

BIOLOGY

Initial student placement in developmental courses is based on individual college placement testing policies and procedures. Students should begin developmental course work at the appropriate level indicated by the college's placement test.

*Effective Term – Summer 1997 [1997*02]*

BIO 090	Foundations of Biology	3	2	4
Prerequisites:	None			
Corequisites:	RED 090			

This course introduces basic biological concepts. Topics include basic biochemistry, cell structure and function, interrelationships among organisms, scientific methodology, and other related topics. Upon completion, students should be able to demonstrate preparedness for college-level biology courses.

*Effective Term – Summer 1997 [1997*02]*

BIO 092	Basics of Cell Biology	3	2	4
Prerequisites:	None			
Corequisites:	RED 090			

This course covers basic cell biology. Emphasis is placed on biological chemistry, cell structure and function, cellular metabolism, genetics, and other related topics. Upon completion, students should be able to demonstrate preparedness for college-level biology courses.

*Effective Term – Fall 2009 [2009*03] – CRC 09/23/08*

BIO 094	Concepts of Human Biology	3	2	4
Prerequisites:	None			
Corequisites:	ENG 095 or RED 090			

This course focuses on fundamental concepts of human biology. Topics include terminology, biochemistry, cell biology, tissues, body systems, and other related topics. Upon completion, students should be able to demonstrate preparedness for college-level anatomy and physiology courses.

*Effective Term – Summer 1997 [1997*02]*

BIO 094	Concepts of Human Biology	3	2	4
Prerequisites:	None			
Corequisites:	RED 090			

This course focuses on fundamental concepts of human biology. Topics include terminology, biochemistry, cell biology, tissues, body systems, and other related topics. Upon completion, students should be able to demonstrate preparedness for college-level anatomy and physiology courses.

*Effective Term – Summer 1997 [1997*02]*

BIO 100	Introduction to Biology	3	2	4
Prerequisites:	None			
Corequisites:	None			

This course is a survey of general biological principles and introduces basic biological laboratory skills. Topics include the molecular and cellular basis of life, bioenergetics, homeostasis, reproduction, genetics, ecology, and evolution. Upon completion, students should be able to articulate an understanding of the general principles of biology and to demonstrate basic laboratory skills. *This is a diploma level course.*

*Effective Term – Summer 1997 [1997*02]*

BIO 106	Intro to Anat/Phys/Micro	2	2	3
Prerequisites:	None			
Corequisites:	None			

This course covers the fundamental and principle concepts of human anatomy and physiology and microbiology. Topics include an introduction to the structure and function of cells, tissues, and human organ systems, and an overview of microbiology, epidemiology, and control of microorganisms. Upon completion, students should be able to identify structures and functions of the human body and describe microorganisms and their significance in health and disease. *This is a diploma level course.*

*Effective Term – Summer 1997 [1997*02]*

BIO 110	Principles of Biology	3	3	4
Prerequisites:	None			
Corequisites:	None			

This course provides a survey of fundamental biological principles for non-science majors. Emphasis is placed on basic chemistry, cell biology, metabolism, genetics, taxonomy, evolution, ecology, diversity, and other related topics. Upon completion, students should be able to demonstrate increased knowledge and better understanding of biology as it applies to everyday life. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.*

*Effective Term – Summer 1997 [1997*02]*

BIO 111	General Biology I	3	3	4
Prerequisites:	None			
Corequisites:	None			

This course introduces the principles and concepts of biology. Emphasis is placed on basic biological chemistry, cell structure and function, metabolism and energy transformation, genetics, evolution, classification, and other related topics. Upon completion, students should be able to demonstrate understanding of life at the molecular and cellular levels. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. This course is also available through the Virtual Learning Community (VLC).*

*Effective Term – Summer 1997 [1997*02]*

BIO 112	General Biology II	3	3	4
Prerequisites:	BIO 111			
Corequisites:	None			

This course is a continuation of BIO 111. Emphasis is placed on organisms, biodiversity, plant and animal systems, ecology, and other related topics. Upon completion, students should be able to demonstrate comprehension of life at the organismal and ecological levels. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. This course is also available through the Virtual Learning Community (VLC).*

*Effective Term – Summer 1997 [1997*02]*

BIO 120	Introductory Botany	3	3	4
Prerequisites:	BIO 110 or BIO 111			
Corequisites:	None			

This course provides an introduction to the classification, relationships, structure, and function of plants. Topics include reproduction and development of seed and non-seed plants, levels of organization, form and function of systems, and a survey of major taxa. Upon completion, students should be able to demonstrate comprehension of plant form and function, including selected taxa of both seed and non-seed plants. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. This course is also available through the Virtual Learning Community (VLC).*

*Effective Term – Summer 1997 [1997*02]*

BIO 130 **Introductory Zoology**
 Prerequisites: BIO 110 or BIO 111
 Corequisites: None

3 3 4

This course provides an introduction to the classification, relationships, structure, and function of major animal phyla. Emphasis is placed on levels of organization, reproduction and development, comparative systems, and a survey of selected phyla. Upon completion, students should be able to demonstrate comprehension of animal form and function including comparative systems of selected groups. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. This course is also available through the Virtual Learning Community (VLC).*

*Effective Term – Summer 1997 [1997*02]*

BIO 140 **Environmental Biology**
 Prerequisites: None
 Corequisites: None

3 0 3

This course introduces environmental processes and the influence of human activities upon them. Topics include ecological concepts, population growth, natural resources, and a focus on current environmental problems from scientific, social, political, and economic perspectives. Upon completion, students should be able to demonstrate an understanding of environmental interrelationships and of contemporary environmental issues. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics. This course is also available through the Virtual Learning Community (VLC).*

*Effective Term – Summer 1997 [1997*02]*

BIO 140A **Environmental Biology Lab**
 Prerequisites: None
 Corequisites: BIO 140

0 3 1

This course provides a laboratory component to complement BIO 140. Emphasis is placed on laboratory and field experience. Upon completion, students should be able to demonstrate a practical understanding of environmental interrelationships and of contemporary environmental issues. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.*

*Effective Term – Summer 1997 [1997*02]*

BIO 143 **Field Biology Minicourse**
 Prerequisites: None
 Corequisites: None

1 2 2

This course introduces the biological and physical components of a field environment. Emphasis is placed on a local field environment with extended field trips to other areas. Upon completion, students should be able to demonstrate an understanding of the biological and physical components of the specific biological environment. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 145 **Ecology**
 Prerequisites: BIO 110 or BIO 111
 Corequisites: None

3 3 4

This course provides an introduction to ecological concepts using an ecosystems approach. Topics include energy flow, nutrient cycling, succession, population dynamics, community structure, and other related topics. Upon completion, students should be able to demonstrate comprehension of basic ecosystem structure and dynamics. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).*

*Effective Term – Summer 1997 [1997*02]*

BIO 146 Regional Natural History 3 3 4
 Prerequisites: None
 Corequisites: None

This course is an interdisciplinary and historical analysis of the natural resources of the region. Emphasis is placed on geology, climate, forest systems, watersheds, water resources, and fish and wildlife resources of the region. Upon completion, students should be able to demonstrate comprehension of the natural history and the integration of the natural resources of the region. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 150 Genetics in Human Affairs 3 0 3
 Prerequisites: BIO 110 or BIO 111
 Corequisites: None

This course describes the importance of genetics in everyday life. Topics include the role of genetics in human development, birth defects, cancer and chemical exposure, and current issues including genetic engineering and fertilization methods. Upon completion, students should be able to understand the relationship of genetics to society today and its possible influence on our future. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 155 Nutrition 3 0 3
 Prerequisites: None
 Corequisites: None

This course covers the biochemistry of foods and nutrients with consideration of the physiological effects of specialized diets for specific biological needs. Topics include cultural, religious, and economic factors that influence a person's acceptance of food, as well as nutrient requirements of the various life stages. Upon completion, students should be able to identify the functions and sources of nutrients, the mechanisms of digestion, and the nutritional requirements of all age groups. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 156 Nutrition and the Child 3 0 3
 Prerequisites: None
 Corequisites: None

This course provides an outline of food requirements for children. Topics include menu plans, food preparation, and nutrition education for children and their parents. Upon completion, students should be able to identify sources and functions of nutrients and describe and use standards for evaluating nutritional adequacy in children.

*Effective Term – Summer 1997 [1997*02]*

BIO 160 Introductory Life Science 2 2 3
 Prerequisites: None
 Corequisites: None

This course introduces scientific and biological concepts. Topics include basic chemistry, cell structure and function, cell division, basic genetic concepts, anatomical terminology, and metric-English measurements and conversions. Upon completion, students should be able to demonstrate an understanding of basic chemistry, cell biology, genetic concepts; anatomical terminology; and metric-English measurements and conversions.

*Effective Term – Summer 1997 [1997*02]*

BIO 161	Intro to Human Biology	3	0	3
Prerequisites:	None			
Corequisites:	None			

This course provides a basic survey of human biology. Emphasis is placed on the basic structure and function of body systems and the medical terminology used to describe normal and pathological states. Upon completion, students should be able to demonstrate an understanding of normal anatomy and physiology and the appropriate use of medical terminology.

*Effective Term – Summer 1997 [1997*02]*

BIO 162	Intro to Human Physiology	4	0	4
Prerequisites:	None			
Corequisites:	None			

This course introduces the functions of the human organ systems. Emphasis is placed on the organ systems relationships and the role of each in homeostasis and maintenance of life. Upon completion, students should be able to demonstrate knowledge of various organ system functions and their role in homeostasis.

*Effective Term – Summer 1997 [1997*02]*

BIO 163	Basic Anat & Physiology	4	2	5
Prerequisites:	None			
Corequisites:	None			

This course provides a basic study of the structure and function of the human body. Topics include a basic study of the body systems as well as an introduction to homeostasis, cells, tissues, nutrition, acid-base balance, and electrolytes. Upon completion, students should be able to demonstrate a basic understanding of the fundamental principles of anatomy and physiology and their interrelationships. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 165	Anatomy and Physiology I	3	3	4
Prerequisites:	None			
Corequisites:	None			

This course is the first of a two-course sequence which provides a comprehensive study of the anatomy and physiology of the human body. Topics include the structure, function, and interrelationship of organ systems with emphasis on the processes which maintain homeostasis. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).*

*Effective Term – Summer 1997 [1997*02]*

BIO 166	Anatomy and Physiology II	3	3	4
Prerequisites:	BIO 165			
Corequisites:	None			

This course is the second in a two-course sequence which provides a comprehensive study of the anatomy and physiology of the human body. Topics include the structure, function, and interrelationship of organ systems with emphasis on the processes which maintain homeostasis. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and the interrelationships of all body systems. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement. This course is also available through the Virtual Learning Community (VLC).*

*Effective Term – Fall 1998 [1998*03]*

BIO 168 Anatomy and Physiology I 3 3 4
 Prerequisites: None
 Corequisites: None

This course provides a comprehensive study of the anatomy and physiology of the human body. Topics include body organization, homeostasis, cytology, histology, and the integumentary, skeletal, muscular, and nervous systems and special senses. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 168 Anatomy and Physiology I 3 3 4
 Prerequisites: None
 Corequisites: None

This course provides a comprehensive study of the anatomy and physiology of the human body. Topics include body organization, homeostasis, cytology, histology, and the integumentary, skeletal, muscular, nervous, special senses, and endocrine systems. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships. *This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirements.*

*Effective Term – Fall 1998 [1998*03]*

BIO 169 Anatomy and Physiology II 3 3 4
 Prerequisites: BIO 168
 Corequisites: None

This course provides a continuation of the comprehensive study of the anatomy and physiology of the human body. Topics include the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems as well as metabolism, nutrition, acid-base balance, and fluid and electrolyte balance. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 169 Anatomy and Physiology II 3 3 4
 Prerequisites: BIO 168
 Corequisites: None

This course provides a continuation of the comprehensive study of the anatomy and physiology of the human body. Topics include the cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems as well as metabolism, nutrition, acid-base balance, and fluid and electrolyte balance. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships. *This course has been approved to satisfy the Comprehensive Articulation Agreement pre-major and/or elective course requirements*

*Effective Term – Summer 1997 [1997*02]*

BIO 170 Introductory Microbiology 3 3 4
 Prerequisites: None
 Corequisites: None

This course introduces fundamental concepts of microbiology with emphasis on the relationships of microorganisms to humans. Topics include common groups of microorganisms and their relationships to human disease, including means of transmission, body defenses, prevention, control, and treatment. Upon completion, students should be able to practice and recognize the value of aseptic technique in microbial control.

*Effective Term – Summer 1997 [1997*02]*

BIO 173 **Microbes in World Affairs** 3 0 3
 Prerequisites: BIO 110 or BIO 111
 Corequisites: None

This course provides an integrated and comprehensive study of the microbial world and its influence on global events and human affairs. Topics include plant and animal diseases caused by viral, bacterial, and fungal pathogens and their impacts on history, industrial microbiology, biotechnology, and microbial ecology. Upon completion, students should be able to demonstrate an understanding of the importance of microbes in human and world affairs. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Fall 2004 [2004*03] – CRC 03/09/04*

BIO 175 **General Microbiology** 2 2 3
 Prerequisites: BIO 110, BIO 111, BIO 163, BIO 165, or BIO 168
 Corequisites: None

This course covers principles of microbiology with emphasis on microorganisms and human disease. Topics include an overview of microbiology and aspects of medical microbiology, identification and control of pathogens, disease transmission, host resistance, and immunity. Upon completion, students should be able to demonstrate knowledge of microorganisms and the disease process as well as aseptic and sterile techniques. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 175 **General Microbiology** 2 2 3
 Prerequisites: BIO 110, BIO 163, BIO 166, or BIO 169
 Corequisites: None

This course covers principles of microbiology with emphasis on microorganisms and human disease. Topics include an overview of microbiology and aspects of medical microbiology, identification and control of pathogens, disease transmission, host resistance, and immunity. Upon completion, students should be able to demonstrate knowledge of microorganisms and the disease process as well as aseptic and sterile techniques. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 176 **Adv General Microbiology** 1 2 2
 Prerequisites: BIO 175
 Corequisites: None

This course is a continuation of BIO 175. Emphasis is placed on microbial metabolism, genetics, and environmental and food microbiology. Upon completion, students should be able to identify unknown microbes and demonstrate an understanding of the fundamentals of molecular biology and microbial ecology. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 180	Biological Chemistry	2	2	3
Prerequisites:	None			
Corequisites:	None			

This course provides an introduction to basic biochemical processes in living systems. Topics include properties of carbohydrates, lipids, proteins, nucleic acids, vitamins, and buffers, with emphasis on biosynthesis, degradation, function, and equilibrium. Upon completion, students should be able to demonstrate an understanding of fundamental biochemical concepts. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 221	Botany I	3	3	4
Prerequisites:	BIO 112			
Corequisites:	None			

This course provides an introduction to the higher vascular plants. Topics include the structure, function, growth, life cycles, reproduction, and economic importance. Upon completion, students should be able to describe the biology and value of the higher vascular plants. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 222	Botany II	3	3	4
Prerequisites:	BIO 112			
Corequisites:	None			

This course includes a survey of the plant kingdom complete with a plant collection and field work. Emphasis is placed on ecology and the taxonomy of higher plants. Upon completion, students should be able to classify common plants. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 223	Field Botany	2	3	3
Prerequisites:	BIO 112			
Corequisites:	None			

This course provides a field and laboratory study of local flora. Emphasis is placed on local flora classification, identification, and ecology by the use of keys and field studies. Upon completion, students should be able to use keys for the classification and identification of local flora and to demonstrate an understanding of plant ecology. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 224	Local Flora Spring	1	2	2
Prerequisites:	None			
Corequisites:	None			

This course provides an introduction to the identification of native plants. Emphasis is placed on spring wild flowers. Upon completion, students should be able to identify a variety of spring wild flowers and native plants. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 225 Local Flora Summer

1 2 2

Prerequisites: None

Corequisites: None

This course provides an introduction to the identification of native plants. Emphasis is placed on summer wild flowers. Upon completion, students should be able to identify a variety of summer wild flowers and native plants. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 226 Local Flora Fall

1 2 2

Prerequisites: None

Corequisites: None

This course provides an introduction to the identification of native plants. Emphasis is placed on fall wild flowers. Upon completion, students should be able to identify a variety of fall wild flowers and native plants. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 227 Winter Plant ID

1 2 2

Prerequisites: None

Corequisites: None

This course provides an introduction to the identification of native plants. Emphasis is placed on plants in their winter condition. Upon completion, students should be able to identify a variety of native plants in their winter condition. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 230 Entomology

3 3 4

Prerequisites: BIO 112

Corequisites: None

This course covers the biology of insects. Topics include harmful and beneficial insects, their identification, classification, life cycles, behavior, distribution, economic importance, and the methods involved in collection and preservation. Upon completion, students should be able to identify common insects and describe their biology and ecology. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 231 Invertebrate Zoology

3 3 4

Prerequisites: BIO 112

Corequisites: None

This course introduces the principles of invertebrate animal biology. Emphasis is placed on the diversity, comparative anatomy, reproduction, development, behavior, ecology, evolution, and the importance of the major invertebrate phyla. Upon completion, students should be able to demonstrate knowledge of life at the invertebrate level. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 232 Vertebrate Zoology 3 3 4
 Prerequisites: BIO 112
 Corequisites: None

This course introduces the principles of animal biology of the chordate phylum. Emphasis is placed on the diversity, morphology, reproduction, development, behavior, ecology, evolution, and importance of the chordates. Upon completion, students should be able to demonstrate increased knowledge and comprehension of zoology as it applies to life. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 235 Ornithology 3 3 4
 Prerequisites: BIO 110 or BIO 111
 Corequisites: None

This course introduces the biology of birds. Emphasis is placed on the systematics, recognition, distribution, anatomy, physiology, behavior, and ecology of birds. Upon completion, students should be able to identify various avian species and demonstrate a knowledge of their biology and ecology. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 236 Mammalogy 3 3 4
 Prerequisites: BIO 112
 Corequisites: None

This course is designed to study the biology of mammals. Topics include taxonomy, reproduction, development, anatomy, physiology, and ecology with emphasis on special adaptations of the selected families. Upon completion, students should be able to demonstrate an understanding of the organization and adaptations of mammals to their environment. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Fall 2008 [2008*03] – CRC 09/12/07*

BIO 240 Waste Management 3 0 3
 Prerequisites: BIO 110 or BIO 111 or BIO 140/140A
 Corequisites: None

This course is a study of human use of and impact on the environment. Topics include how human activities can negatively affect the land and water and how to avoid and cope with waste problems. Upon completion, students should be able to identify both hazardous and nonhazardous waste products and solutions for their management. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 240 Waste Management 3 0 3
 Prerequisites: BIO 110 or BIO 111
 Corequisites: None

This course is a study of human use of and impact on the environment. Topics include how human activities can negatively affect the land and water and how to avoid and cope with waste problems. Upon completion, students should be able to identify both hazardous and nonhazardous waste products and solutions for their management. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Fall 2010 [2010*03] – CRC 09/22/09*

BIO 242 Nat Resource Conservation 3 0 3
 Prerequisites: BIO 112 or (BIO 140 and BIO 140A)
 Corequisites: None

This course covers the importance of natural resources and their role in our environment. Emphasis is placed on the physical, biological, and ecological principles underlying natural resource conservation with attention to the biological consequences of human impacts. Upon completion, students should be able to demonstrate an understanding of natural resource conservation. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 242 Natural Resource Conservation 3 0 3
 Prerequisites: BIO 112
 Corequisites: None

This course describes the importance of natural resources and their role in our environment. Emphasis is placed on the physical, biological, and ecological principles underlying natural resource conservation with attention to the biological consequences of human impacts. Upon completion, students should be able to demonstrate an understanding of natural resource conservation. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 243 Marine Biology 3 3 4
 Prerequisites: BIO 110 or BIO 111
 Corequisites: None

This course covers the physical and biological components of the marine environment. Topics include major habitats, the diversity of organisms, their biology and ecology, marine productivity, and the use of marine resources by humans. Upon completion, students should be able to identify various marine habitats and organisms and to demonstrate a knowledge of their biology and ecology. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 250 Genetics 3 3 4
 Prerequisites: BIO 112
 Corequisites: None

This course covers principles of prokaryotic and eukaryotic cell genetics. Emphasis is placed on the molecular basis of heredity, chromosome structure, patterns of Mendelian and non-Mendelian inheritance, evolution, and biotechnological applications. Upon completion, students should be able to recognize and describe genetic phenomena and demonstrate knowledge of important genetic principles. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Spring 2010 [2010*01] – CRC 09/22/09*

BIO 265 Cell Biology 3 3 4
 Prerequisites: BIO 111, BIO 275, or BIO 280
 Corequisites: None

This course provides an in-depth study of cellular organization and communication, biochemical cell processes, and cellular growth, replication and death. Topics include organelle structure and function, nucleic acid and protein synthesis, gene organization and regulation, cell signaling mechanisms, bioenergetics, cell motility and apoptosis. Upon completion, students should be able to demonstrate knowledge of cell structure and function and lab skills including microscopy, cell culture, and molecular biology techniques.

*Effective Term – Summer 1997 [1997*02]*

BIO 271 Pathophysiology 3 0 3
 Prerequisites: BIO 163, BIO 166, or BIO 169
 Corequisites: None

This course provides an in-depth study of human pathological processes and their effects on homeostasis. Emphasis is placed on interrelationships among organ systems in deviations from homeostasis. Upon completion, students should be able to demonstrate a detailed knowledge of pathophysiology. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 272 Cardiopulmonary Biology 2 2 3
 Prerequisites: BIO 166 or BIO 169
 Corequisites: None

This course provides an in-depth study of cardiovascular and respiratory functions and their relationships. Emphasis is placed on the interpretation of blood gases and other analytical measurements. Upon completion, students should be able to demonstrate a detailed knowledge of circulatory and respiratory anatomy and physiology. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 273 Radiation Biology 2 0 2
 Prerequisites: BIO 163, BIO 166, or BIO 169
 Corequisites: None

This course covers the principles of radiation biology. Emphasis is placed on the effects of ionizing radiation on body tissues, uses of radiation in medicine, and protective measures. Upon completion, students should be able to demonstrate an understanding of the effects and uses of radiation in diagnostic and therapeutic modalities. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Fall 2010 [2010*03] – CRC 09/22/09*

BIO 275 Microbiology 3 3 4
 Prerequisites: BIO 110, BIO 111, BIO 163, BIO 165, or BIO 168
 Corequisites: None

This course covers principles of microbiology and the impact these organisms have on man and the environment. Topics include the various groups of microorganisms, their structure, physiology, genetics, microbial pathogenicity, infectious diseases, immunology, and selected practical applications. Upon completion, students should be able to demonstrate knowledge and skills including microscopy, aseptic technique, staining, culture methods, and identification of microorganisms. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 275 Microbiology 3 3 4
 Prerequisites: BIO 110, BIO 112, BIO 163, BIO 165, or BIO 168
 Corequisites: None

This course covers principles of microbiology and the impact these organisms have on man and the environment. Topics include the various groups of microorganisms, their structure, physiology, genetics, microbial pathogenicity, infectious diseases, immunology, and selected practical applications. Upon completion, students should be able to demonstrate knowledge and skills including microscopy, aseptic technique, staining, culture methods, and identification of microorganisms. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 280 Biotechnology

2	3	3
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Prerequisites: BIO 111 or CHM 151

Corequisites: None

This course provides experience in selected laboratory procedures. Topics include proper laboratory techniques in biology and chemistry. Upon completion, students should be able to identify laboratory techniques and instrumentation in basic biotechnology. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

*Effective Term – Summer 1997 [1997*02]*

BIO 285 Research & Measurement

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Prerequisites: BIO 112 and CHM 132

Corequisites: None

This course provides an intensive laboratory experience with an investigative approach. Emphasis is placed on the use of various laboratory equipment and field techniques to enhance research and measurement competencies in ecology, natural resources, and other related topics. Upon completion, students should be able to demonstrate competencies with laboratory equipment and prepare a presentation of a selected research topic. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.*

See the SEL and SEM prefixes for generic Selected Topics and Seminar course descriptions.