BIOL 3320K: Plant Morphology

4 Credit Hours

Prerequisite: (BIOL 1107 and BIOL 1107L) and (BIOL 1108 and BIOL 1108L)

In this course students will explore the evolutionary trends and relationships of the phyla of non-vascular and vascular plants, as well as a number of groups of algae. Students will examine vegetative and reproductive morphology across varied life cycles and through paleobotany. Laboratory work is closely tied to lecture material and includes examination of microscope slides as well as dissections and observations of morphological features of specimens. Students will make drawings of many of their specimens. A trip to the Atlanta Botanical Gardens is required.

BIOL 3327: Medical Genetics

3 Credit Hours

Prerequisite: BIOL 3300 or consent of the instructor.

An introduction to the principles of medical genetics and the application of these principles to human genetic disorders. Topics include inborn errors of metabolism, cytogenetic anomalies, neural tube defects, and application of molecular genetics to the diagnosis of specific disorders. Genetic counseling procedures, prenatal options and the ethical dilemmas generated as a result of these options will also be discussed.

BIOL 3330K: Biology of the Algae

4 Credit Hours

Prerequisite: (BIOL 1107 and BIOL 1107L) and (BIOL 1108 and BIOL 1108L)

This course covers the physiology, ecology, systematics, and diversity of marine and freshwater algae. In particular, students will explore the role of algae in biogeochemical cycling, the evolution of photosynthesis, and ecosystem function in a changing biosphere. The course also focuses on the applied aspects of algal biology by examining their use as indicators of ecosystem health, food sources, and other social, cultural, and economic commodities. Field collections and experiments are an integral part of the course.

BIOL 3335: Natural History of Georgia

4 Credit Hours

Prerequisite: BIOL 3370

This course examines the flora, fauna, geology, and environments of selected Georgia ecoregions. Students will learn the historical and geological development of the state's major habitats and landforms, which are examined by way of two four-day, overnight field trips during the Maymester term.