151LL, or CHM151 and CHM151LL, or CHM150AA, or CHM151AA.



SUN# CHM 1151

Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

Division: Physical Sciences and Engineering

CHM151AA / General Chemistry I**4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

Detailed study of principles of chemistry for science majors and students in pre-professional curricula. Prerequisites: A grade of C or better in [(CHM130 and CHM130LL), or CHM130AA, or one year of high school chemistry taken within the last five years] and (a grade of C or better in MAT151 or higher level mathematics course, or satisfactory placement), or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of all prerequisites within the last two years is recommended. Student may receive credit for only one of the following: CHM150 and CHM151LL, or CHM151 and CHM151LL, or CHM150AA, or CHM151AA.

Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

Division: Physical Sciences and Engineering

CHM151LL / General Chemistry I Laboratory**1 Credit / 3.0 Periods for Laboratory**

Laboratory experience in support of CHM150 or CHM151. Prerequisites: A grade of C or better in CHM150 or CHM151. Corequisites: CHM150 or CHM151. Course Notes: Student may receive credit for only one of the following: CHM150 and CHM151LL, or CHM151 and CHM151LL, or CHM150AA, or CHM151AA. General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM150 or CHM151



SUN# CHM 1151

Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

Division: Physical Sciences and Engineering



CHM152 / General Chemistry II**3 Credits / 3.0 Periods for Lecture**

A study of the chemical properties of the major groups of elements, equilibrium theory, thermodynamics, electrochemistry, and other selected topics. Prerequisites: A grade of C or better in [(CHM150 or CHM151) and CHM151LL], or CHM150AA, or CHM151AA, or permission of the Instructor, or Department or Division Chair. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM152LL. Arizona Shared Unique Number SUN# CHM1152. Completion of prerequisites within the last two years recommended. Completion of CHM152LL required to meet the Natural Science requirement. Student may receive credit for only one of the following: CHM152 and CHM152LL, or CHM152AA.



SUN# CHM 1152

Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

Division: Physical Sciences and Engineering

CHM152AA / General Chemistry II**4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

A study of the chemical properties of the major groups of elements, equilibrium theory, thermodynamics, electrochemistry, and other selected topics. Prerequisites: A grade of C or better in [(CHM150 or CHM151) and CHM151LL], or CHM150AA, or CHM151AA, or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of prerequisites within the last two years recommended. Student may receive credit for only one of the following: CHM152 and CHM152LL, or CHM152AA.

Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

Division: Physical Sciences and Engineering

CHM152LL / General Chemistry II Laboratory**1 Credit / 3.0 Periods for Laboratory**

Laboratory experience in support of CHM152. Prerequisites: A grade of C or better in CHM152 or Corequisites: CHM152. Course Notes: Student may receive credit for only one of the following: CHM152 and CHM152LL, or CHM152AA. General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM152



SUN# CHM 1152

Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

Division: Physical Sciences and Engineering

CHM154 / General Chemistry II with Qualitative Analysis**3 Credits / 3.0 Periods for Lecture**

A study of the chemical properties of the major groups of elements, equilibrium theory, thermodynamics, kinetics, electrochemistry, and other selected topics. Includes qualitative analysis. Prepares students for all sophomore chemistry courses. Prerequisites: A grade of C or better in [(CHM150 or CHM151) and CHM151LL] or CHM150AA, or permission of the Instructor, or Department or Division Chair. Course Notes: General Education Designation: Natural Sciences (Quantitative) [SQ] in combination with: CHM154LL. Completion of prerequisites within the last two years recommended. Completion of CHM154LL required to meet the Natural Science requirement.

Division: Physical Sciences and Engineering

CHM154LL / General Chemistry II with Qualitative Laboratory**2 Credits / 6.0 Periods for Laboratory**

Laboratory experience in support of CHM154. Includes qualitative analysis. Prerequisites: A grade of C or better in CHM154 or Corequisites: CHM154. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM154

Division: Physical Sciences and Engineering

CHM230 / Fundamental Organic Chemistry**3 Credits / 3.0 Periods for Lecture**

Chemistry of representative groups of organic compounds, emphasizing biological applications. Prerequisites: A grade of C or better in (CHM130 and CHM130LL) or (CHM150 or CHM151 and CHM151LL), or permission of the Instructor, or Department or Division Chair. Course Notes:

General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM230LL. Arizona Shared Unique Number SUN#: CHM 2230. Completion of prerequisites within the last two years recommended. CHM230 course content is designed to meet the needs of students in such areas as agriculture, home economics, nursing, pre-physician assistant, and physical education among others.

Division: Physical Sciences and Engineering

CHM230LL / Fundamental Organic Chemistry Laboratory**1 Credit / 3.0 Periods for Laboratory**

Laboratory experience in support of CHM230. Prerequisites: A grade of C or better in CHM130LL or CHM151LL, or equivalent. Prerequisites or Corequisites: CHM230. Course Notes: General Education Designation: Natural Sciences (Quantitative) - [SQ] in combination with: CHM230

Division: Physical Sciences and Engineering

CHM235 / General Organic Chemistry I**3 Credits / 3.0 Periods for Lecture**

Rigorous introduction to chemistry of carbon-containing compounds. Reaction mechanisms and recent methods of synthesis emphasized. Prerequisites: A grade of C or better in (CHM152 and CHM152LL), or CHM152AA, or (CHM154 and CHM154LL), or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of prerequisites within the last two years recommended.



SUN# CHM 2235

Division: Physical Sciences and Engineering

CHM235LL / General Organic Chemistry I Laboratory**1 Credit / 4.0 Periods for Laboratory**

Laboratory experience in support of CHM235. Prerequisites: A grade of C or better in CHM235 or Corequisites: CHM235. Completion of prerequisites within the last two years recommended.



SUN# CHM 2235

Division: Physical Sciences and Engineering

CHM236 / General Organic Chemistry IIA**3 Credits / 3.0 Periods for Lecture**

Study of chemistry of carbon-containing compounds continued. Structural determination and additional reaction mechanisms and modern methods of synthesis emphasized. Prerequisites: A grade of C or better in (CHM235 and CHM235LL) or CHM235AA, or permission of the Instructor, or Department or Division Chair. Course Notes: Completion of prerequisites within the last two years recommended.

Division: Physical Sciences and Engineering



CHM236LL / General Organic Chemistry IIA Laboratory

1 Credit / 4.0 Periods for Laboratory

Laboratory experience in support of CHM236. Prerequisites: A grade of C or better in CHM236 or Corequisites: CHM236. Completion of prerequisites within the last two years recommended.



SUN# CHM 2236

Division: Physical Sciences and Engineering

CHM260 / Fundamental Biochemistry

3 Credits / 3.0 Periods for Lecture

Structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates and lipids; the utilization and synthesis of these materials by living systems and the relationship of the processes to energy production and utilization. Prerequisites: A grade of C or better in [(CHM230 and CHM230LL) or CHM230AA], or [(CHM235 and CHM235LL) or CHM235AA], or permission of the instructor, or Department or Division Chair. Course Notes: Completion of prerequisites within the last two years recommended. Designed for students in agriculture, dental hygiene, home economics, nursing, and physical therapy.

Division: Physical Sciences and Engineering

CHM298AA / Special Projects

1 Credit / 1.0 Periods for Laboratory

Organized and tailored around the interests and needs of the individual student. Structured to provide an atmosphere of individualized research and study paralleled by professional expertise and guidance. Professional-type facilities and equipment available for student use. Allows the best aspects of independent study and individualized learning to be combined to maximize student development. Prerequisites:

Permission of Program Director or Instructor.

Division: Physical Sciences and Engineering