



Course Number Course Name	BIOL 2610 Principles of Biology: Biodiversity, Ecology, and Evolution
Credit Value (Breakdown of theory and lab credits)	3 Theory
Catalog Course Description	You will study the principles of evolution on the origin of the biosphere and the diversifications of life; the processes of natural selection and the origin of species, and the evolution of populations; evolutionary ecology with emphasis on behavioral, population, and community ecology, along with the impacts on the ecosystem, ecology, and conservation biology.
Course Student Learning Outcomes/Objectives /Competencies	<ol style="list-style-type: none"> 1. Understand the scientific method and apply it to biological topics of genetics, evolution, ecology, and biodiversity. 2. Apply quantitative reasoning and scientific thinking to real world problems. 3. Identify and describe the basic principles of evolution. 4. Analyze the relationships between the genetics of populations and evolution. 5. Analyze the processes of speciation. 6. Describe how the hierarchical classification scheme is used to categorize organisms. 7. Describe how DNA research has modernized bio systematics. 8. Compare and contrast the general characteristics of each of the living domains and kingdoms. 9. Relate the structure of organisms to the way they function. 10. Explain how the life histories of organisms are adapted for different environments. 11. Relate the complexity of behavior to the overall complexity of an organism. 12. Describe the ecological roles played by organisms in each kingdom. 13. Compare basic ecological principles at the population and community levels of organization. 14. Describe and compare energy relationships and the cycling of materials in ecosystems.
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 ability to effectively communicate the findings of biological research and incorporate their findings into the existing body of knowledge in biology. Students will demonstrate ability to report the results of their experiments through oral and written communication.

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