

UC Davis Course Descriptions

Applicants to the Forensic Science Graduate Program must have completed coursework at an accredited college or university with minimum equivalency to the following UC Davis courses:

General Chemistry	<p>CHE 2A General Chemistry (5 units) Lecture—3 hours; laboratory/discussion—4 hours. Prerequisite: High school chemistry and physics strongly recommended; satisfactory score on diagnostic examinations. Periodic table, stoichiometry, chemical equations, physical properties and kinetic theory of gases, atomic and molecular structure and chemical bonding. Laboratory experiments in stoichiometric relations, properties and collection of gases, atomic spectroscopy, and introductory quantitative analysis.</p>	<p>CHE 2B General Chemistry (5 units) Lecture—3 hours; laboratory/discussion—4 hours. Prerequisite: course 2A or 2AH. Continuation of course 2A. Condensed phases and intermolecular forces, chemical thermodynamics, chemical equilibria, acids and bases, solubility. Laboratory experiments in thermochemistry, equilibria, and quantitative analysis using volumetric methods.</p>	<p>CHE 2C General Chemistry (5 units) Lecture—3 hours; laboratory/discussion—4 hours. Prerequisite: course 2B or 2BH. Continuation of course 2B. Kinetics, electrochemistry, spectroscopy, structure and bonding in transition metal compounds, application of principles to chemical reactions. Laboratory experiments in selected analytical methods and syntheses.</p>
Organic Chemistry	<p>CHE 118A Organic Chemistry for Health and Life Sciences (4 units) Lecture—3 hours; laboratory/discussion—1.5 hours. Prerequisite: course 2C with a grade of C– or higher. The 118A, 118B, 118C series is for students planning professional school studies in health and life sciences. A rigorous, in-depth presentation of basic principles with emphasis on stereochemistry and spectroscopy and preparations and reactions of nonaromatic hydrocarbons, haloalkanes, alcohols and ethers.</p>	<p>CHE 118B Organic Chemistry for Health and Life Sciences (4 units) Lecture—3 hours; laboratory—3 hours. Prerequisite: course 118A. Continuation of course 118A, with emphasis on spectroscopy and the preparation and reactions of aromatic hydrocarbons, organometallic compounds, aldehydes and ketones.</p>	
Physics	<p>PHY 7A General Physics (4 units) Lecture—1.5 hours; discussion/laboratory—5 hours. Prerequisite: completion or concurrent enrollment in Mathematics 16B, 17B, or 21B. Introduction to general principles and analytical methods used in physics for students majoring in a biological science.</p>	<p>PHY 7B General Physics (4 units) Lecture—1.5 hours; discussion/laboratory—5 hours. Prerequisite: course 7A. Continuation of course 7A.</p>	<p>PHY 7C General Physics (4 units) Lecture—1.5 hours; discussion/laboratory—5 hours. Prerequisite: course 7B. Continuation of course 7B.</p>
Calculus	<p>MAT 16A Short Calculus (3 units) Lecture—3 hours. Prerequisite: two years of high school algebra, plane geometry, plane trigonometry, and satisfying the Mathematics Placement Requirement. Limits; differentiation of algebraic functions; analytic geometry; applications, in particular to maxima and minima problems.</p>	<p>MAT 16B Short Calculus (3 units) Lecture—3 hours. Prerequisite: course 16A, 17A, or 21A. Integration; calculus for trigonometric, exponential, and logarithmic functions; applications.</p>	<p>MAT 16C Short Calculus (3 units) Lecture—3 hours. Prerequisite: course 16B, 17B, or 21B. Differential equations; partial derivatives; double integrals; applications; series.</p>
Statistics	<p>STA 13 Elementary Statistics (4 units) Lecture—3 hours; discussion—1 hour. Prerequisite: two years of high school algebra or the equivalent in college. Descriptive statistics; basic probability concepts; binomial, normal, Student's t, and chi-square distributions. Hypothesis testing and confidence intervals for one and two means and proportions. Regression.</p>		

Note: All courses above are in quarter format.