

# CGS BIOLOGY (CGS BIO)

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## CGS BIO 101 Concepts of Biology

5 cr.

An introduction to the fundamental principles of living organisms. Includes cell and tissue structure, growth, basic physiological processes, reproduction and inheritance, classification, evolution and ecology. Lecture, lab, and may also include demonstrations, discussion and field trips.

**Prerequisites:** none.

**Course Rules:** Previously BIO 109.

**General Education Requirements:** NS+

**Last Taught:** Summer 2024, Spring 2024.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## CGS BIO 103 Topics in Modern Biology:

3 cr.

The study of plants from an historical and geographical perspective, and how plants are used in the modern world as a source of food, drugs, and other materials.

**Prerequisites:** none.

**Course Rules:** May be retaken with change in topic to 9 cr max. Previously CGS BIO 164. Lecture may also include demonstrations, discussion and field trips.

**General Education Requirements:** NS

**Last Taught:** Spring 2021, Spring 2020.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## CGS BIO 104 Plants In Today's World

3 cr.

Structure, functions, life histories, taxonomy and evolution of representative plants throughout the plant kingdom. Lecture, lab, and may also include demonstrations, discussion and field trips.

**Prerequisites:** none.

**Course Rules:** Previously BOT 100.

**General Education Requirements:** NS+

**Last Taught:** Spring 2023, Fall 2022.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## CGS BIO 141 Heredity

3 cr.

Principles of heredity with applications to plant, animal and human inheritance; current advances in genetics and their bearing on the life sciences. Lecture and may also include demonstrations, discussion and field trips.

**Prerequisites:** none.

**Course Rules:** Previously CGS BIO 160.

**General Education Requirements:** NS

**Last Taught:** Fall 2020.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## CGS BIO 141X Heredity

3 cr.

Principles of heredity with applications to plant, animal and human inheritance; current advances in genetics and their bearing on the life sciences. Lecture and may also include demonstrations, discussion and field trips.

**Prerequisites:** none.

**Course Rules:** Previously CGS BIO 160.

**General Education Requirements:** NS

**Last Taught:** Fall 2020.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## CGS BIO 150 Foundations of Biological Sciences I

5 cr.

First semester of a two semester course designed for majors in biological sciences. Cell structure/function, cellular metabolism enzymes, respiration, photosynthesis, information flow DNA, RNA, protein, principles of genetics, and speciation and evolutionary theory.

**Prerequisites:** 1 year of high school Chemistry with a grade of B or better; or CGS CHE 112; or consent of instructor.

**General Education Requirements:** NS+

**Last Taught:** Spring 2024, Fall 2023.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## CGS BIO 152 Foundations of Biological Sciences II

5 cr.

Second semester of a two semester course designed for majors in biological sciences. Continuation of CGS BIO 150.

**Prerequisites:** grade of C or better in CGS BIO 150(P).

**Course Rules:** Topics include: a survey of the three domains of life, selected topics in plant and animal physiology, and ecology at multiple levels of the biological hierarchy.

**General Education Requirements:** NS+

**Last Taught:** Spring 2024, Spring 2023.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## CGS BIO 180 Introduction to Human Biology

3 cr.

Introduction to the development, nature, and processes of human adaptability. Lecture and may also include demonstrations, discussion and field trips.

**Prerequisites:** none.

**General Education Requirements:** NS

**Last Taught:** Fall 2023, Spring 2023.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

## CGS BIO 184 Biology of Human Sexuality and Reproduction

3 cr.

Biological aspects of human sexuality and reproduction, including topics from a biological perspective: birth control, sexually transmitted diseases, birth defects, abortion, differences between the sexes, and the manipulation of the human reproductive process by science. Lecture and may also include demonstrations, discussion and field trips.

**Prerequisites:** none.

**Course Rules:** Previously ZOO 155.

**General Education Requirements:** NS

**Last Taught:** Fall 2020, Spring 2020.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**CGS BIO 190 Introduction to Environmental Science**

3 cr.

Principles underlying the proper management of our resources: water, soils, minerals, forests, wildlife and human. This meets the statutory requirement for Conservation of Natural Resources required for State certification for teachers of science and social sciences.

**Prerequisites:** Previously BIO 107. Lecture and may also include demonstrations, discussion and field trips. A student may not earn credit for both CGS BIO 190 and CGS BIO 191.

**General Education Requirements:** NS

**Last Taught:** Summer 2024, Fall 2023.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**CGS BIO 190X Introduction to Environmental Science**

3 cr.

Principles underlying the proper management of our resources: water, soils, minerals, forests, wildlife and human. This meets the statutory requirement for Conservation of Natural Resources required for State certification for teachers of science and social sciences.

**Prerequisites:** Previously BIO 107. Lecture and may also include demonstrations, discussion and field trips. A student may not earn credit for both CGS BIO 190 and CGS BIO 191.

**General Education Requirements:** NS

**Last Taught:** Summer 2024, Fall 2023.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**CGS BIO 191 Environmental Science**

3-4 cr.

Contemporary study of the natural world through the human perspective, including humans as a modifying force in the biophysical environment.

Selected topics: ecological principles, pollution, population biology, and environmental management. This course meets the statutory requirement for Conservation of Natural Resources required for State certification for teachers of science and social sciences. Lecture, lab, and may include demonstrations, discussions, and field trips.

**Prerequisites:** none.

**Course Rules:** Previously CGS BIO 108. A student may not earn credit for both CGS BIO 190 and CGS BIO 191.

**General Education Requirements:** NS+

**Last Taught:** Spring 2022, Spring 2021.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**CGS BIO 192 Environmental Science and Ethics**

4 cr.

An interdisciplinary study of environmental science and the natural world. Emphasis on humans as a modifying force in the biophysical environment and examines the philosophical questions of how best to do this.

**Prerequisites:** none.

**Course Rules:** Students may not receive credit for both CGS BIO 192 and CGS BIO 190 or CGS BIO 191.

**Last Taught:** Spring 2024, Spring 2023.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**CGS BIO 201 Human Structure & Function**

3 cr.

Introduces non-Biology majors to the study of how the human body is organized. Major organ systems of the human body and how its structure relates to function. Lecture, lab, and may also include demonstration.

**Prerequisites:** none.

**Course Rules:** Previously CGS BIO 182.

**General Education Requirements:** NS+

**Last Taught:** Fall 2020, Fall 2019.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**CGS BIO 202 Anatomy and Physiology 1**

4 cr.

An examination of the structure and function of the human body at the molecular, cellular, tissue, organ, and system levels of organization. The integration of these levels of organization within the human organism is emphasized.

**Prerequisites:** none.

**Course Rules:** Previously CGS BIO 285. Lecture, lab, and may also include demonstrations, discussion and field trips.

**General Education Requirements:** NS+

**Last Taught:** Summer 2024, Spring 2024.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**CGS BIO 203 Anatomy and Physiology 2**

4 cr.

Examination of the structure/function of the human body at the molecular, cellular, tissue, organ, and system levels. Integration of these levels of organization within the human organism. Second semester of a two-semester class.

**Prerequisites:** CGS BIO 202 or CGS BIO 285.

**Course Rules:** Previously CGS BIO 286. Lecture, lab, and may also include demonstrations, discussion and field trips.

**General Education Requirements:** NS+

**Last Taught:** Summer 2024, Spring 2024.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**CGS BIO 211 Genetics**

3-4 cr.

Laws of variation and heredity and their modification by environment, genetic engineering, and chromosome behavior with emphasis on human genetics. Lecture, lab, and may also include demonstrations, discussion and field trips.

**Prerequisites:** introductory CGS BIO course.

**Course Rules:** Previously BIO 260.

**General Education Requirements:** NS+

**Last Taught:** Spring 2021, Spring 2020.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**CGS BIO 251 General Survey of Microbiology**

5 cr.

Survey of micro-organisms and their activities; emphasis on structure, taxonomy, function, ecology, nutrition, physiology, pathology and genetics. Survey of applied microbiology: agricultural, medical, industrial, environmental and food. The laboratory is an introduction to standard techniques.

**Prerequisites:** a grade of C or better in one of the following: CGS BIO 101(P), CGS BIO 150(P), or CGS BIO 202(P), or consent of instructor.

**Course Rules:** CGS CHE 125 recommended.

**General Education Requirements:** NS+

**Last Taught:** Spring 2024, Spring 2023.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**CGS BIO 298 Special Topics in Biology**

1-3 cr.

Designed to cover topics in biology not ordinarily covered in other classes.

**Prerequisites:** none.

**Course Rules:** Previously CGS BOT 291/CGS ZOO 291.

**Last Taught:** Spring 2023.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**CGS BIO 299 Reading and Research in Biology**

1 cr.

Supervised undergraduate reading and research in biological sciences. This course is designed to acquaint the undergraduate with the literature and research techniques used in biological investigation and to give practical experience in scientific problem-solving.

**Prerequisites:** consent of instructor.

**Course Rules:** Previously CGS BAC 299, CGS BOT 299, and CGS ZOO 299.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**CGS BIO 310 General Ecology**

4 cr.

Interrelationships between living organisms and their environment, ecosystems concepts, population dynamics, community organization and distribution, and application of ecological principles to humans and their environment.

**Prerequisites:** CGS BIO 152(P).

**Course Rules:** Previously CGS BIO 201 and CGS BIO 250. Lecture, lab, and may also include demonstrations, discussion and field trips.

**General Education Requirements:** NS+

**Last Taught:** Fall 2019.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**CGS BIO 398 Special Topics: The Ecology of Food Production**

3 cr.

Focused exploration of the environmental impact of industrialized agricultural systems; history and practice of food production and global distribution; current industrialized agricultural practices on the environment; food systems, food security, sustainable agricultural practices and alternative food sources; social, political, ethical, and economic forces that relate to farming practices, global food distribution, and consumption.

**Prerequisites:** Junior standing or consent of instructor.

**Current Offerings:** <https://catalog.uwm.edu/course-search/>

**CGS BIO 430 Animal Behavior-Ethology**

3 cr. Undergraduate.

A general introduction to the field of animal behavior. Evolution and natural selection, social behavior, communication, reproduction, orientation and navigation, and hormonal mechanisms of behavior.

**Prerequisites:** CGS BIO 310(P).

**Course Rules:** Previously CGS BIO 373. Lecture, lab, and may also include demonstrations, discussions, and field trips.

**General Education Requirements:** NS+

**Current Offerings:** <https://catalog.uwm.edu/course-search/>