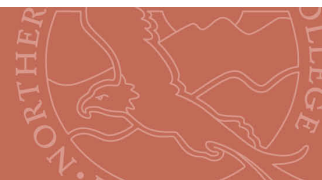


NORTHERN NEW MEXICO COLLEGE



Course Number Course Name	BIOL 2310 Microbiology
Credit Value (Breakdown of theory and lab credits)	3 Theory
Catalog Course Description	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.
Course Student Learning Outcomes/Objectives /Competencies	<ol style="list-style-type: none"> 1. Describe and compare the structure and function of prokaryotic and eukaryotic cells. 2. Describe and compare the techniques used for staining of and microscopic observation of bacteria including morphology. 3. Describe the nutritional requirements for bacterial growth and the impact of environmental factors on bacterial growth (temperature, pH, oxygen, etc.). 4. Describe and compare the mechanisms of aerobic respiration, anaerobic respiration, and fermentative metabolism. 5. Describe the mechanism of bacterial growth by binary fission, and laboratory methods used for observing and measuring bacterial growth. 6. Describe the mechanisms of bacterial DNA replication, RNA transcription, and translation, and compare and contrast with eukaryotic cells. 7. Describe the structure and replication strategies of viruses. 8. Describe and contrast mechanisms of innate non-specific immunity and adaptive specific immunity. 9. Describe immune hypersensitivity reactions, autoimmune diseases, and immunodeficiency diseases. 10. Differentiate between host-microbe relationships, mechanisms of microbial pathogenesis, differentiate between communicable and noncommunicable diseases and describe mechanisms of direct and indirect transmission of communicable diseases
College-Wide Student Learning Outcomes measured (General education courses only)	
Program Student Learning Outcomes measured	<ol style="list-style-type: none"> 1. Provide students with an understanding of the role of science in society and the ethical conduct of science.

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