training in the principles of resource utilization and conservation as applied to biological systems. The course focuses on the management and rational exploitation of resources in terrestrial and aquatic ecosystems with particular emphasis on local and regional resources.

BIOL 3280 Waste Treatment and Recycling (3,3,0) (E)
Prerequisite: BIOL 2110 Ecology
This course is designed to understand the origins of waste and the social, political and economic issues involved with waste disposal and to review the waste generation problem and to examine various physical, chemical and biological waste treatment methods. The course also introduces the various technologies in reducing and reutilizing the various types of wastes. Students will have a comprehensive knowledge of the current and projected legislation regarding waste and their potential implications.

BIOL 3320 Immunology (3,3,0) (E)
Prerequisite: BIOL 1210 Cell Biology, BIOL 2160 Genetics and Evolution and BIOL 2210 Animal Physiology
This course provides basic concepts in the rapidly advancing field of immunology and exposes students to modern and current applications of immunology in cell biology, molecular biology and medical sciences.

BIOL 3350 Neurobiology (3,3,0) (E)
Prerequisite: BIOL 2210 Animal Physiology
The course studies neurobiology with main emphasis on how neuronal information are integrated in the CNS to control functions such as visual recognition, sleep, memory and movement. The course also studies the autonomic nervous system with emphasis on its control of body functions. Lastly, the relationship between the nervous system and the hormonal system will also be stressed.

BIOL 3380 Environmental Science Laboratory I (2,0,6)
Prerequisite: BIOL 2110 Ecology and Biology major Year III standing (Environmental Concentration); or BIOL 2110 Ecology and Geography major Year III standing
This course provides students with hands-on experience in the approach and techniques commonly used in environmental research. A local habitat will be selected and students will be trained the sampling and analytical techniques for various environmental matrices including water, soil and biological samples.

BIOL 3390 Environmental Science Laboratory II (2,0,6)
Prerequisite: Biology major Year III standing (Environmental Concentration)
This laboratory exercise provides students with training in analytical techniques, including physical, chemical and biological techniques, for environmental investigations, and with the skills in management and evaluation of environmental data, and with hands-on experience in management techniques for conducting and evaluating an environmental project.

BIOL 3460 Biotechnology Studies Laboratory I (2,0,6)
Prerequisite: Biology major Year III standing (Biotechnology Concentration)
This laboratory exercise introduces basic principles and current methods in biotechnology. The topics cover the basic technologies in molecular biology, enzymology and immunology.

BIOL 3470 Biotechnology Studies Laboratory II (2,0,6)
Prerequisite: Biology major Year III standing (Biotechnology Concentration)
This laboratory exercise introduces basic principles and current methods in biotechnology. The topics cover various techniques currently being used in the area of immunology, plant science, production of microbial products, neurobiology and physiology.

BIOL 3591-2 Applied Biology Project I & II (3,0,9)
Prerequisite: Biology major Year III standing
This course aims to guide students in the development of research methodology appropriate to the practice of biology. Opportunity will be given to students who work on problems of an applied or interdisciplinary nature that have real-world significance.

BIOL 4005 Biotechnology Studies Laboratory I (2,0,6)
Prerequisite: Biology major Year IV standing (Biotechnology Concentration)
The course is to introduce basic principles and current methods in biotechnology. The topics cover the basic technologies in molecular biology, enzymology and immunology.

BIOL 4006 Environmental Science Laboratory I (2,0,6)
Prerequisite: Biology major Year IV standing (Environmental Concentration)
This course provides students with hands-on experience in the approaches and techniques commonly used in environmental research. A local habitat will be selected and students will be trained the sampling and analytical techniques of various environmental matrices including water, soil and biological samples.

BIOL 4007 Molecular Biotechnology I (3,3,0)
Prerequisite: Biology major Year IV standing
This course aims to introduce to students fundamental principle and current techniques in molecular biology with particular emphasis on biotechnology applications. The recombinant DNA technology in protein engineering will be emphasized.

BIOL 4015 Fermentation and Enzyme Technology (3,3,0)
Prerequisite: Biology major Year IV standing
This course aims to introduce basic principles and current techniques in industrial microbiology and enzyme technology.

BIOL 4016 Principles of Environmental Management (3,3,0)
Prerequisite: Biology major Year IV standing
This course aims to (1) discuss the anthropogenic causes of environmental degradation and the way sustainable growth can be brought about by environmental management; (2) examine the framework of environmental planning and management and the techniques for tackling environmental management; and (3) apply principles of environmental science to help manage some of the diverse array of environmental problems, in different physical, biological and social environments.

BIOL 4017 Environmental Biotechnology (3,3,0)
Prerequisite: Biology major Year IV standing
This course provides a general understanding of the principles and applications of biotechnology in environmental monitoring, pollution control and contaminants removal. Special emphasis will be placed in biological wastewater treatment, bioremediation and ecological engineering.

BIOL 4025 Biotechnology Studies Laboratory II (2,0,6)
Prerequisite: Biology major Year IV standing (Biotechnology Concentration)
This course introduces basic principles and current methods in biotechnology. The topics cover various techniques currently in use in immunology, plant science, production of microbial products, neurobiology, and physiology.