

{ Biology }

» UNDERSTANDING REVELATIONS IN NATURE

Majoring in biology at Concordia University is an exciting combination of study and practice that allows you to explore your scientific interests in depth.

Graduates of Concordia's biology major have been very successful in finding employment or entering graduate programs in medicine or research. Whether you are mastering the latest technological approach to identifying pathogens in the laboratory, dissecting a human cadaver, or studying active volcanoes in Hawaii; Concordia University provides the type of hands-on experience that turns you from a student into a professional and provides you with an advantage over many other college graduates.

Senior Project

A unique and important component of the biology major is the requirement to successfully complete a senior project. These are individually designed experiences in research or clinical settings under the guidance of a faculty member. Graduates report that their theses are very influential in admission to prestigious medical or graduate schools. Our graduates have been accepted into and are excelling in graduate programs at the University of Washington, UCLA, University of Oregon, Harvard, and Oregon Health and Science University, to name a few.

Course Spotlight – Developmental Biology

Understanding developmental biology will immerse you in some of the most significant scientific dialogues of our time. The findings from this field help our progress in treating birth defects like fetal alcohol syndrome or congenital disorders like Huntington's disease. Technological developments and ethical issues related to human development like human cloning and the use of human embryonic stem cells are discussed. You will also practice interpreting primary research articles which are the way in which scientists communicate with each other. This is a critical skill to attain if you wish to go on to graduate studies.



You will learn how organisms develop from a single cell to an adult and be introduced to the current understanding of how cells differentiate into the various tissues and organs of the body. The course emphasizes experimental approaches used to analyze and study these processes. A number of model organisms are studied including the African clawed toad, zebra fish, chicken, fruit flies, and mammals.

Faculty Profile – Chuck Kunert

DEAN, COLLEGE OF THEOLOGY, ARTS, & SCIENCES

Chuck Kunert, Ph.D. has been on the Concordia University faculty since 1969, and he currently serves as Dean of the College of Theology, Arts, & Sciences. He is the recipient of numerous grants for improving science education, including funding from the National Science Foundation and the Murdock Charitable Trust. His academic interests focus on understanding the molecular basis of how genes function as well as the intersection of faith and science, "A Christian university like Concordia has a deep and abiding responsibility to challenge our students to seek God's truth in all they study."

Dr. Kunert says there is a clear distinction in the Lutheran approach to higher education. "Some Christian universities share with their students the truth as the faculty and administration see it. A Christian, Lutheran university like Concordia has an even greater privilege. Rather than teaching our students the truth as we see it, we are called to encourage our students to join us in a humble approach to learning and to continually wrestle with what God's truth really is. Science is the human attempt to understand the revelation of God in nature."

Why a Concordia University Biology Degree?

You will complete a critical core of class work in science and math and specialize in one of the following concentrations –

1. **ENVIRONMENTAL MANAGEMENT** prepares you for a career as an environmental specialist in government, industry or environmental groups
2. **GENERAL BIOLOGY** is a good choice if you are interested in graduate studies in biology but have not decided exactly what specialty you would like to pursue
3. **MOLECULAR BIOLOGY** graduates often find employment directly in the biotech or medical research fields and are also qualified for graduate work in this field
4. **PRE-ATHLETIC TRAINING** is designed to meet the entrance requirements of most graduate programs in athletic training
5. **PRE-MEDICAL STUDIES** prepares you to take graduate exams and meet admission requirements for medical, dental, or veterinary medicine programs
6. **PRE-OCCUPATIONAL THERAPY** is designed to meet the entrance requirements of most graduate programs in occupational therapy
7. **PRE-PHYSICAL THERAPY** is designed to meet the entrance requirements of most graduate programs in physical therapy
8. **PRE-PHYSICIAN'S ASSISTANT** is designed to meet the academic requirements for admission into a physician's assistant program

Sample Curriculum

The following is a sampling of the many classes that have recently been offered in our curriculum –

MICROBIOLOGY

Make the acquaintance of all sorts of bacteria, viruses, protozoa, fungi, and invertebrates.

GENETICS

Learn the basic principles of how genetic information is inherited.

HUMAN ANATOMY AND PHYSIOLOGY

Explore in detail the structure and function of the human body, with the help of a human cadaver.

FIELD BIOLOGY

Enjoy field-based biology in a location that varies by semester and typically includes a trip of seven to 14 days.

IMMUNOLOGY

Cover the fundamentals of antibody-mediated and cell-mediated immunity.

ECOLOGY

Study the interaction of plants and animals with their environment.

MOLECULAR BIOLOGY

Delve into the details of the molecular basis of reproduction and genetics in organisms from phage to higher eukaryotes.

Next Step

We look forward to discussing how a Concordia University biology degree can prepare you for a career that puts your knowledge of the natural world in service to others. Contact the Concordia University Office of Admission at –

800-321-9371 503-280-8501 admissions@cu-portland.edu



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