

BOTN – BOTANY

BOTN 205

Fundamentals of Plant Biology

3 Credits Weekly (3-3-0)

This course gives a broad introduction to the fascinating field of plant biology. It covers the basics of plant taxonomy as applied to areas such as pharmaceutical sciences and ecological monitoring and management. Further, the course provides an overview of how adaptations to the terrestrial environment shaped the evolution of plants. The link between anatomy, morphology and function of specific organs will be examined in seed plants. We will discuss how the history of botany has shaped our knowledge of plants, and how current research is changing our understanding of plants as complex and responsive organisms. In the laboratory component, the student will gain skills in plant ID, standard herbarium techniques and descriptive analysis of plant morphology as well as in applying the scientific method to answer simple questions in plant biology.

Prerequisites: Minimum grades of C- in BIOL 108 and BIOL 107.

BOTN 405

Plant Behaviour and its Applications

3 Credits Weekly (3-3-0)

Over the past decade, it has become clear that plants are able to sense and respond to environmental cues, interact with other organisms, and make decisions about how to optimize growth, all of which can be described as behavioural responses. This course provides insight into the physiological mechanisms that allow for plant sensory responses and interactions with other organisms. We will explore how this understanding of plant behaviour can be applied in a variety of contexts such as pharmaceutical sciences, bio-remediation, reclamation, and pest- and pathogen-management in agriculture and forestry. The laboratory employs experimental techniques used in studying plant growth responses to answer specific research questions.

Prerequisites: Minimum grades of C- in BOTN 205, and in one of BIOL 312, BIOL 314, BIOL 316, BIOL 321 or BIOL 337.