BIOL 4015 Fermentation and Enzyme Technology (3,3,0) (E)
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) (E)
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) (E)
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) (E)
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.

BIOL 4026 Environmental Science Laboratory II (1,0,3) (E)
Prerequisite: Biology major Year IV standing (Environmental Concentration)
This course aims to (1) provide students with training in analytical techniques, including physical, chemical and biological techniques, for environmental investigations; (2) provide students with the skills in management and evaluation of environmental data; and (3) provide students with hands-on experience in management techniques for conducting and evaluating an environmental project.

BIOL 4027 Molecular Biotechnology II (3,3,0) (E)
Prerequisite: Biology major Year IV standing
This course aims to cover the fundamental principles and current techniques in molecular biology with particular emphasis on the application of biotechnology in animal science, plant science and medicine.

BIOL 4035 Biological Resources and Management (3,3,0) (E)
Prerequisite: Biology major Year IV standing
This course is designed to promote an awareness of human beings' interaction with the abiotic and biotic environments through studying the principles of resource utilization and conservation that apply 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 4898-9 Applied Biology Project I & II (3,0,9) (E)
Prerequisite: Biology major Year IV standing
This course aims to provide students with opportunitites to conduct a literature survey or laboratory-based research on a specific biological question. Guidance will be provided to students in the development of an independent research plan and apply this plan to address the question.

BIOL 7010 Advanced Topics in Biotechnology (3,3,0)
Prerequisite: BSc (Hons) in Biology or with consent of instructor
This is a postgraduate course covering the principles and methods of biotechnology at an advanced level It aims at providing more in-depth studies of selected topics, such as production of recombinant proteins, toxicological study of drugs, application of immunological techniques in research, and new developments of modern biotechnology.

BIOL 7020 Advanced Topics in Environmental Sciences (3,3,0)
Prerequisite: BSc (Hons) in Biology or with consent of instructor
This is a postgraduate course that provides update information in recent advance development in selected areas in environmental science and technology.

BIOL 7030 Environmental Health and Toxicology (3,3,0)
Prerequisite: BIOL 1160 Biological Chemistry and BIOL 2210 Animal Physiology
This course provides general knowledge concerning the various routes of human exposure to toxic chemcials. Main emphasis will be placed on the biological responses to toxicants, methods for evaluating potential toxicity and applications of toxicological data to assess potential health risk.

BIOL 7040 Principles of Environmental Management (3,3,0)
Prerequisite: BIOL 2110 Ecology or Geography major Year III standing
This course discusses the anthropogenic causes of environmental degradation and the way sustainable growth can be brought about by environment management. This course also examines the framework of environmental planning and management and the techniques for tackling environmental management. This course also applies principles of environmental science to help manage some of the diverse array of environmental problems, in different physical, biological and social environment.

BIOL 7050 Molecular Biology (3,3,0)
Prerequisite: BIOL 1160 Biological Chemistry, BIOL 1210 Cell Biology, BIOL 1310 Microbiology and BIOL 2160 Genetics and Evolution
This course aims to provide a fundamental principle and current techniques in molecular biology with particular regard to topics related to application in biotechnology. Special attention will be given to the organization of eukaryotic genes, the flow of genetic information and the control of gene expression. The recombinant DNA technology in protein engineering will be emphasized.

BIOL 7060 Environmental Biotechnology (3,3,0)
Prerequisite: BIOL 1160 Biological Chemistry and BIOL 1310 Microbiology
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 7070 Fermentation and Enzyme Technology (3,3,0)
Prerequisite: BIOL 1160 Biological Chemistry, BIOL 1210 Cell Biology, BIOL 1310 Microbiology and BIOL 2160 Genetics and Evolution
This course introduces basic principles and current techniques in industrial microbiology and enzyme technology.