

UWI MCGILL SUMMER COURSES

BIOL2465 Tropical Horticulture (3 Credits)

Pre-requisites: BIOL1020 Diversity of Life I and BIOL1025 Diversity of Life II

Restrictions: Not to be taken by persons who have passed ECOL2055 Horticulture

Syllabus: The importance of horticulture. Principles and practices of plant propagation. Impact of environmental, agronomic and cultural factors on growth and development of plants; protected agriculture technology. Growing media characteristics. Water and nutrient management. Crop protection: management of biotic stresses (weeds, pests and diseases). Production, post-harvest handling and value chain elements of select tropical fruits, vegetables and cut-flowers. Turf establishment and management. Tree establishment and management. Introduction to the international framework for global trade in horticultural species.

BIOL2466 Tropical Energy and Bioprocessing (3 Credits)

Pre-requisite: Permission of the Department

Syllabus: Tropical energy issues and approaches – Energy vs food debate; Introduction to the scope of bioprocessing industries – definitions, technology and products; Basic biofuel processing concepts; Economics of bioenergy, including economics of conservation and biofuels on reduction of CO₂ generation; Basic principles of industrial utilization of raw food materials for production of bio-products. Characterisation of raw material and products for biotechnological conversion; Utilisation of food residues for the production of bio-products including sugars, antibiotics, amino acids, peptides; Bioprocessing for production of drug therapeutics, nutraceuticals and functional foods.

Teaching: The course will be taught intensively over four weeks in the summer, typically 3 days per week. Lectures will be given at the Bellairs Research Institute during each of the morning sessions and labs/field trips will be held in the afternoon sessions.

BIOL2463 Sustainable Land Use (3 Credits)

Pre-requisite: Permission of the Department

Syllabus: Trade Policy Impact on Land Use and Food Security in the Caribbean; The State of Agriculture Today; Alternative Agricultural Systems; Agricultural Production in the Humid Tropics; Importance of Livestock in Tropical Agriculture; The Status of Animal Production in the Tropics; Livestock Production and Sustainability; Animal Productivity in the Tropics.

Teaching: The course will be taught intensively over four weeks in the summer, typically 3 days per week. Lectures will be given at the Bellairs Research Institute during each of the morning sessions and labs/field trips will be held in the afternoon sessions.

BIOL3901 Multidisciplinary Project (6 Credits)

Pre-requisite: Permission of the Department

Restrictions: Not to be taken by students who have passed BIOL3950 Biology Research Project, BIOC3950 Biochemistry research Project, ECOL Ecology Research Project, MICR3950 Microbiology Research Project or CHEM3505 Chemistry research Project.

Syllabus: A lab and/or field project carried out under the supervision of a member of staff as part of the McGill UWI Summer courses. Projects will address real-world problems related to food, nutrition or energy at the local, regional or international level. Development of a hypothesis suitable for investigation. Experimental work to support or refute this hypothesis. Analysis and communication of results obtained.

Teaching: Duration of the course is 14 weeks in the summer period, with approximately 2 days per week (Monday and Tuesday) devoted to individual project work.