

Important Information relating to Courses counting towards a Biological Science or BCN degrees:

Most courses in the following areas will count as “Science” courses for our students:

Biology (BIOL, BIOM), Biochemistry (BIOC), Chemistry (CHEM), Forensic Sciences (FRSC), Faculty of Science (SCIE), Mathematics (MATH), Physics (PHYS), Statistics (STAT)

However, there are a few that are intended for non-Science majors – these typically only count as “any area of study”. Such courses will have a note in the course description – it’s a good idea to check that out before registering in a course.

A full list of courses and course descriptions can be found in the Undergraduate Calendar. You can download the most recent version here:

<https://www.uwindsor.ca/secretariat/282/undergraduate-and-graduate-calendars>

At this time (July 2023), here are some courses offered through Science Departments that will **not** count as Biology/Science for our students (note information highlighted in yellow):

BIOL-1013. Organisms and the Environment

Organisms interacting with other organisms and with their physical environment. Ecological impacts of human activity. This course is offered on-campus and as a distance course. (Intended for non-majors and students requiring preparation for BIOL-1111 and BIOL-1101.) (Not counted for credit in any Faculty of Science program.) (2 lecture hours a week.)

BIOL-2063. Principles of Biological Anthropology

A biocultural perspective of human genetic and phenotypic variation in an evolutionary context including but not limited to: comparisons to other primates; identifying sources and nature of variation in living humans and critique of race; investigations of illness in the past and present; and the study of extinct species. May be taken by Science students for credit but does not count as a Science option towards the fulfillment of the specified requirements for the Biological Sciences and Behaviour, Cognition and Neuroscience degrees.

BIOM-1003. Biology of Organisms

Properties of living organisms from the level of the cell through tissues, organs and organ systems, genetics, to the functioning, integrated organism. This course is offered on-campus and as a distance course. (Intended for non-majors and students requiring preparation for BIOL-1111 and BIOL-1101) (Not counted for credit in any Faculty of Science program.) (2 lecture hours a week.)

BIOM-1073. Introductory Medical Microbiology

This introductory course provides a foundation in microbiology relating to Nursing. Key concepts in the biology of infectious agents, human-microbe interactions, mechanisms of microbial diseases, control of microbial growth, immunology, epidemiology, and public health. (Open only to Nursing students. May not be used for credit in any Science program.) (Co-requisite: Registration in all courses required for 1st year fall semester.) (Antirequisites: BIOL-2070, BIOL-2071, BIOM-3070, BIOM-3071.)

BIOM-2033. Introductory Molecular Biology

Basic introduction to the molecular biology of the cell with emphasis on basic life processes in animals. The major topics covered include: Regulation of eukaryotic gene expression, genome structure, chromosomal structure, fundamental aspects of recombinant DNA technology, DNA cloning,

microarrays, and protein structure and function. (Antirequisite: BIOM-2131; Prerequisite: BIOL-1111 and BIOL-1101) (3 lecture hours or equivalent a week.) (A distance course restricted to graduates of programs in Medical Technology from a College of Applied Arts and Technology with more than 100 hours of certified laboratory experience; or by consent of the instructor.)

BIOM-2093. Genetics

The course reviews transmission genetics and principles of inheritance. The material also includes nonnuclear inheritance and gene linkage, gene expression and regulation, mechanisms and phenotypic effects of DNA mutation and repair, and the principles and applications of population and quantitative genetics. Students will be exposed to molecular genetic techniques such as PCR and DNA sequencing. This is a distance course designed primarily for graduates of programs in Medical Technology from a College of Applied Arts and Technology. This course may not count as a major requirement for Biology Majors. (Antirequisite: BIOL-2111; prerequisites: BIOL-1111 and BIOL-1101, or the equivalent.) (3 lecture hours or equivalent a week.)

CHEM-1003. Alchemy to Chemistry: Science Through the Ages

Science and technology shape the world in which we live. Nevertheless, sometimes the societal impact of scientific breakthroughs is not realized for a generation or more. In this course, key scientific discoveries and developments will be examined and discussed through the lens of a Chemist. Starting with the "ancients", the course works through time to the present looking at how theories and the scientific method has developed and evolved over time. The course will focus on topics pertaining to chemistry, the science of substances and interactions. (It may be taken by Science students for credit, but does not count as a Science option towards the fulfillment of the specified requirements for a Science degree.) (3 lecture hours per week)

ESCI-1000. Natural Hazards and Disasters

The Earth's component systems and their interrelationships. Earth hazards and the Earth's interior processes: volcanism and earthquakes. Hazards and surface processes: landslides and floods. Atmospheric hazards: storms, hurricanes and tornadoes. (May be taken by Science students for credit, but does not count as a Science option towards the fulfillment of the specified requirements for a Science degree). (2 lecture hours per week)

ESCI-1010. Our Changing Earth

Origin of the universe and solar system; focus on the Earth and moon; earliest life forms. Measurement of geological time. Global climatic change in geological history; drifting continents; deserts, floods and ice sheets. Fossils and evolution; extinctions and probable causes. Human evolution and migrations; early technologies. (May be taken by Science students for credit, but does not count as a Science option towards the fulfillment of the specified requirements for a Science degree). (2 lecture hours a week)

ESCI-1020. Introduction to Planetary Science

An introduction to the origin of the Universe and Solar System. Topics include: the Big Bang theory; origin and organization of matter; and formation of galaxies, nebulae, stars, and planetary systems. The focus is on the geological features of planets, moons, asteroids, and comets. Coverage includes historical perspectives and current theory on astronomy, measurement of the ages of the Universe and Solar System, space exploration, Moon and Mars missions, analyses of NASA satellite images, the origin and evolution of life in the Solar System, and the search for possible extra-terrestrial life and intelligence in the Universe. (May be taken by Science students for credit, but does not count as a Science option towards the fulfillment of the specified requirements for a Science degree.) (3 lecture hours a week.)

PHYS-1000. Introduction to Astronomy I

The solar system with emphasis on the results of recent space exploration. This is a descriptive course suitable for the non-scientist. (May be taken by B.Sc. students for credit, but does not count as a Physics

course or other science course towards the fulfillment of the requirements for the B.Sc. degree.) (2 lecture hours a week.)

PHYS-1010. Introduction to Astronomy II

The stars, galaxies, including pulsars, black holes, and quasars. Current theories of the structure of the universe will be discussed. This is a descriptive course suitable for the non-scientist. (May be taken by B.Sc. students for credit, but does not count as a Physics course or other science course towards the fulfillment of the requirements for the B.Sc. degree.) (2 lecture hours a week.)

PHYS-2000. The Exoplanet Revolution

This course will examine the development and evolution of our understanding of the nature and origins of planetary systems before and after the discovery of the first exoplanets. Students will learn about the various methods used to detect and measure exoplanets, and will actively engage in the analysis of data collected through remote off-site telescopes. The course will include a review of recent discoveries regarding the different classes of planets that exist and their characteristics and origins. It will also look more closely at planets found in the habitable zones around their stars and the conditions that exist there, particularly in planetary atmospheres. Finally, it will review the latest developments in new telescope technologies and space missions and what their capabilities should allow astronomers to discover in coming years. (Prerequisite: PHYS-1000 or PHYS-1010.) (May be taken by B.Sc. students for credit, but does not count as a Physics course or other science course towards the fulfillment of the requirements for the B.Sc. degree.) (3 lecture hours a week.)

PHYS-2040. History of Astronomy

This online course explores the contributions to astronomy made by First Nations, Indian, Chinese, Mayan, Australian, Egyptian, Babylonian, Greek, and Islamic cultures. We start with oral history traditions and follow with explorations of early astronomical instruments and their applications. We will examine medieval European views and how these led to the philosophies of modern astronomy. The course will also highlight how we came to move from a 'geocentric' to a 'heliocentric' view of the solar system by examining the contributions of Copernicus, Brahe, Kepler, Galileo, and Newton. (Open to students with semester 3 and above standing.) (May be taken by BSc and BFS students for credit, but satisfies only the course requirements for "any area of study" toward the fulfillment of the requirements for a BSc or BFS.) (Online asynchronous delivery.)

(Calendar descriptions from Fall 2023 Undergraduate Calendar. Please check the most recent version of the calendar for current descriptions. This is not necessarily a comprehensive list – check the course description before registering in a course. If you have any questions or concerns, please contact an iBio Academic Advisor.)