

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

094B • REAL ESTATE APPRAISAL II

3.0 units

Total Lecture 54.4 hours
Advisory: RLEST 094A and RLEST 090
Acceptable for credit: California State University

This is an advanced real estate appraisal course which will prepare the student to do an appraisal on multi-family residential, commercial, industrial and special purpose properties. The student will analyze income and expense statements, use discounted cash flows, capitalization methods, and gain a thorough knowledge of the economic approaches to value. Current regulations, standards of practice, and ethics will be studied. The student will be taught how to do a Small Residential Income Property Appraisal Report. *Pass/No Pass Option.*

095A • REAL ESTATE FINANCE I

3.0 units

Total Lecture 54.4 hours
Advisory: RLEST 090
Acceptable for credit: California State University

The student taking this course will analyze real estate financing, which includes lending policies, problems in financing transactions in residential, apartment, commercial and special purpose properties. Methods of financing properties are emphasized in this course. This course applies toward the educational requirements of the California Real Estate Broker's license examination. Current Licensees can also earn 45 hours of Continuing Education units. *Pass/No Pass Option.*

096A • REAL ESTATE INVESTMENT I

3.0 units

Total Lecture 54.4 hours
Advisory: RLEST 090
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 will also study 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 investment returns. This course has been accepted by the Dept. of Real Estate toward the educational requirements of the California Real Estate Broker's license examination. *Pass/No Pass Option.*

100 • PROPERTY MANAGEMENT

3.0 units

Total Lecture 54.4 hours
Advisory: RLEST 090
Acceptable for credit: California State University

The student will study 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. Current Licensees can also earn 45 hours of Continuing Education units. *Pass/No Pass Option.*

CHEMISTRY (CHEM)

DIVISION: Natural Sciences
DEPARTMENT: Chemistry
DEPT CHAIR: Catherine Shea
PHONE: 408-855-5260
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.

A.S. Degree:

- Physical Science

Schedule Matrix:

COURSE	FALL	SPRING	SUMMER	WEEKEND
CHEM 001A	D, E	D, E	D	X
CHEM 001B	E	E	D	X
CHEM 002	D	D	D	X
CHEM 012A	D	D		
CHEM 012B	D	D		
CHEM 030A	D, E	D, E	D	X
CHEM 030B	E	E	D	

D= DAY CLASSES; E= EVENING CLASSES; X= WEEKEND

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 001 Astronomy.....	3.0
ASTRO 002 Astronomy Lab.....	1.0
CHEM 001AB General Chemistry.....	5.0 each
CHEM 002 Introductory Chemistry.....	4.0
CHEM 005 Quantitative Analysis.....	4.0
CHEM 030AB Fundamentals of Chemistry.....	3.0 each
PHYS 002AB General Physics.....	5.0 each
PHYS 004A Engineering Physics - Mechanics.....	5.0
PHYS 004B Engineering Physics - Electricity & Magnetism.....	5.0
PHYS 004C Engineering Physics - Light and Heat.....	5.0
PHYS 004D Atomic Physics.....	2.0
PHYS 010 Introduction 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 72.0 hours; Total Lab: 54.4 hours
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 a pre-professional chemistry preparation for students planning a scientific or science related career field. A rigorous study of the fundamentals of chemistry at the first-year level combines the study of atomic and molecular structure, quantum theory, thermochemistry, gases, solutions, and qualitative analysis with the classical study of properties of atoms and molecules and their reactivity. The course includes both lecture and laboratory work designed to prepare students to enter fields of study as chemistry, engineering, medicine, dentistry as well as biological sciences. (UC credit may be limited; see a counselor) This course may also be offered via distance learning. Materials Fee: \$15.00. Grade Only.

001B • GENERAL CHEMISTRY

5.0 units

Total lecture 72.0 hours; Total Lab: 54.4 hours
Prerequisite: CHEM 001A
Acceptable for credit: University of California, California State University
This course consists of a study of the elements and their compounds with emphasis in lecture and laboratory on the transition elements and their coordination compounds, the nomenclature, structure and periodic groupings. The units of study will include solution equilibria, thermodynamics, nuclear chemistry, organic chemistry kinetics and electrochemistry. The laboratory will include equilibrium, pH, acid-base reactions, K_{sp} , quantitative analysis, and organic synthesis. Students will use internet resources. (UC credit may be limited; see a counselor) This course may also be offered via distance learning. Materials Fee: \$15.00. Grade Only.

002 • INTRODUCTORY CHEMISTRY

4.0 units

Total lecture 54.4 hours; Total Lab: 54.4 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: \$15.00. Grade Only.

012A • ORGANIC CHEMISTRY I

5.0 units

Total lecture 54.4 hours; Total Lab: 108.8 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: \$35.00. Grade Only.

012B • ORGANIC CHEMISTRY II

5.0 units

Total lecture 54.4 hours; Total Lab: 108.8 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: \$35.00. Grade Only.

030A • FUNDAMENTALS OF CHEMISTRY

3.0 units

Total lecture 36.8 hours; Total Lab: 54.4 hours
Advisory: MATH 903
Acceptable for credit: University of California, California State University
An elementary course covering the basic principles of inorganic chemistry and an introduction to organic chemistry for non-science majors. Especially designed for the RN candidate, the Fire Science student and majors in the following programs: Physical Education, Administration of Justice, Psychology, Sociology, Dental Hygiene, and Home Economics (except Dietetics). Not recommended for science majors (UC credit may be limited; see a counselor) This course may also be offered via distance learning. Materials Fee: \$15.00. Grade Only.

030B • FUNDAMENTALS OF CHEMISTRY

3.0 units

Total lecture 36.8 hours; Total Lab: 54.4 hours
Advisory: MATH 903
Prerequisite: CHEM 030A
Acceptable for credit: University of California, California State University
A continuation of CHEM 30A with emphasis in the fields of organic and introductory biochemistry. (UC credit may be limited; see a counselor) Materials Fee: \$15.00. Grade Only.