HORTICULTURAL SCIENCE (HORT)

HORT*1120  Grape and Wine Science  Winter Only  (LEC: 3)  [0.50]
This course will examine whole plant physiology as illustrated by the
perennial system of a grapevine. Students will investigate all the
primary functions of a green plant, with each function then related to a
grapevine and how it functions in nature. Each function of the vine will be
connected to the ultimate effects on fruit quality and by extension, wine
quality throughout the course.
Offering(s): Offered through Distance Education format only.
Restriction(s): HORT*3430. Not acceptable for students in the BSC,
BSC(AGR) or BSC(ENV) programs.
Department(s): Department of Plant Agriculture
Location(s): Guelph

HORT*1130  Science of Gardening  Fall Only  (LEC: 3)  [0.50]
This course examines the growth, development and physiology of
horticultural species used for food and ornamental aesthetic purposes.
The interaction between plants and impact of environmental factors as
such as light, temperature, CO2 and humidity [on plant processes] will be
emphasized.
Restriction(s): Not acceptable for students in the BSC, BSC(AGR) or
BSC(ENV) programs.
Department(s): Department of Plant Agriculture
Location(s): Guelph

HORT*2450  Introduction to Turfgrass Science  Fall Only  (LEC: 3, LAB: 2)  [0.50]
The biology, ecology, adaptation, and uses of cool-season and warm-
season turfgrass species and cultivars will be introduced. Topics will
include the identification and life strategies of different turfgrass species,
principles of reproduction and techniques for establishment of turfgrass
by seeding, sprigging and sodding. The ecology of management including
mowing, irrigation, cultivation, mineral nutrition, repair and renovation,
and management of stresses (thatch, weeds, insects, disease) will be
covered. The turfgrass industry will be introduced, including application
of ecological principles to athletic field management, sod production, golf
course management, and professional lawn care.
Prerequisite(s): BIOL*1040 or [BIOL*1090, (1 of BIOL*1050, BIOL*1070,
BIOL*1080)]
Restriction(s): HORT*3220
Department(s): Department of Plant Agriculture
Location(s): Guelph

HORT*3010  Annual, Perennial and Indoor Plants - Identification and
Use  Fall Only  (LEC: 2, LAB: 2)  [0.50]
This course focuses on the identification and adaptation of annual,
biennial, perennial herbaceous and indoor plants. Lectures will be
integrated with outdoor laboratory activities to emphasize utilization of
plant groups in park, perennial border, general landscape botanic garden
and interiorscape settings.
Offering(s): Offered in odd-numbered years.
Prerequisite(s): 1 of AGR*2470, LARC*2240, 0.50 credits in botany
Department(s): Department of Plant Agriculture
Location(s): Guelph

HORT*3050  Management of Turfgrass Insect Pests and Weeds  Fall
Only  (LEC: 3, LAB: 2)  [0.50]
Biological, behavioral and impact of insect pests of turfgrass and recognition
of symptoms will be emphasized. Identification and management
of weed species commonly found in turfgrass will be discussed.
Environmental impacts of cultural and chemical control techniques will
be discussed for each group of pests and advances in chemical and
biological control methods will be developed.
Prerequisite(s): HORT*2450
Restriction(s): DTM*3300
Department(s): Department of Plant Agriculture
Location(s): Guelph

HORT*3150  Principles and Applications of Plant Propagation  Fall
Only  (LEC: 2, LAB: 2)  [0.50]
Plant propagation is the art and science of multiplication of plant
material involving the application of the principles of plant growth and
development and the techniques of mass production. This course will
explore biological, commercial, environmental, and social dimensions of
plant propagation systems with emphasis on global trends in the plant
production industry.
Prerequisite(s): AGR*2470 or BOT*2100
Restriction(s): HORT*3230, HORT*3350
Department(s): Department of Plant Agriculture
Location(s): Guelph

HORT*3270  Medicinal Plants  Winter Only  (LEC: 3)  [0.50]
This course will focus on the application of recent biotechnology
advances to elucidate the physiology, biochemistry, and conservation
biology of medicinal plants for enhancing their efficacy in preventing and
curing human disease.
Prerequisite(s): 1 of BIOL*1050, BIOL*1070, BIOL*1080, BIOL*1090
Department(s): Department of Plant Agriculture
Location(s): Guelph

HORT*3280  Greenhouse Production  Winter Only  (LEC: 3, LAB: 3)  [0.50]
This course examines the principles and practices of production, culture
and marketing of greenhouse flower and vegetable crops.
Prerequisite(s): 1 of AGR*2050, AGR*2470, BOT*2100
Department(s): Department of Plant Agriculture
Location(s): Guelph

HORT*3310  Plants, Food and Health  Winter Only  (LEC: 3)  [0.50]
The course provides an in-depth understanding of plants grown for food,
spices and grains as they relate to humans in terms of disease prevention
and health. Plants and their familial characteristics, the metabolic
pathways characteristic to specific food types, and their effects on
human physiology are discussed. Topics are introduced in the context of
world food habits, plants as food and hot spots of healthy populations
and their food customs.
Prerequisite(s): BIOC*2580
Department(s): Department of Plant Agriculture
Location(s): Guelph
HORT*3430  Wine-Grape Culture Winter Only (LEC: 3) [0.50]
The history and impact of grape-growing in the New World will be presented and studied. Grape (Vitis) taxonomy (ampelography) and physiology will be studied as it relates to the Old World/New World wine growing. The physiology of fruiting and vegetative balance for managing wine quality in the vineyard will be studied in detail, especially as it pertains to cool climate and northern limit grape growing for premium wine quality. End product management and wine regions of the world will be examined.

Offering(s): Offered through Distance Education format only.
Prerequisite(s): AGR*2470 or BOT*2100
Department(s): Department of Plant Agriculture
Location(s): Guelph

HORT*3510  Vegetable Production Fall Only (LEC: 3, LAB: 3) [0.50]
The principles of vegetable production will be studied in terms of sustainable crop management and the impact of biotic and abiotic factors will be discussed. Consideration will also be given to storage processing and marketing.
Prerequisite(s): 1 of AGR*2050, AGR*2470, BOT*2100
Department(s): Department of Plant Agriculture
Location(s): Guelph

HORT*4200  Plants, the Environment and Society Winter Only (LEC: 3) [0.50]
The course will explore the environmental impact of plants in urban and rural landscapes and society’s perception of the how those areas should be used. Emphasis will be placed on the ecology of managed landscapes and issues surrounding society’s perception of management practices. The impact of public perception about the management and environmental impact of plants in urban and rural landscapes will be discussed, including the issues surrounding the use and maintenance of managed landscapes ecosystems.
Prerequisite(s): (1 of AGR*2470, BOT*2100, ENVS*2330, LARC*2240)
Department(s): Department of Plant Agriculture
Location(s): Guelph

HORT*4300  Postharvest Physiology Winter Only (LEC: 3, LAB: 3) [0.50]
This course provides an examination and discussion of physiological and biochemical processes unique to postharvest development and deterioration. Principles and practices of storing fruits, vegetables, and florists’ and nursery stocks as well as marketing pathways for horticultural crops will be considered.

Offering(s): Offered in odd-numbered years.
Prerequisite(s): AGR*2470
Department(s): Department of Plant Agriculture
Location(s): Guelph

HORT*4380  Tropical and Sub-Tropical Crops Fall Only (LEC: 3) [0.50]
This course examines the production and utilization of tropical and subtropical crops in farming systems.

Offering(s): Offered in even-numbered years.
Prerequisite(s): 1 of AGR*2470, BOT*2100, (AGR*2050, AGR*2150)
Department(s): Department of Plant Agriculture
Location(s): Guelph

HORT*4420  Fruit Crops Fall Only (LEC: 3, LAB: 3) [0.50]
Growth patterns, fruiting characteristics and adaptation to environmental conditions of fruit crops in temperate regions will be presented. Classification, cultural practices including propagation and the physiological principles underlying these practices will be emphasized.

Prerequisite(s): 1 of AGR*2050, AGR*2470, BOT*2100
Department(s): Department of Plant Agriculture
Location(s): Guelph

HORT*4450  Advanced Turfgrass Science Winter Only (LEC: 3, LAB: 2) [0.50]
This course emphasizes on plant stressors and physiological responses of plants to stress. Interactions between the soil system, the plant and the environment are considered, with focus on how soil physical, chemical and biological properties as well as environmental factors affect turfgrass plant health and physiology. Principles and strategies of biological control, cultural practices that affect plant health, pest life cycles and pest population levels are addressed in order to develop integrated management plans for turf aimed at reducing pest levels in an environmentally benign manner.

Prerequisite(s): AGR*2050 or AGR*2470
Department(s): Department of Plant Agriculture
Location(s): Guelph