CHEMISTRY (CHEM)

CHEM A020 **1 Unit (18 lecture hours)**
Problem Solving in Organic Chemistry 1
Co-requisite(s): CHEM A220.

Grading Mode: Pass/No Pass
Not Transferable.

This course covers problem-solving skills and strategies that enhance success in Chemistry A220. Topics include problems in organic chemical structure, nomenclature, reactions and reaction mechanisms. Offered on a pass-no pass basis only. NOT DEGREE APPLICABLE.

CHEM A025 **1 Unit (18 lecture hours)**
Problem Solving in Organic Chemistry 2
Co-requisite(s): CHEM A225.

Grading Mode: Pass/No Pass
Not Transferable.

This course covers problem-solving skills and strategies that enhance success in Chemistry A225. Topics include problems in organic chemical structure, nomenclature, reactions and reaction mechanisms. Offered on a pass-no pass basis only. NOT DEGREE APPLICABLE.

CHEM A100 **3 Units (54 lecture hours)**
Principles of Chemistry
Grading Mode: Standard Letter, Pass/No Pass
Transfer Credit: CSU; UC: Credit Limitation: CHEM A100, CHEM A110 and CHEM A130 combined: maximum credit, 1 course; No credit for CHEM A100, CHEM A110 and CHEM A130 if taken after CHEM A180.

Non-mathematical chemistry for students not majoring in science. Emphasis on relationship of chemistry to the human body with particular attention to drugs of all kinds, food, metabolism, cancer and environmental contaminants. Includes concepts of structure of matter, bonding, acid-base chemistry, organic chemistry and thermodynamics. Graded or Pass/No Pass option.

CHEM A110 **5 Units (81 lecture hours; 45 lab hours)**
Introduction to Chemistry
Prerequisite(s): Successful completion of a course at the level of elementary algebra or Appropriate OCC math placement.

Grading Mode: Standard Letter, Pass/No Pass
Transfer Credit: CSU; UC: Credit Limitation: CHEM A100, CHEM A110 and CHEM A130 combined: maximum credit, 1 course; No credit for CHEM A100, CHEM A110 and CHEM A130 if taken after CHEM A180.

Principles of inorganic, organic, and bio-chemistry. Not for those who will take CHEM A180 or CHEM A130. Graded or Pass/No Pass option. **C-ID:** CHEM 102.

CHEM A130 **4 Units (63 lecture hours; 45 lab hours)**
Preparation for General Chemistry
Prerequisite(s): Successful completion of a course at the level of elementary algebra or Appropriate OCC math placement.

Advisory: Eligibility for ESL A060 or ENGL A099.

Grading Mode: Standard Letter, Pass/No Pass
Transfer Credit: CSU; UC: Credit Limitation: CHEM A100, CHEM A110 and CHEM A130 combined: maximum credit, 1 course; No credit for CHEM A100, CHEM A110 and CHEM A130 if taken after CHEM A180.

Introduction to the principles, calculations, and laboratory techniques of chemistry for students planning to take CHEM A180. May be taken for grades or on a pass-no pass basis.

CHEM A180 **5 Units (72 lecture hours; 90 lab hours)**
General Chemistry A
Prerequisite(s): Successful completion of a course at the level of intermediate algebra or Appropriate OCC math placement, and CHEM A130.

Grading Mode: Standard Letter
Transfer Credit: CSU; UC.

This course studies gases, solutions, reactions, bonding theories, acid-base, and redox theory. **C-ID:** CHEM 110.

CHEM A185 **5 Units (72 lecture hours; 90 lab hours)**
General Chemistry B
Prerequisite(s): CHEM A180.

Grading Mode: Standard Letter
Transfer Credit: CSU; UC.

Study of non-ideal solutions, chemical equilibria, thermodynamics, kinetics and nuclear chemistry. **C-ID:** CHEM 120S as CHEM A180 and CHEM A185.

CHEM A220 **3 Units (54 lecture hours)**
Organic Chemistry A
Prerequisite(s): CHEM A185.

Grading Mode: Standard Letter
Transfer Credit: CSU; UC.

A study of organic compounds and their reactions from the standpoint of structure, mechanisms and kinetics. Introduction to spectroscopic methods of identification. **C-ID:** CHEM 150 when CHEM A220L is also completed.

CHEM A220L **2 Units (18 lecture hours; 90 lab hours)**
Organic Chemistry A Lab
Prerequisite(s): CHEM A185.

Grading Mode: Standard Letter
Transfer Credit: CSU; UC.

Theory and techniques of separation, purification, synthesis, and analysis of organic compounds including instrumental methods of chromatography and spectroscopy.

CHEM A225 **3 Units (54 lecture hours)**
Organic Chemistry B
Prerequisite(s): CHEM A220.

Grading Mode: Standard Letter
Transfer Credit: CSU; UC.

Further study of the structures, reactions, mechanisms and kinetics of organic compounds. Introduction to biologically important compounds and natural products.

CHEM A225L **2 Units (18 lecture hours; 90 lab hours)**
Organic Chemistry B Laboratory
Prerequisite(s): CHEM A220 and CHEM A220L.

Grading Mode: Standard Letter
Transfer Credit: CSU; UC.

Further applications of laboratory theory and techniques in the synthesis and analysis of organic compounds including instrumental methods of chromatography.