



<b>Course Number</b> <b>Course Name</b>	<b>BIOL 210 MICROBIOLOGY</b>
<b>Credit Value</b> <b>(Breakdown of theory and lab credits)</b>	3 Theory
<b>Catalog Course Description</b>	You will concentrate on the characteristics of microbes (particularly the bacteria), the influence of microbes on man and his environment and of man on the microbial environment, with a focus on medically significant microbes, physiologic responses to infection, clinical aspects of asepsis, proper procedures in the handling, isolation, and identification of bacteria.
<b>Student Learning Outcomes/Objectives /Competencies of the Course</b>	<ol style="list-style-type: none"> <li>1. Describe and compare the structure and function of prokaryotic and eukaryotic cells.</li> <li>2. Describe and compare the techniques used for staining of and microscopic observation of bacteria including morphology.</li> <li>3. Describe the nutritional requirements for bacterial growth and the impact of environmental factors on bacterial growth (temperature, pH, oxygen, etc.).</li> <li>4. Describe and compare the mechanisms of aerobic respiration, anaerobic respiration, and fermentative metabolism.</li> <li>5. Describe the mechanism of bacterial growth by binary fission, and laboratory methods used for observing and measuring bacterial growth.</li> <li>6. Describe the mechanisms of bacterial DNA replication, RNA transcription, and translation, and compare and contrast with eukaryotic cells.</li> <li>7. Describe the structure and replication strategies of viruses.</li> <li>8. Describe and contrast mechanisms of innate non-specific immunity and adaptive specific immunity.</li> <li>9. Describe immune hypersensitivity reactions, autoimmune diseases, and immunodeficiency diseases.</li> <li>10. Differentiate between host-microbe relationships, mechanisms of microbial pathogenesis, differentiate between communicable and non-communicable diseases and describe mechanisms of direct and indirect transmission of communicable diseases</li> </ol>
<b>College-Wide Student Learning Outcomes</b>	<ol style="list-style-type: none"> <li>1. <i>Critical Thought</i> <i>Critical Thought will be assessed by testing of concepts related to Microbiology.</i></li> </ol>