

BIOLOGICAL SCIENCES

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Courses

Prefix	Course
BIO	Biology
ENV	Environmental Sciences
SSH	Sustainability Social Sciences
SUS	Sustainability/Natural Sciences

Career Programs

Sustainability

Academic Certificate

- Sustainability, Academic Certificate (<https://catalog.cgc.edu/educational-programs/biological-sciences/sustainability-ac/>)

General Biology

Cala, Jacqueline

Division Chair

- B.S., University of Arizona
- M.S., Arizona State University

Konatske, Jamie

- B.S., M.Ed., Arizona State University

Patterson, Kimberley

- B.S., Arizona State University
- D.V.M., Oklahoma State University

Ramakrishna, Pushpa

- B.S., M.S., Bangalore University
- M.N.S., Ed.D., Arizona State University

Human Anatomy & Physiology

Discala, Camille

- B.A., Herbert H. Lehman College of the City University of New York
- M.D., Albert Einstein College of Medicine

Fouerman, Polly

- A.B., Brown University
- M.S, Ph.D., University of Wisconsin-Madison
- D.V.M., Cornell University

Greer, Kimberly

- B.S., University of Tennessee
- M.S., Brigham Young University

Howard, Justin

- B.S., D.C., Logan College

Rauhalammi, Samuli

- M.S. Anatomy & M.S. Medical Visualisation and Anatomy, University of Glasgow

Microbiology

Orozco, Myrna (Estela)

- B.S., M.S., University of Texas at El Paso
- B.S., D.V.M., Texas A&M University

Wellner, Karen

- B.S., State University of New York at Oneonta
- M.S., Ph. D., Arizona State University
- M.A., Ph.D., University of Iowa

Biology (BIO)

BIO100 / Biology Concepts

4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture

Introductory course covering basic principles and concepts of biology. Methods of scientific inquiry and behavior of matter and energy in biological systems are explored. Prerequisites: None. Course Notes: Field trips may be required at students' expense.

Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

Division: Biological Sciences

BIO105 / Environmental Biology

4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture

Fundamentals of ecology and their relevance to human impact on natural ecosystems. Prerequisites: None.

Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

Division: Biological Sciences

BIO108 / Plants and Society

4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture

A global study of plants in relation to humans; as a source of food, fiber, drugs, and other products; for aesthetic value, survival, and energy. Prerequisites: None.

Division: Biological Sciences

BIO156 / Introductory Biology for Allied Health

4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture

An introductory biology course for allied health majors with an emphasis on humans. Topics include fundamental concepts of cell biology, histology, microbiology, and genetics. Prerequisites: A grade of C or better in RDG100, or RDG100LL, or higher, or eligibility for CRE101. One year of high school or one-semester of college level chemistry is strongly recommended.

Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

Division: Biological Sciences

BIO160 / Introduction to Human Anatomy and Physiology

4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture

Principles of scientific method. Structural organization, homeostasis and control mechanisms of the body. Specific chemistry concepts. Structure and function of the major systems of the body. Prerequisites: None.

Fulfills: Natural Sciences Quantitative [SQ]; Natural Sciences Quantitative [SQ]-in combo

Division: Biological Sciences

BIO181 / General Biology (Majors) I**4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

The study and principles of structure and function of organisms at the molecular and cellular levels. A detailed exploration of the chemistry of life, the cell, and genetics. Prerequisites: A grade of C or better in RDG100, or RDG100LL, or higher, or eligibility for CRE101. One year of high school or one semester of college-level biology and chemistry is strongly recommended.

Division: Biological Sciences

BIO182 / General Biology (Majors) II**4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

The study and principles of structure and function of living things at cellular, organismic, and higher levels of organization. A detailed exploration of the mechanisms of evolution, biological diversity, biology of organisms, and ecology. Prerequisites: A grade of C or better in BIO181, or BIO181XT, or permission of Department or Division. Course Notes: BIO182 may require field trips.

Division: Biological Sciences

BIO201 / Human Anatomy and Physiology I**4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

Study of structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Prerequisites: A grade of C or better in (BIO156, or BIO156XT, or BIO181, or BIO181XT, or one year of high school biology) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101). CHM130 or higher or one year of high school chemistry suggested but not required.

 SUN# BIO 2201

Fulfills: Natural Sciences General [SG]; Natural Sciences General [SG]-in combo

Division: Biological Sciences

BIO202 / Human Anatomy and Physiology II**4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

Continuation of structure and function of the human body. Topics include endocrine, circulatory, lymphatic, respiratory, digestive, urinary, and reproductive systems; and fluid and electrolyte balance. Prerequisites: A grade of C or better in BIO201 or BIO201XT.

Division: Biological Sciences

BIO205 / Microbiology**4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

Study of microorganisms and their relationship to health, ecology, and related fields. Prerequisites: A grade of C or better in (BIO156, or BIO156XT, or BIO181, or BIO181XT, or one year of high school biology) and (RDG100, or RDG100LL, or higher, or eligibility for CRE101). CHM130 or higher or one year of high school chemistry suggested but not required.

Division: Biological Sciences

BIO220 / Biology of Microorganisms**4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

Detailed study of microbial cells, their structure, genetics, physiology and taxonomy. Prerequisites: A grade of C or better in BIO181. Corequisites: (CHM152 and CHM152LL) or (CHM154 and CHM154LL).

Division: Biological Sciences

Environmental Sciences (ENV)**ENV101 / Introduction to Environmental Science****4 Credits / 3.0 Periods for Laboratory, 3.0 Periods for Lecture**

Introduces the interconnected nature of environmental science and solutions to environmental issues. Prerequisites: None.

Division: Biological Sciences

Sustainability/Social Science and Humanities (SSH)**SSH111 / Sustainable Cities****3 Credits / 3.0 Periods for Lecture**

Introduction to the field of sustainability and exploration of the practices leading to the development of sustainable cities. Explores the concept of sustainable development of cities within local, regional, and global contexts. Prerequisites: None.

Fulfills: Humanities, Arts and Design [HU]; Humanities, Arts and Design [HU]-in combo; Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo; Global Awareness [G]; Global Awareness [G]-in combo

Division: Biological Sciences

Sustainability/Natural Science (SUS)**SUS110 / Sustainable World****3 Credits / 3.0 Periods for Lecture**

Introduction to the field of sustainability and exploration of the interaction between human and natural global systems. Framework for analyzing and investigating the global challenges such as land use change, competition for water and other natural resources, and renewable energy concerns and crises. Prerequisites: None.

Fulfills: Social-Behavioral Sciences [SB]; Social-Behavioral Sciences [SB]-in combo

Division: Biological Sciences