

**BADM-280 Cooperative Education** 3 cr.  
Supervised cooperative work program. Student is employed in an approved business occupation. Student will be supervised and rated by the employer and instructor. Student Meets in a weekly class and/or report on a variety of films, reading, or seminars. Semester offered: On Demand.

## CHEMISTRY

**CHEM-110 Introductory Chemistry** (3+2p) 4 cr.  
An introductory survey of general chemistry including: scientific and dimensional analysis, interactions of heat, light, and electric fields with matter, atomic and molecular structure, reaction dynamics, acid-base systems, and electrochemistry. Fulfills lab science requirement for non-science majors and as an introductory course for students with no prior chemistry. Prerequisite: MATH 096 or equivalent. Semester offered: Fall, Spring and Summer. [NM Common Course Number CHEM 1114, Area III; Laboratory Science Core]

**CHEM-111 General Chemistry I** (3+3p) 4 cr.  
Part one of the general study of atomic systems including: scientific and dimensional analysis, states of matter, thermochemistry, atomic structure, chemical bonding, molecular geometry, liquid crystal, thin film, and ceramic materials. For engineering and pre-professional majors. Prerequisite: MATH 115 or equivalent; high school chemistry with grade of B or better within the last four years, or CHEM 110 with grade of C or better. Semester offered: Fall and Spring. [NM Common Course Number CHEM 1214, Area III; Laboratory Science Core]

**CHEM-112 General Chemistry II** (3+3p) 4 cr.  
Part two of the general study of atomic systems including: kinetics, catalysis, acid-base systems, thermodynamics, electro-chemistry, nuclear chemistry, reaction optimization, industrial processes, and coordination chemistry. For engineering and pre-professional majors. Prerequisite: MATH 185, or equivalent, CHEM 111 or equivalent. Semester offered: Fall and Spring. [NM Common Course Number CHEM 1224, Area III; Laboratory Science Core]

**CHEM-210 Organic Chemistry Survey** 4 cr.  
A one semester survey for students requiring a brief coverage of important classes of organic compounds and their application to metabolism. Coverage includes nomenclature, preparation, chemical transformations of functional groups and reaction mechanisms. Prerequisites: CHEM 110 or CHEM 111. Semester offered: On Demand.

**CHEM-251 Organic Chemistry I** (3+3p) 4 cr.  
Part one of the study of carbon compound chemistry covering: atomic and molecular orbitals; structure and reaction mechanisms of alkanes, alkenes, and alcohols; laboratory synthesis; gas chromatography; infrared, mass, and nuclear magnetic resonance spectroscopies. For pre-professional majors. Prerequisite: CHEM 112 (recommended) or equivalent; or CHEM 111 with corequisite CHEM 112. Semester offered: Fall.

**CHEM-252 Organic Chemistry II** (3+3p) 4 cr.  
Part two of the study of carbon compound chemistry covering: structure and reaction mechanisms of carboxyl, amine, conjugated, and

polyfunctional systems; ultraviolet spectroscopy; bio-chemistry; and synthetic polymers. Prerequisite: CHEM 251 or equivalent. Semester offered: Spring.

**CHEM-281 Analytical Chemistry** (3+5p) 5 cr.  
Fundamentals of instrumental chemical analysis. Topics include: statistical methods, digital control and data acquisition, gas/liquid chromatography, emission/absorption spectroscopy, capillary electrophoresis, volumetric, gravimetric, and electrochemical analysis. For chemistry and some pre-professional majors. Prerequisite: CHEM 112. Semester offered: On Demand.

## COLLEGE AUTOMOTIVE PROGRAM (Chrysler)

**CAPP-110 Chrysler Shop-Fund and Safety** 1 cr.  
This course will orient the student to shop operations, use of service manuals, pay structures, tools, warranties, and customer relations. Shop safety will be strongly emphasized as well as employee/employer relations. Corequisite: CAPP 120. Semester offered: Fall.

**CAPP-120 Chrysler Electrical and Ignition System** 7 cr.  
A study of the electrical and electronic systems found in the automotive field. Emphasis is on basic circuitry, starting systems, charging systems, ignition systems, diagnosis and servicing the electrical components on current Chrysler vehicles. Instruction will include test equipment related to ignition, electrical, and electronic devices. Course includes specific DaimlerChrysler training. Corequisite: CAPP 110. Semester offered: Fall.

**CAPP-130 Chrysler Fuel and Emission System** 4 cr.  
A study of the fuel and emission control systems used on current Chrysler vehicles. Students will learn to use the exhaust gas analyzer, oscilloscope, and other special test equipment. Course includes specific Chrysler training. Prerequisites: CAPP 110, CAPP 120, CAPP 280. Corequisite: CAPP 140. Semester offered: Spring.

**CAPP-140 Chrysler Drivability Diagnosis and Repair** 4 cr.  
A systematic troubleshooting method for Chrysler fuel, electrical, and electronic systems. Use of tools and equipment needed for proper diagnosis emphasized. Course includes specific Chrysler training. Prerequisite: CAPP 110, CAPP 120. Corequisite: CAPP 130. Semester offered: Spring.

**CAPP-145 ASE Tests** 1 cr.  
Sign up for a minimum of two ASE exams and pass one. Semester offered: Spring.

**CAPP-146 ASE Tests** 1 cr.  
Take and pass remaining ASE exams. Students are required to pass a minimum of four ASE exams in order to receive credit and graduate. Any tests passed in CAPP 145 are counted as part of the requirement. Prerequisite: CAPP 145. Semester offered: Spring.

**CAPP-150 Chrysler Engines and Related Systems** 4 cr.  
This course covers the principles and operation of the internal combustion