

BEFORE ENROLLING IN DEGREE APPLICABLE COURSES, IT IS RECOMMENDED THAT YOU COMPLETE ENGL 001A AND READ 053.

096A • REAL ESTATE INVESTMENT I

3.0 units

Total Lecture 54 hours

Advisory: RLEST 090 or Real Estate license, or demonstrated subject matter proficiency, MATH 903 or BUS 064B, Eligibility for ENGL 001A and READ 053.
Acceptable for credit: California State University

This course is designed to acquaint the real estate student with the specific advantages and disadvantages of the various types of real estate investments including apartments, multiresidential, commercial, industrial, professional, recreational, condominiums and special purpose properties, and the effects of inflation, depreciation, taxes, tax-deferred exchanges, real estate cycles, growth patterns, risk and liquidity on the total real estate investment. The student also studies the advantages and disadvantages of investments in related fields of real estate investments including syndications, limited partnerships, the use of leverage, and creative financing such as all inclusive deeds of trusts in maximizing the real estate investments returns. This course may be offered via distance learning. *Pass/No Pass Option.*

100 • PROPERTY MANAGEMENT

3.0 units

Total Lecture 54 hours

Advisory: BUS 064B, Eligibility for ENGL 001A and READ 053
Acceptable for credit: California State University

This course provides an overview of successful techniques and practices in the management of rental income property from acquisition to disposal: neighborhood analysis, rent schedules, renting credit, collections, eviction, maintenance and rehabilitation; insurance, tax considerations, depreciation schedules and pitfalls in the purchase of income property. This course applies toward the educational requirements of the California Real Estate Broker's license examination. This course may be offered via distance learning. *Pass/No Pass Option.*

CHEMISTRY (CHEM)

DIVISION: Math and Science
DEPARTMENT: Chemistry
DEAN: Danny Nguyen
DIVISION CHAIR: Thais Winsome
DEPT CHAIR: Kelly Neary
PHONE: 408-855-5588
COUNSELING: 408-855-5030

The Chemistry Program at Mission College consists of:

- A series of chemistry courses designed to meet transfer requirements for physical and biological science majors.
- A series of courses intended for students majoring in fields other than chemistry, biology, or physical science.
- A course designed specifically for students who require preparation or review of the more basic chemical concepts.

All chemistry courses at Mission College include a practical component where students conduct hands-on chemical experimentation in a modern, well-equipped laboratory.

Student Learning Outcomes:

Students who finish the Chemistry core curriculum will:

- analyze and apply fundamental chemical concepts and techniques
- perform chemical calculations and solve chemical equations

Students will be assessed by exams and homework assignments

Career Options:

- Chemist • Pharmacist • Chemical Engineer
- Physician • Dentist • Veterinarian
- Biologist • Physicist • Geologist/Geochemist
- Oceanographer • Allied Health Professional

Some career options may require more than two years of college study. Classes beyond the Associate Degree level may be required to fulfill some career options or for preparation for transfer to a university program.

Highlights:

- An outstanding chemistry faculty striving to maintain an aggressive and well-respected chemistry program.
- Ample contact with the instructor and the relaxed atmosphere that only a limited class size can offer.

Physical Science - A.S. Degree

To earn an A.S. Degree in Physical Science, a minimum of 18 units of course work, distributed among the following courses must be completed:

Select 18 units from the following:	Units
ASTRO 001Astronomy	3.0
ASTRO 002Astronomy Lab	1.0
CHEM 001ABGeneral Chemistry.....	5.0 each
CHEM 002Introductory Chemistry	4.0
CHEM 005Quantitative Analysis	4.0
CHEM 030ABFundamentals of Chemistry.....	3.0 each
PHYS 002ABGeneral Physics	5.0 each
PHYS 004A.....Engineering Physics - Mechanics.....	5.0
PHYS 004BEngineering Physics - Electricity & Magnetism	5.0
PHYS 004CEngineering Physics - Light and Heat	5.0
PHYS 004DAtomic Physics	2.0
PHYS 010Introduction to Physics	4.0
Total Program A.S. Degree Requirements:	18.0

CHEMISTRY

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CHEMISTRY (CHEM)

Note: Completion of CHEM 1A, 1B is equivalent to San Jose State University sequence of CHEM 1A, 1B, although the order of topics presented is different. Students who are planning to complete the sequence are advised to take both semesters at the same college.

001A • GENERAL CHEMISTRY

5.0 units

Total lecture 54 hours; Total Lab: 108 hours

Advisory: Eligibility for ENGL 001A and READ 053

Prerequisite: MATH 000C, CHEM 002 or high school chemistry with a "B" or better.

Acceptable for credit: University of California, California State University

Chemistry 001A is the first of a two-semester sequence in general inorganic chemistry designed for science majors and those seeking entry to medicine and other professional programs in the health sciences. Topics include atomic structure, stoichiometry, chemical bonding, thermochemistry, chemical reactivity, and the properties of solids, liquids, gases, and solutions. This course may also be offered via distance learning. Materials Fee. Grade Only.

001B • GENERAL CHEMISTRY

5.0 units

Total lecture 54 hours; Total Lab: 108 hours

Advisory

Eligibility for ENGL 001A and READ 053

Prerequisite: CHEM 001A

Acceptable for credit: University of California, California State University

This course is a continuation of CHEM 001A (General Chemistry I) and is intended for majors in chemistry, biological sciences, engineering, and professional programs in medicine and pharmacy. Topics include chemical kinetics, chemical equilibrium, thermodynamics, electrochemistry, chemistry of the transition elements, and selected topics in nuclear chemistry. This course may also be offered via distance learning. Materials Fee. Grade Only.

002 • INTRODUCTORY CHEMISTRY

4.0 units

Total Lecture 54 hours; Total Lab: 54 hours

Advisory: MATH 000C

Acceptable for credit: University of California, California State University

CHEM 2 is designed specifically to prepare students for CHEM 1A. It introduces the principles of atomic structure, gas laws, solutions, and acid-base theories. There is heavy emphasis on problem solving, chemical formulas, equations and quantity relationships. The course includes both lab and lecture. (No UC credit if taken after CHEM 001A or CHEM 030A) This course may also be offered via distance learning. Materials Fee. Grade Only.

012A • ORGANIC CHEMISTRY I

5.0 units

Total Lecture 54 hours; Total Lab: 108 hours

Prerequisite: CHEM 001B

Acceptable for credit: University of California, California State University

CHEM 012A is the first semester of organic chemistry, which includes a study of important organic molecules found in living systems and man-made molecules. This course includes both lecture and laboratory work designed to prepare students to enter fields of study such as chemistry, engineering, pre-pharmacy, pre-dentistry, pre-medicine, and biological sciences. Modern laboratory techniques, including instrumental methods of structure determination, are included. Materials Fee. Grade Only.

012B • ORGANIC CHEMISTRY II

5.0 units

Total Lecture 54 hours; Total Lab: 108 hours

Prerequisite: CHEM 0012A

Acceptable for credit: University of California, California State University

CHEM 012B is the second semester of organic chemistry, which includes a study of important organic molecules found in living systems and man-made molecules. This course includes both lecture and laboratory work designed to prepare students to enter fields of study such as chemistry, engineering, pre-pharmacy, pre-dentistry, pre-medicine, and biological sciences. Modern laboratory techniques, including instrumental methods of structure determination, are included. Materials Fee. Grade Only.

030A • FUNDAMENTALS OF CHEMISTRY

4.0 units

Total Lecture 54 hours; Total Lab: 54 hours

Advisory: Eligibility for ENGL 001A and READ 053

Prerequisite: MATH 903 or MATH 903M

Acceptable for credit: University of California, California State University

CHEM 030A is an introductory chemistry course designed for nursing and allied-health majors. Topics include dimensional analysis, inorganic nomenclature, atomic and molecular structure, bonding, chemical reactions, gas laws, solutions, acids-bases, oxidation-reduction, equilibrium and electrolyte systems. This course is not recommended for students majoring in biology or chemistry or for those seeking entry to professional programs in medicine or pharmacy. This course may also be offered via distance learning. Materials Fee. Grade Only.

030B • FUNDAMENTALS OF CHEMISTRY

3.0 units

Total Lecture 36 hours; Total Lab: 54 hours

Advisory: Eligibility for ENGL 001A and READ 053

Prerequisite: CHEM 030A

Acceptable for credit: University of California, California State University

This course is a continuation of CHEM 030A. It is intended for pre-nursing students and is not recommended for science majors or those seeking entry to professional programs in medicine or pharmacy. This course is a survey of the major classes of biological macromolecules and their role in the chemistry of life processes. Topics include the biochemistry of carbohydrates, proteins, lipids, and nucleic acids, basic reactions of biosynthesis and metabolism, and applications of basic biochemistry to human physiology and disease processes. This course satisfies the general education requirements for non-science majors. Materials Fee. Grade Only.