EEOB 1930: Introduction to Biological Studies – Aquatic Biology

EEOB 1930 will introduce high school and college students to the components of freshwater ecosystems through hands-on experiences at Stone Laboratory. During this introductory aquatic biology course students will be exposed to various aquatic ecosystems (e.g., large lakes, cold water streams, warm water streams, estuaries, and warm water pond ecosystems) and will learn to identify their key features. Students will also gain a basic understanding of the properties of water, the physio-chemical characteristics of lakes (i.e., relationship between physical, chemical, and biological aspects of aquatic habitats), the associations of living organisms (i.e., trophic relationships and food web structure), aquatic seasonal dynamics, stream classification, the stream continuum concept, and nutrient dynamics.

This course is devoted to the major questions, approaches, applications, and tools of modern freshwater ecology. Upon successful completion of this course students will be able to: (1) classify inland waters, (2) identify the main structural components of aquatic systems, (3) identify invertebrates, plants, and fish associated with different habitats, (4) discuss human impacts on aquatic communities, and (5) describe the functioning of aquatic ecosystems.

Students will gain a basic understanding of aquatic ecology through a combination of lectures, labs assignments, and field trips. Students will become familiar with laboratory techniques and tools (e.g., scope work and dissections) and common equipment and sampling protocols used in the field. Both the laboratory and field experiences are absolutely essential to this course because they are designed to reinforce lecture topics. Field trips include:

- Two-hour field trip on Lake Erie via OSU research vessel
- Full-day field trip Little Pickerel Creek
- Full-day field trip to warm water stream and estuary
- Two-hour field trip to Terwilliger’s Pond, South Bass Island
- Field trip on electrofishing vessel in Lake Erie

Assessment of your participation and knowledge gained includes multiple quizzes, multiple homework assignments, a final written exam, a final laboratory practical, and a graded collection of specimens. The quizzes and exams will be completed individually but the various homework assignments and the collection of specimens will be completed in small groups.

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