



<b>Course Number</b>	BIOL 4425 Molecular Genetics
<b>Course Name</b>	
<b>Credit Value</b> <b>(Breakdown of theory and lab credits)</b>	3 Theory
<b>Catalog Course Description</b>	You will study the molecular biology of the gene, including chromosome structure, DNA replication and repair, RNA transcription and translation and the control of these processes, and techniques used to study these processes. Prerequisite: BIOL 3329.
<b>Course Student Learning Outcomes/Objectives /Competencies</b>	<ol style="list-style-type: none"> <li>1. Understand the molecular basis for transcription, translation, replication, and gene regulation and other topics in molecular genetics for both prokaryotes and eukaryotes</li> <li>2. Understand the underlying theoretical principles of the scientific methods and approaches of molecular genetics</li> <li>3. Able to critically interpret experimental designs related to molecular genetics</li> <li>4. Acquire an appreciation for the impact of molecular genetics (particularly of human) in physiology, evolution, and disease</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. Provide students with technical and analytical skills used in modern biological research. This will allow the students to demonstrate proper and safe laboratory practice, proper use of equipment and the ability to work effectively with computational, mathematical and statistical approaches.</li> </ol>