

# BIOLOGY (BIO) - ROCK COUNTY

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## Courses

### BIO 099 Basic Biology Tutorial 1-2 Units

This tutorial will provide biological instruction through several methods of listening, speaking, reading, writing, & will review basic concepts in Chem., Mathematics, & computer skills required in BIO 101, 162 & 171. The content & skills will empower students to succeed in their concurrent Bio. course & in lateral & higher-level Biological Sci.s courses. COREQ: THIS COURSE IS INTENDED FOR STUDENTS CONCURRENTLY ENROLLED IN BIO 101, 162, OR 171

### BIO 101 Concepts of Biology 5 Units

(Previously BIO 109) An Intro to the fundamental principles of living organisms. Includes cell & tissue structure, growth, basic physiological processes, reproduction & inheritance, classification, evolution & ecology. Lecture, lab, & may also include demonstrations, discussion & field trips

### BIO 105 Greek and Latin Origins of Medical and Scientific Terminology 2-3 Units

The course is designed to acquaint students pursuing Sci. & other majors with the origins of technical terms they are likely to encounter.

### BIO 121 Foundations of Biological Sciences I 5 Units

First Sem. of a two Sem. course designed for majors in biological Sci.s. Topics include: cell structure & function, cellular metabolism (enzymes, respiration, photosynthesis), Info flow (DNA, RNA, protein), principles of genetics, & speciation & evolutionary theory. PREREQ: A GRADE OF C OR BETTER IN MATH 141 OR WAIVER

### BIO 122 Foundations of Biological Sciences II 5 Units

Second Sem. of a two Sem. course designed for majors in biological Sci.s. Continuation of BIO 121. Topics include: a Surv. of the three domains of life, selected topics in plant & animal Physolgy, & ecology at multiple levels of the biological hierarchy. PREREQ: BIO 121

### BIO 141 Heredity 3 Units

(Previously BIO 160) Principles of heredity with applications to plant, animal & human inheritance; current advances in genetics & their bearing on the life Sci.s. Lecture & may also include demonstrations, discussion & field trips.

### BIO 161 Survey of Botany 3 Units

(Previously BOT 100) Structure, functions, life histories, taxonomy & evolution of representative plants throughout the plant kingdom. Lecture, lab, & may also include demonstrations, discussion & field trips.

### BIO 162 General Botany 5 Units

(Previously BOT 130) An Intro to plant Sci.s including the structure, development, Physolgy & genetics of plants. The relation of the major plant groups & the principles of Bio.. Lecture, lab, & may also include demonstrations, discussion & field trips. PREREQ: A GRADE OF C OR BETTER IN MATH 141 OR WAIVER

### BIO 163 Dendrology 3 Units

(Previously BOT 202) Identification, classification & economic importance of evergreen & deciduous woody plants, both native & exotic species, stressing characteristics of leaf, fruit, twig, bark, & wood structure. Lecture, lab, & may also include demonstrations, discussion & field trips.

### BIO 164 Plants and Civilization 2 Units

(Previously BOT 240) The study of plants from an historical & geographical perspective, & how plants are used in the modern world as a source of food, drugs, & other materials. Lecture & may also include demonstrations, discussion & field trips.

### BIO 171 Animal Biology 5 Units

(Previously ZOO 101) General biological principles - structure & function of cells, histology, embryology, heredity, ecology, & evolution; Surv. of the animal kingdom; & structure & function of the vertebrate body. Lecture, lab, & may also include demonstrations, discussion & field trips. PREREQ: BIOLOGY 141 AND MATH 141 BOTH WITH A GRADE OF C OR BETTER

### BIO 180 Introduction to Human Biology 3 Units

(Previously ZOO 105) Intro to the development, nature, & processes of human adaptability. Lecture & may also include demonstrations, discussion & field trips.

### BIO 182 Human Anatomy and Physiology 3 Units

(Previously PHS 170) This is a basic course which Introduces the non-Bio. major to the study of how the human body is organized. Through lecture & Lab, the student studies the major organ systems of the human body & how its structure relates to function. Lecture, lab, & may also include demonstration, discussion & field trips. PREREQ: GENERAL STUDIES LAB SCIENCE OR CONSENT OF INSTRUCTOR

### BIO 184 Biology of Human Sexuality and Reproduction 3 Units

(Previously ZOO 155) This course focuses on the biological aspects of human sexuality & reproduction. In addition, the following topics will be discussed from a biological perspective: birth control, sexually transmitted diseases, birth defects, abortion, differences between the sexes, & the manipulation of the human reproductive process by Sci.. Lecture & may also include demonstrations, discussion & field trips.

### BIO 186 Biology of Women 3 Units

(Previously BIO 130. BIO 186 & GSW 130 are the same course.) An Intro to the Physolgy & reproductive anatomy of women including pregnancy, human development, cancer, infertility, birth control, sexually transmitted diseases & other health issues.

### BIO 190 Introduction to Environmental Science 3 Units

(Previously BIO 107) The principles underlying the proper Mgmt. of our resources: water, soils, minerals, forests, wildlife & human. The current & past attitudes relating to the resources with the interaction & complexities of humans' interests. This meets the statutory requirement for Conservation of Natural Resources required for State certification for teachers of Sci. & social Sci.s. Lecture & may also include demonstrations, discussion & field trips.

### BIO 191 Environmental Science 3-4 Units

(Previously BIO 108) A contemporary study of the natural world through the human perspective. Emphasis on humans as a modifying force in the biophysical Env., including selected topics in ecological principles, pollution, population Bio., & Env.al Mgmt.. This course meets the statutory requirement for Conservation of Natural Resources required for State certification for teachers of Sci. & social Sci.s. Lecture, lab, & may include demonstrations, discussions, & field trips.

**BIO 193 Natural History of Wisconsin 3 Units**

Natural History of Wisconsin is an Introductory Bio. course intended for the general student wanting to learn more about Wisconsin's diverse plant & animal life. The main focus of this course is the state's diversity of plants & animals & the ecosystems in which they live. In addition, it may cover basic concepts of field ecology, behavior, & conservation, identification of select organisms, & a review of the historical contributions to our understanding of Wisconsin natural history. This course is designed to increase the awareness & appreciation of Wisconsin's fantastic biological diversity at a time when the general public is becoming increasingly disconnected from natural environments. Optional field trips may be included.

**BIO 196 Introduction to Wildlife Resources 3 Units**

(Previously ZOO 140) Wildlife resources of the U.S.; the importance of wildlife to our past & present economic & cultural life & selected problems in wildlife conservation. Lecture, lab, & may also include demonstrations, discussion & field trips.  
PREREQ: INTRO BIOLOGY COURSE

**BIO 201 Principles of Ecology 4 Units**

(Previously BIO 250) The interrelationships between living organisms & their environment, ecosystems concepts, population dynamics, community organization & distribution, & application of ecological principles to humans & their environment. Lecture, lab, & may also include demonstrations, discussion & field trips.  
PREREQ: INTRO BIOLOGY COURSE

**BIO 211 Genetics 3-4 Units**

(Previously BIO 260) Laws of variation & heredity & their modification by environment, genetic engineering, & chromosome behavior with emphasis on human genetics. Lecture, lab, & may also include demonstrations, discussion & field trips.  
PREREQ: INTRO BIOLOGY COURSE

**BIO 251 General Survey of Microbiology 4-5 Units**

(Previously BAC 201) Surv. of micro-organisms & their activities; emphasis on structure, taxonomy, function, ecology, Nut., Physiology, pathology & genetics. Surv. of applied microbiology: agricultural, medical, industrial, environmental & food. The Lab is an Intro to standard techniques & procedures in general microbiology. Lecture, lab, & may also include demonstrations, discussion & field trips.  
PREREQ: BIO 101, BIO 162, OR BIO 171 REQUIRED. CHE 125 RECOMMENDED

**BIO 271 Vertebrate Biology 4 Units**

(Previously ZOO 237) An Intro to the study of vertebrate animals considering their structure, evolution, ecology, & special adaptation. Lecture, lab, & may also include demonstrations, discussion & field trips.  
PREREQ: INTRO BIOLOGY COURSE

**BIO 277 Ornithology 3 Units**

(Previously ZOO 277) A course which introduces the student to the Biology of birds & the methods of modern field studies, identification, life histories, ecology, & behavior of birds, with emphasis on local species. Lecture, lab, & may also include demonstrations, discussion & field trips.  
PREREQ: INTRO BIOLOGY COURSE

**BIO 280 Human Anatomy 3 Units**

(Previously ZOO 234) A study of the fundamental structure & organization of the organs & systems of the human body. Lecture, lab, & may also include demonstrations, discussion & field trips.

**BIO 281 Human Physiology 5 Units**

(Previously PHS 235) An examination of the physiological processes of the human body. Lecture, discussion, & lab.  
PREREQ: INTRO COURSE IN BIO AND CHE OR CONSENT OF INSTRUCTOR

**BIO 282 Updates in Human Physiology and Microbiology 3 Units**

(Previously PHS 250) This course was designed for the nursing consortium, primarily for RNs who plan to enter a BSN program. PHS 250 is a review & recent update of concepts in human Physiology & microbiology. This course utilizes an extensive review packet of basic concepts of Physiology & microbiology. which must be completed during the course. Lecture only, online class.

**BIO 285 Anatomy and Physiology 4 Units**

(Previously PHS 202) An examination of the structure & function of the human body at the molecular, cellular, tissue, organ, & system levels of organization. The integration of these levels of organization within the human organism is emphasized. This is the first Sem. of a two-Sem. sequence. Lecture, lab, & may also include demonstrations, discussion & field trips.  
PREREQ: BIO 101, BIO 162, OR BIO 171 OR CONSENTS OF INSTRUCTOR

**BIO 286 Anatomy and Physiology 4 Units**

(Previously PHS 203) An examination of the structure & function of the human body at the molecular, cellular, tissue, organ, & system levels of organization. The integration of these levels of organization within the human organism is emphasized. This is the second Sem. of a two-Sem. sequence. Lecture, lab, & may also include demonstrations, discussion & field trips.  
PREREQ: BIO 285

**BIO 288 Human Anatomy and Physiology 5 Units**

(Previously PHS 230) A study of the fundamental principles of human structure & function with applications to health & disease. The course will explore all organ systems of the human body at various levels of organization from the cellular & subcellular to the organ system level. Lecture, lab, & may also include demonstrations, discussions & field trips.  
PREREQ: BIO 280 OR EQUIVALENT; INTRO CHE RECOMMENDED

**BIO 291 Introduction to Fish, Forest and Wildlife Resources 4 Units**

(Previously NAT 250) An integration Intro to the theoretical & applied aspects of the Mgmt. of our biotic resources. This course will stress sustainable Mgmt. & ecosystem integrity using contemporary conservation issues & local examples.  
PREREQ: BIO 101, BIO 162, OR BIO 171 OR CONSENTS OF INSTRUCTOR

**BIO 294 Internship in Biological Sciences 1-3 Units**

An individually arranged internship in an area field site, public agency, community organization or industry to gain practical experience in a Biological Sci.s discipline. The internship is intended for advanced Sci. students with previous college level Bio. coursework. Students will work under the supervision of a faculty member & will receive credit based on hours employed & completion of a final report summarizing their experiences & how they build upon previous classroom experiences. Presentation of any research performed would be arranged through the supervising faculty member. This course will fulfill the requirements of the AP degree designation by giving students the opportunity to learn first h& the interrelationships between Sci. theory & application in the natural world. Students will also have the opportunity to apply the scientific method & problem solving skills in experimental work & experiences completed in the community or business Env. during the internship. Students will also be expected to apply basic Sci. knowledge to interpret & analyze data that is collected as part of any research component of an internship. Prereq: a university-level Introductory course in the Biological Sci.s & cons. instr. Repeatable for a maximum of six credits.

**BIO 298 Special Topics in Biology 1-3 Units**

(Previously BOT 291/ZOO 291) Designed to cover topics in Bio. not ordinarily covered in other classes.

**BIO 299 Reading and Research in Biology 1-3 Units**

(Previously BAC 299/BOT 299/ZOO 299) Supervised undergraduate reading & research in biological Sci.s. This course is designed to acquaint the undergraduate with the Lit. & research techniques used in biological investigation & to give practical experience in scientific problem-solving. PREREQ: CONSENT OF INSTRUCTOR

**BIO 373 Animal Behavior 3 Units**

(Previously ZOO 305) A general Intro to the field of animal behavior. Topics include evolution & natural selection, social behavior, communication, reproduction, orientation & navigation, & hormonal mechanisms of behavior. Lecture, lab, an may also include demonstrations, discussions, & field trips.