

BOTANY (BOT)

BOT*1200 Plants and Human Use Winter Only (LEC: 3) [0.50]

This course will examine past and present interactions between humans and plants with emphasis on major changes in civilization and cultures as a result of these interactions. The approach will be to consider several case studies of how unique structural and chemical properties of various plant organs have played a role in their use by humans. Not an acceptable course for students in B.SC. Biological Sciences Programs, B.A.S. Program, B.SC. (ENV.) or B.SC. (AGR.) Programs.

Restriction(s): BIOL*1050

Department(s): Department of Plant Agriculture

Location(s): Guelph

BOT*2000 Plants, Biology and People Winter Only (LEC: 3) [0.50]

The course deals with the biology of plant species of historical and cultural importance. It will focus on plants used as a source of drugs, herbal medicines, industrial raw materials, food products, perfumes and dyes. Examples of plant products that will be looked at include cocaine, chocolate, tea, opium, hemp and ginseng. The relevant morphology, physiology, distribution and ethnobotany of these plant species will be discussed.

Offering(s): Offered through Distance Education format only.

Prerequisite(s): BIOL*1050 or BIOL*1070

Restriction(s): BOT*1200

Department(s): Department of Plant Agriculture

Location(s): Guelph

BOT*2100 Life Strategies of Plants Fall and Winter (LEC: 3, LAB: 3) [0.50]

This course introduces the structures and processes used by plants in the greening of our planet, and how and why plants are basic to the functioning of the biosphere. This course includes hands-on experience in examining the cells, tissues and architectures of plants as well as selected processes of plant function.

Prerequisite(s): 2 of BIOL*1050, BIOL*1070, BIOL*1080, BIOL*1090

Department(s): Department of Molecular and Cellular Biology

Location(s): Guelph

BOT*3050 Plant Functional Ecology Fall Only (LEC: 3, LAB: 3) [0.50]

This course integrates fundamental and applied aspects of plant ecology, focusing on the roles of functional traits, physiological mechanisms, life history strategies, abiotic constraints, and biotic interactions in influencing plant distribution and abundance. Specific topics include physiological ecology, growth and allocation patterns, influence of biotic and trophic interactions [pollinators, pathogens, herbivores, competitors, mutualists, decomposers] on the structure and function of plant communities, and effects of global environmental change. Labs will include a field component that explores variation in functional aspects of plants. This course is especially valuable for students interested in plant or wildlife biology and environmental management.

Prerequisite(s): 7.50 credits including BIOL*1070

Department(s): Department of Integrative Biology

Location(s): Guelph

BOT*3310 Plant Growth and Development Winter Only (LEC: 3, LAB: 3) [0.50]

In this course the unique function and structure of plants is explored in relation to their growth, survival and adaptation to the environment. The control of growth and development by environmental and hormonal signals is explained through lectures and "hands-on" laboratories.

Prerequisite(s): BIOL*1090, (BIOL*1070 or BIOL*1080)

Department(s): Department of Molecular and Cellular Biology

Location(s): Guelph

BOT*3410 Plant Anatomy Fall Only (LEC: 3, LAB: 3) [0.50]

The intricate internal structure of plants is explored in this course. The development, pattern and significance of cells, tissues and organs will be emphasized as well as the histological and microscopical methods used to study them. The lab emphasizes interpretation of plant structure as it relates to function.

Prerequisite(s): 2 of BIOL*1070, BIOL*1080, BIOL*1090

Department(s): Department of Molecular and Cellular Biology

Location(s): Guelph

BOT*3710 Plant Diversity and Evolution Winter Only (LEC: 3, LAB: 3) [0.50]

This course integrates fundamental and applied aspects of plant evolution, focusing on the evolutionary history of plants, classification and identification, and hypotheses related to the evolution of plant form and life history. Specific topics include evolutionary process in plants and evolution of physiological, reproductive, behavioural, and morphological traits. Labs will focus on methods and contemporary tools for phylogenetic reconstruction, comparative analyses, identification, and basic morphology/anatomy. This course is especially valuable for students interested in plant or wildlife and environmental management.

Prerequisite(s): 7.50 credits including BIOL*1070

Department(s): Department of Integrative Biology

Location(s): Guelph

BOT*4380 Metabolism in the Whole Life of Plants Winter Only (LEC: 3) [0.50]

This course follows the developmental changes that take place in plants, and explores the molecular, biochemical and physiological mechanisms that are responsible for development. Emphasis will be placed on the importance of modern experimental methods and critical evaluation of data.

Prerequisite(s): BIOL*1090, BIOC*2580

Department(s): Department of Molecular and Cellular Biology

Location(s): Guelph