ARRUPE BIOLOGY (ACBIO)

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ACBIO 101 General Biology I (3 Credit Hours)
Co-requisites: ACBIO 111
General Biology I is a 3-credit lecture course that introduces the fundamental principles of Biology focusing the fields of cell structure and function, molecular genetics, and evolution. Topics covered in the course include introductory chemistry, cell structure and function, cellular communication, metabolic processes, cellular reproduction, and introductory genetics. Students will be able to demonstrate an understanding of matter, energy, and organization in living systems. 2. Students will be able to demonstrate an understanding of the biochemistry and metabolism of organisms. 3. Students will be able to demonstrate and understand the fundamental concepts of cell structure, function, and processes. 4. Students will be able to explain the major concepts of molecular genetics, including the flow of genetic information from DNA to RNA to proteins and how changes in genes impact cellular function, organismal health, and evolutionary trajectories.
Course equivalencies: ACBIO 101 / BIOL 101
Outcomes:
1

ACBIO 102 General Biology II (3 Credit Hours)
Pre-requisites: ACBIO 101 and ACBIO 111 with grade of C- or better
Co-requisites: ACBIO 112
General Biology II is a 3-credit lecture course that introduces the fundamental principles of Biology focusing the fields of evolution and evolutionary history, plant structure and function, animal form and function. Topics covered in the course include evolutionary processes, speciation, history of life on earth, plant biology, soils, homeostasis, animal biology, mammalian organ systems, community ecology, and environmental challenges as scientific and social problems. Students will be able to demonstrate an understanding of biological evolution and differentiate between the processes of evolution. 2. Students will be able to demonstrate an understanding of the evolutionary history of life on Earth. 3. Analyze the functions and interrelationships of various organismal systems including plant structure and function, and animal form and function. 4. Explain major concepts of ecology including nutrient cycling, trophic levels, population dynamics, and biodiversity.
Course equivalencies: ACBIO 102 / BIOL 102
Outcomes:
1

ACBIO 111 General Biology I Lab (1 Credit Hour)
Co-requisites: ACBIO 101
General Biology 1 Lab is a 1-credit laboratory course that introduces students to the fundamental principles of organismal biology. Differentiate between the major taxonomic groups. 2. Make comparisons in cell structure and function among selected organisms. 3. Identify characteristics of selected organisms and understand the evolutionary and ecological relationships among taxonomic groups. 4. Demonstrate the ability to use current research techniques and instruments to study the diversity of organisms at the microscopic and macroscopic level.
Course equivalencies: BIOL 111/ACBIO 111
Outcomes:
1

ACBIO 112 General Biology II Lab (1 Credit Hour)
Pre-requisites: ACBIO 101 and ACBIO 111 with a grade of C- or better
Co-requisites: ACBIO 102
General Biology lab is a 1-credit laboratory course that introduces the fundamental principles of Biology focusing on evolutionary principles and processes, cell structure and function, plant and animal biological processes, and ecological principles. Differentiate between the major taxonomic groups. 2. Make comparisons in cell structure and function among selected organisms. 3. Identify characteristics of selected organisms and understand the evolutionary and ecological relationships among taxonomic groups. 4. Demonstrate the ability to use current research techniques and instruments to study the diversity of organisms at the microscopic and macroscopic level.
Course equivalencies: ACBIO 112 / BIOL 112
Outcomes:
1