



<b>Course Number</b> <b>Course Name</b>	ENVS 2201 Environmental Physical and Chemical Processes
<b>Credit Value</b> <b>(Breakdown of theory and lab credits)</b>	3 Theory
<b>Catalog Course Description</b>	You will study basic general, analytical, organic, and polymer chemistry from an environmental perspective: the pollutants of air, water, and land; the rudiments of toxicology, and an introduction to green chemistry. You will learn about chemical processes in industry and nature, physical transport, risk, and aspects of human impacts and policy.
<b>Course Student Learning Outcomes/Objectives /Competencies</b>	<ol style="list-style-type: none"> <li>1. Understand chemical reactions and pathways occurring at the soil-water interface.</li> <li>2. Knowledge of interfacial phenomena that are important for environmental chemical processes, whether they involve sorption of ions to flocculates during water treatment or soil weathering processes.</li> <li>3. Literacy in geochemical theory, with emphasis on reactions at the molecular-scale.</li> <li>4. Familiarity with chemical equilibria and kinetics to quantitatively assess reactivity and chemical speciation in soils and at the particle-water interface.</li> </ol>
<b>College-Wide Student Learning Outcomes measured (General education courses only)</b>	
<b>Program Student Learning Outcomes measured</b>	<ol style="list-style-type: none"> <li>1. Apply systems theory, concepts, and methodologies to critically analyze and understand interactions on an ecological level.</li> <li>2. Ability to undertake dynamic, complex, real-world problems in the lab, field, community, and workplace.</li> </ol>