This course will emphasize principles and concepts of modern ecology. Emphasis will be placed on increasing teachers' knowledge and understanding in identifying, applying and analyzing recent biology concepts, processes and principles and increasing teachers' understanding and skills in using the methods of science through the use of open-ended investigations.

BIOL 5517. Selected Topics in Ecology. (3 Credits)
This course will address ecological concepts in northern, middle and coastal areas of Georgia for middle grades and secondary teachers. Emphasis will be placed on addressing current ecological issues that incorporate hands-on field activities into the learning process.

BIOL 5518. Biotechnology. (3 Credits)
This course will emphasize the study of gene structure and regulation. It is designed to acquaint students with current concepts and issues in biotechnology and to explore its applications in plant, animal, biomedical, human society and the global environment.
BIOL 5519. Plant Biology. (3 Credits)
Particular attention will be placed on the identification, selection and use of materials for correlating the study of plants with other subjects. The teacher will develop a base of knowledge that will enhance his/her effectiveness in planning and executing laboratory and field exercises in botany that complement lecture presentation.

BIOL 5520. Evolution and the Nature of Science. (3 Credits)
The nature of science and the fundamentals governing its origin will be presented in relation to current problems affecting the maintenance of life on earth. Special emphasis will be placed on the interaction of biological and cultural evolution and the alternatives to extinction that challenge contemporary man.

BIOL 5521. Hydrology/Water Use Efficiency. (3 Credits)
This course is designed to introduce concepts basic to hydrology and irrigation. Fundamental characteristics of aquifers - tributary and non-tributary - are discussed along with their relevance for policy issues. Irrigation techniques and water use efficiency are discussed.

BIOL 5522. Enviro and Nat Resour. (3 Credits)
This course provides an overview of the economic principles, public policy instruments, and current practice involved in the management and conservation of natural and environmental systems. Emphasis is on the basic economic, ecology, principles and concepts that are necessary for effective resource management.

BIOL 5523. Water Resources/Envr Plan. (3 Credits)
This course provides the basic concepts necessary for applying benefit cost analysis to water projects and issues.

BIOL 5524. Water Law. (3 Credits)
This course is designed to introduce students without a background in law to basic legal concepts that are of critical importance for the design and implementation of water policies. Included will be a review of all major court decisions concerning equitable apportionment and their relevance for contemporary water policy.