HRT 3204 Floriculture, Ornamental and Landscape Horticulture

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Course type: CORE (BSc. Horticulture III)

1. COURSE STRUCTURE

Course Credits (CU): 3 CU

Course Duration: 15 weeks (45 contact hours per Semester) i.e. 30 LH, 30 PH and 2 weeks of examination

Course description

Principles and practices in propagation of flowers; environmental factors affecting flower production; Post-harvest physiology; marketing systems. Principles and elements of design. The landscaping process: Site visit, design and implementation. Categories of landscape plants: trees and shrubs, groundcovers and species with modified stems. Aspects covered include: species identification and description, environmental adaptation, utilisation and management in the landscape.

A pre-requisite for attendance of this course is the completion of the following courses: HRT 1201: Introduction to Horticulture, HRT 2101: Plant Propagation and Nursery Management; and HRT 3102: Fruit Production.

1. COURSE OBJECTIVES

General objective / aim: To emphasize the socio-economic importance of ornamental plants in Uganda while elucidating the factors influencing their utilization.

Specific objectives

* + Provide a background to the Floriculture industry in Uganda, production and marketing; and constraints faced by farmers
  + Introduce the diversity of ornamental species, their agronomy and application in landscaping
  + Impart knowledge on the use of principles and elements of design in landscaping

1. RECOMMENDED REFERENCES FOR READING

* Turgeon A J. 2005. Turf grass management. Seventh edition. Prentice Hall. ISBN: 0-13-114000-0
* Acquaah G. 2004. Horticulture: Principles and Practices. Third Edition. 569 pages. Prentice Hall. New Jersey, USA. ISBN-10: 0130331252, ISBN-13: 978-0130331250
* Malitz J M and Malitz S. 2002. Interior Landscapes: Horticulture and Design. W. W. Norton & Company Publishers. ISBN-10: 0393730824
* Hannebaum L G. 2002. Landscape design: A practical approach. Fifth edition. Prentice Hall. ISBN: 0-13-010581-3
* Ingels J. 2001. Ornamental Horticulture: Science, Operations & Management: Science, Operations and Management. Third Edition. 596 pages. Delmar Cengage Learning. ISBN-10: 0766814173, ISBN-13: 978-0766814172
* Hansen R and Stahl F. 1993. Perennials and their garden habitats. Fourth edition. Cambridge University Press. ISBN: 0-521-35194-4

1. COURSE CONTENT, METHODS OF INSTRUCTION, TOOLS AND EQUIPMENT REQUIRED

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| TOPIC | CONTENT | METHOD OF INSTRUCTION / Time allocated | TOOLS / EQUIPMENT NEEDED |
| 1. Introduction to the floriculture industry in Uganda | * Importance to the economy * Problems faced by farmers * Comparative advantages and disadvantages in relation to other countries (Case studies: Ethiopia and Kenya | Interactive lecture (2hrs) | Computer, LCD Projector and  Screen, BB, chalk |
| 1. Practices in the production of fresh cut flowers | * Overview * Pre-harvest and harvesting care * Stage of growth * Preconditioning * Temperature and water * Biocides/disinfectants * Sugar/pulsing * Restriction to ethylene damage | Interactive lecture (2hrs) | BB, chalk |
| 1. Greenhouse production of fresh cut rose flowers | * Introduction * Classes and propagation of roses * Effect of abiotic factors on rose plant growth, quality and output * Methods and systems * Nitrogen management  Biotic interactions | Interactive lecture (2hrs) | BB, chalk |
| 1. Greenhouse production of Chrysanthemum | * Classification and cultivars * Agronomy (Propagation, transplanting, fertilization and irrigation) * Light intensity and photoperiod * Pinching * Effect of temperature and carbon dioxide on plant growth * Plant scheduling * Pests and Diseases | Interactive lecture (2hrs), field-based practical (6hrs) | BB, chalk,  Transport to a flower farm (30-seater) |
| * Continuous assessment I | 0.5hr |
| 1. Introduction to ornamental and landscape horticulture | * Definitions * Goals of landscaping * Landscape categories * Background to design | Interactive lecture (2hrs) | Computer, LCD Projector and  Screen, BB, chalk |
| 1. Design elements | * Concepts of beauty * Contribution of plants to the landscape * Definition and discussion of the elements of effect | Interactive lecture (2hrs) | BB, chalk |
| 1. Design principles | * Background to the principles * Design principles in landscape quality * Practical: To determine how elements and principles of design are used in established landscapes | Interactive lecture (2hrs), Practical (6hrs) | BB, chalk |
| 1. The design process | * Steps involved in the design process * Components of the design process * Factors influencing design quality and appreciation * Role of plants in the landscape * Plant arrangement * Practical: To discuss the steps taken in landscape development | Interactive lecture (2hrs), Practical (6hrs) | BB, chalk, Transport to the site (30-seater) |
| * Continuous assessment II | 0.5hr |
| 1. Landscape installation | * Hardscaping * Pre-planting site modifications * Overview of nursery production | Interactive lecture (2hrs) | BB, chalk |
| 1. Bedding plants, ground covers and ornamental grasses | * Definition and uses * Designing a flower garden * Types, uses and selection of ground covers * Classification and description of ornamental grass categories * Establishment of themes * Practical: To emphasize the pros and cons of species selection and placement | Interactive lecture (2hrs), Practical (6hrs) | BB, chalk, Transport to the site (30-seater) |
| 1. Trees and shrubs | * Distinction between categories * Classification * Species selection and placement * Seedling selection and planting * Post-planting management and agronomy * Uses in the landscape * Establishment of themes | Interactive lecture (2hrs) | Computer, LCD Projector and  Screen, BB, chalk |
| 1. Ornamental species with modified stems | * Role in the landscape * Plant establishment * Growth requirements * Classification and description of select species in major families | Interactive lecture (2hrs) | BB, chalk |
| 1. Turf production and management | * Definitions * Purpose of turf * Lawn establishment * Planting and management practices * Practical: To identify major landscape species and their potential uses | Interactive lecture (2hrs), Practical (6hrs) | BB, chalk, Transport to the site (30-seater) |
| 1. Pruning | * Definition and objectives * Techniques and strategies * Maintenance of established trees, hedges and climbing plants | Interactive lecture (2hrs) | BB, chalk |
| * Continuous assessment III | 1hr |

5. SUMMARY OF TIME NEEDED

Interactive lectures covering theory 28 hrs

Continuous assessment 2 hrs

Field-based practical sessions 30 hrs

6. OVERALL COURSE EVALUATION

Continuous Assessment

Tests I, II & III 30%

Assignments, practical, Field work) 10%

Final examination 60%