BSc (Hons) Agriscience and Technology (minor: Natural Resource Management) – A332/15

1. Objectives

The changing socio-economic pattern of Mauritius has led to an increasing demand for agricultural produce of good quality. Agricultural production is now increasingly being characterised by the use of modern technology. It is the Government policy and vision for the future to adopt a technology-based approach to render the local agricultural sector more productive, service-oriented, sustainable and competitive whilst responding to the environmental and ethical standards demanded by society. Agriculture can be made more environmentally sustainable by a more rational and sustainable management of natural resources used in agricultural production namely land, water, soil, plants and animals, and also by reducing environmental pollution, minimising the hazards of agrochemical use, of loss of soil health, and loss of biodiversity.

The further development of agriculture and its related industries is challenging and requires appropriate knowledge, skills and technology concepts to keep pace with the latest technological developments in that sector. This has led to the need for well-trained agricultural scientists who have the technical and practical skills in addition to in-depth knowledge of the science to meet these new challenges facing the Mauritian agriculture.

This programme offers the opportunity of a 6 months work placement which aims to equip students with a broad spectrum of scientific, technical and managerial skills needed to contribute to the future success of agriculture in Mauritius. It is in line with Government policy and vision for sustainable development in all sectors of the economy, in particular sustainable management of land, freshwater and marine resources, and biodiversity. The programme aims to keep abreast of the latest technologies being developed in these areas.

By the end of this programme, graduates will have developed knowledge and skills to:

- Explain the scientific, economic, environmental and business principles underpinning agricultural productivity and production;
- Identify and evaluate appropriate agricultural techniques in the crop and animal sectors to enhance efficiency of production and secure long-term food security;
- Identify and solve technological problems encountered in current crop and livestock production systems;
- Acquire an appreciation of the status of local and international natural resources;
- Manage agricultural enterprises and identify new ventures in the agricultural sector;
- Acquire knowledge and skills in the appropriate management of natural resources;
- Develop the ability to evaluate appropriate agricultural practices with respect to natural resource management;
- Evaluate the wider consequences of agricultural activities and promote sustainable agricultural practices;
- Transfer relevant knowledge, skills and technology concepts to the producers and to support innovation;
- Design, plan and carry out research in the various fields of agriculture;
- Use appropriate scientific and statistical methods and evaluations for decision making in various sectors of agriculture;
- Demonstrate use of written and oral communication skills;
- Embark on training programmes at postgraduate level.

2. General Entry Requirements

In accordance with General Entry Requirements for Admission to the University for Undergraduate Degrees.

3. Programme Requirements

Cambridge School Certificate/ 'O' Level: Credit in Mathematics and Chemistry and at least 2 GCE 'A' Level passes in related approved Science subjects (Mathematics, Chemistry, Physics, Biology, Computer Science, Computing, Agriculture any other related field).

4. Programme Duration

	Normal (Years)	Maximum (Years)
Degree:	3½	5½

5. Credits per Year: Minimum 18 credits**,** Maximum 48 credits subject to Regulation 4.

6. Minimum Credits Required for Award of Undergraduate Degree: 115

The breakdown is as follows:

	Credits from		
	Taught Core Modules	**Project**	**Work Placement**
Degree	100	9	6

The "Scientific Communication Skills and Methods" and "Occupational Safety and Health" modules must be completed satisfactorily for the award of the degree.

Students may exit with a

(a) Certificate after having earned 30 credits in core modules.
(b) Diploma after having earned 60 credits in core modules.

7. Assessment

Each module will be assessed over 100 marks (i.e. expressed as %) with details as follows (unless otherwise specified):

Assessment will be based on a Written Examination of 2-3 hour duration, carrying a weighting of 70%, and Continuous Assessment carrying 30% of total marks for AGRI modules. Modules from other Faculties/Departments/Centres will carry weighting in the Written Examination and the Continuous Assessment as specified by the concerned

Faculties/Departments/Centres. Continuous Assessment will be based on laboratory/field works, and/or assignments, and should include at least 1 class test. Written examinations for all AGRI modules will normally be carried out at the end of the academic year except for AGRI 3136(5) entrepreneurship in the agribusiness sector module.

An overall total of 40% for combined Continuous Assessment and Written Examination would be required to pass a module, without minimum thresholds within the individual Continuous Assessment and Written Examination.

Modules will carry the weightings of 1, 3 or 5 depending on their status (Introductory, Intermediate or Advanced). Weighting for a particular module is indicated within parentheses in the module code. Each module will carry credits in the range of 3 to 6. Project will carry 9 credits and will be in the field of Natural Resource Management.

Work Placement will be assessed solely by continuous assessment and the assessment will be based on the Employer's Assessment Report, the Work Placement Report and a Presentation thereon. Work Placement will carry 6 credits and a weightings of five(5). A minimum of 50% should be attained to pass this module.

Assessment of the "Scientific Communication Skills and Methods" and "Occupational Safety and Health" modules will be based on continuous assessment of students throughout the module and/or submission of a portfolio and a minimum of 40% should be attained.

8. List of Modules

CORE MODULES

Code	Module Name	Hr / Yr L+P	Credits
AGRI 1018Y(1)	Agricultural Chemistry and Soil Science	45+60	5
AGRI 1034Y(1)	Animal Production: Principles and Techniques	30+30	3
AGRI 1035Y(1)	Agronomy and Horticultural Crop Production I	45+60	5
AGRI 1047Y(1)	Microbiology and Genetics	60+60	6
AGRI 1064Y(1)	Agrometeorology and Climate Change	45+0	3
AGRI 1071Y(1)	Data Handling and Research Methodology	30+30	3
AGRI 1078Y(1)	Economics for Agricultural Managers	45+0	3
COMS 1010(1)	Communication Skills	DE	3
AGRI 1100 (1)	Occupational Safety and Health	15+0	1
AGRI 2156Y(3)	Agricultural Engineering Principles	60+45	5
AGRI 2088Y(3)	Biochemistry and Biotechnology	60+60	6
AGRI 2089Y(3)	Pests, Diseases and Weeds Control	45+60	5
AGRI 2092Y(3)	Animal Production and Science I	60+60	6
AGRI 2093Y(3)	Botany and Crop Physiology	60+45	5
AGRI 2112Y(3)	Experimental Designs and Sampling Techniques	30+30	3
AGRI 2130 (1)	Scientific Communication Skills and Methods	15+0	1
AGRI 2157Y(3)	GIS, Remote Sensing and Land Surveying	60+45	5
AGRI 2158Y(3)	Agricultural Management and Extension	45+0	3
AGRI 3000Y(5)	Project	-	9
AGRI 3136(5)	Entrepreneurship in the agribusiness sector	45+0	3
AGRI 3003Y(5)	Animal Science and Production II	60+60	6
AGRI 3026Y(5)	Crop Production Technologies	60+45	5
AGRI 3138Y(5)	Forestry and Biodiversity	60+45	5
AGRI 3083Y(5)	Soil Conservation and Management	60+45	5
AGRI 3137Y(5)	Aquatic Resource Management	60+45	5
WORK PLACEMENT			
Code	**Module Name**	**Wk/Yr**	**Credits**
AGRI 2103(5)	Work Placement	24	6
Total Number of Credits = 115			

9. Programme Plan – BSc (Hons) Agriscience and Technology (minor: Natural Resource Management)

YEAR 1

CORE MODULES

Code	Module Name	Hr / Yr L+P	Credits
AGRI 1018Y(1)	Agricultural Chemistry and Soil Science	45+60	5
AGRI 1034Y(1)	Animal Production: Principles and Techniques	30+30	3
AGRI 1035Y(1)	Agronomy and Horticultural Crop Production I	45+60	5
AGRI 1047Y(1)	Microbiology and Genetics	60+60	6
AGRI 1064Y(1)	Agrometeorology and Climate Change	45+0	3
AGRI 1071Y(1)	Data Handling and Research Methodology	30+30	3
AGRI 1078Y(1)	Economics for Agricultural Managers	45+0	3
COMS 1010(1)*	Communication Skills	DE	3
AGRI 1100 (1)	Occupational Safety and Health	15+0	1

***To be taken in Semester 2**

YEAR 2

CORE MODULES

Code	Module Name	Hr / Yr L+P	Credits
AGRI 2156Y(3)	Agricultural Engineering Principles	60+45	5
AGRI 2088Y(3)	Biochemistry and Biotechnology	60+60	6
AGRI 2089Y(3)	Pests, Diseases and Weeds Control	45+60	5
AGRI 2092Y(3)	Animal Production and Science I	60+60	6
AGRI 2093Y(3)	Botany and Crop Physiology	60+45	5
AGRI 2112Y(3)	Experimental Designs and Sampling Techniques	30+30	3
AGRI 2157Y(3)	GIS, Remote Sensing and Land Surveying	60+45	5
AGRI 2158Y(3)	Agricultural Management and Extension	45+0	3
AGRI 2130 (1)	Scientific Communication Skills and Methods	15+0	1

Code	Module Name	Wk/Yr	Credits
AGRI 2103(5)	Work Placement	24	6

YEAR 3

Code	Module Name	Hr / Yr L+P	Credits
AGRI 3000Y(5)	Project	-	9
AGRI 3136(5)*	Entrepreneurship in the agribusiness sector	45+0	3
AGRI 3003Y(5)	Animal Science and Production II	60+60	6
AGRI 3026Y(5)	Crop Production Technologies	60+45	5
AGRI 3138Y(5)	Forestry and Biodiversity	60+45	5
AGRI 3083Y(5)	Soil Conservation and Management	60+45	5
AGRI 3137Y(5)	Aquatic Resource Management	60+45	5

***To be taken in Semester 1**

Total number of credits = 115