
BSc (HONS) SUSTAINABLE AGRICULTURE AND FOOD SECURITY (Full-Time) (A335/16)

1. Background

Food security has been defined as when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. Food Security concerns not only food production systems and supply chains, but also includes development issues such as land tenure, patterns of inequality, poverty and the exchange value of commodities.

Food supply and security must be achieved through a sustainable approach to production (Sustainable Agriculture), with emphasis on sustainable utilisation of soil, land water, energy and other inputs. A Sustainable Agriculture foundation will ensure a positive outcome to the Food-Hunger-Poverty nexus. Sustainability issues also englobe gender and youth issues. There is the need to develop methodologies to appraise trade-offs in terms of risk and uncertainty in strategic decision-making both at farm level and at national planning level. Such appraisal is particularly important in light of global environmental change and globalisation of trade.

This programme is in line with Government vision and policy for encouraging a philosophy of sustainable agriculture that will ensure food-security for its people, in terms of satisfying local food demand, and also enable export of quality, safe, residue-free produce that will satisfy the stringent norms of importing countries.

This programme aims to equip and empower graduates with the skills and knowledge to design solutions towards a more sustainable crop and livestock production and enhanced food security in Mauritius, while protecting and managing natural resources and biodiversity within the context of climate change effects. The programme looks at key trends in food production and consumption, and examines the interrelationships between food security and other policy goals (such as environmental protection), and sustainability of food production systems.

On successful completion of this programme, learners will be able to demonstrate:

- Knowledge of conventional agricultural practices and their environmental implications;
- Knowledge of the concept and principles of Sustainable Agriculture and Food Security;
- Understanding of the practices and techniques of natural crop and livestock production;
- Understanding of food security issues in a changing global trade environment;
- Understanding of food security issues in the context of climate change;
- Ability to analyse the factors that can contribute to a food secure nation;
- Understanding of the linkages between food security, sustainable agriculture and other socioeconomic sectors.
- Ability to apply relevant knowledge, skills and technologies to help the farming community and other stakeholders.

2. GENERAL ENTRY REQUIREMENTS

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

3. PROGRAMME REQUIREMENTS

- SC: Credit in Mathematics and Chemistry
- 2 GCE 'A' Level: Passes in any of the following (Agriculture, Physics, Chemistry, Biology, Botany, Zoology, Environmental Studies, and other allied science subjects).

4. PROGRAMME DURATION

	Normal (Years)	Maximum (Years)
Degree	3.5	5.5

5. CREDITS PER YEAR : Minimum 18 credits
Maximum 48 credits } *subject to Regulation 4* }

**6. MINIMUM CREDITS REQUIRED FOR THE AWARD OF UNDERGRADUATE DEGREE: 110
BREAKDOWN AS FOLLOWS:**

	Credits from		
	Core Taught Modules	Project	Internship
Degree	95	9	6

Students may exit with :

- Certificate after having earned 30 credits in core modules.
- 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. 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. Semester Examinations will be carried out for modules indicated in the programme structure.

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.

All students should keep a portfolio of all coursework for their respective programme of studies and same should be made available upon request, to the Faculty Examination Office. In case students fail to submit the Portfolio to the External Examiners through the Faculty Examination Office, a penalty of 10% on all Continuous Assessment marks obtained shall apply.

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 1 to 6. Project – AGRI 3000Y(5) will carry 9 credits. Assessment of the Internship – AGRI 3200(5) will be based on the Evaluation of the Industrial/Enterprise Mentor and the Student’s Portfolio, and module will carry 6 credits. Assessment of the following modules will be based on continuous assessment of students throughout the module and/or submission of a portfolio: Professional Development – AGRI 3117(5) (no credits; for satisfactory completion of the module, a minimum of 40% should be achieved); Scientific Communication and IT for Agriculture - AGRI 2266(3) (2 credits).

Students who do not have SC level pass in Biology will be required to follow the module “Structure and Function of Multicellular Organisms and Ecosystems” in the first semester of the first year of the programme of study. Assessment will be based on a Written Examination carrying a weighting of 70%, and Continuous Assessment carrying 30% of total marks. The module carries no credits. For satisfactory completion of the module, a minimum of 40% should be attained, otherwise student will have to retake the module.

8. Submission Deadlines for Dissertation:

- First Draft: by last week day of February of the Academic Year.
- Final Copy: three copies of the dissertation (2 spiral-bound copies and 1 soft copy in a single PDF text file on electronic storage media) should be submitted to the Faculty Registry and **in addition, a soft copy of the first draft and the final dissertation in a single PDF text file should be uploaded on the “Turnitin’ Platform”, in the final assignment submission link indicated by the Programme/Project Coordinator.** All of the above should be submitted not later than the last week day of March of the academic year by 4.00 p.m. at latest.
- **Failure to submit the Project/Dissertation through the Turnitin Platform will deem to be unreceivable**

9. List of Modules**CORE MODULES**

<u>Code</u>	<u>Module Name</u>	<u>Hr / Yr</u>	<u>Credits</u>
		<u>L+P</u>	
AGRI 1018Y(1)	Agricultural Chemistry and Soil Science	45+60	5
AGRI 1095Y(1)	Animal Science and Production	45+60	5
AGRI 1096Y(1)	Agronomy and Sustainable Horticulture	45+60	5
AGRI 1047Y(1)	Microbiology and Genetics	60+60	6
AGRI 1135Y(1)	Agricultural and Food Economics and Management	45+0	3
AGRI 1071Y(1)	Data Handling and Research Methodology S1	30+30	3
AGRI 1064Y(1)	Agrometeorology and Climate Change S2	45+0	3
AGRI 1097Y (1)	Sustainable Agriculture and Food Security: Concepts and Framework S2	30+0	2
AGRI 2112Y(3)	Experimental Designs and Sampling Techniques S1	30+30	3
AGRI 2189Y(3)	Postharvest Technology and Food Wastes S1	30+30	3
AGRI 2195Y(3)	Sustainable Animal Production and Health Management S1	30+30	3
AGRI 2196Y(3)	Food Safety and Nutrition Security S2	30+30	3
AGRI 2191Y(3)	Sustainable Crop Production S2	30+30	3
AGRI 2266(3)	Scientific Communication and IT for Agriculture S2	30+0	2
AGRI 2156Y(3)	Agricultural Engineering Principles	60+45	5
AGRI 2188Y(3)	Biotechnology and Biosafety	45+60	5
AGRI 2190Y(3)	Sustainability of Agri-Food Systems	45+45	4
AGRI 2192Y(3)	Sustainable Pests, Disease, and Weed Management	45+60	5
AGRI 2193Y(3)	Seed Technology and Production	30+30	3
AGRI 2194Y(3)	Sustainable Aquaculture and Fisheries	45+45	4
AGRI 3000Y(5)	Project	-	9
AGRI 3116Y(5)	Sustainable AgriFood Value Chain Development	60 + 0	4
AGRI 3174Y(5)	Ecosystem-Based Agriculture and Sustainable Natural Resource Management	45+45	4
AGRI 3175Y(5)	Food Security Policies, Regionalisation and Globalisation	60+45	5
AGRI 3176Y(5)	Innovation and Entrepreneurship in Agri-Food Ventures	30+45	3
AGRI 3177Y(5)	Food Security, Climate Change, and Sustainable Development	45+30	4
AGRI 3200(5)	Internship	(6 months)	6
AGRI 3117(5)	Professional Development	15 hr	-

AGRI 3117(5) – Professional Development will be included in the 6 months internship

Total number of credits = 110

10. Programme Plan - BSc (Hons) Sustainable Agriculture and Food Security

YEAR 1

CORE MODULES

<u>Code</u>	<u>Module Name</u>	<u>Hr / Yr</u>	<u>Credits</u>
		<u>L+P</u>	
AGRI 1018Y(1)	Agricultural Chemistry and Soil Science	45+60	5
AGRI 1095Y(1)	Animal Science and Production	45+60	5
AGRI 1096Y(1)	Agronomy and Sustainable Horticulture	45+60	5
AGRI 1047Y(1)	Microbiology and Genetics	60+60	6
AGRI 1064Y(1)	Agrometeorology and Climate Change S2	45+0	3
AGRI 1071Y(1)	Data Handling and Research Methodology S1	30+30	3
AGRI 1135Y(1)	Agricultural and Food Economics and Management	45+0	3
AGRI 1097Y (1)	Sustainable Agriculture and Food Security: Concepts and Framework S2	30+0	2

YEAR 2

CORE MODULES

<u>Code</u>	<u>Module Name</u>	<u>Hr / Yr</u>	<u>Credits</u>
		<u>L+P</u>	
AGRI 2112Y(3)	Experimental Designs and Sampling Techniques S1	30+30	3
AGRI 2188Y(3)	Biotechnology and Biosafety	45+60	5
AGRI 2189Y(3)	Postharvest Technology and Food Wastes S1	30+30	3
AGRI 2196Y(3)	Food Safety and Nutrition Security S2	30+30	3
AGRI 2190Y(3)	Sustainability of Agri-Food Systems	45+45	4
AGRI 2156Y(3)	Agricultural Engineering Principles	60+45	5
AGRI 2191Y(3)	Sustainable Crop Production S2	30+30	3
AGRI 2195Y(3)	Sustainable Animal Production and Health Management S1	30+30	3
AGRI 2192Y(3)	Sustainable Pest, Disease, and Weed Management	45+60	5
AGRI 2193Y(3)	Seed Technology and Production	30+30	3
AGRI 2194Y(3)	Sustainable Aquaculture and Fisheries	45+45	4
AGRI 2266(3)	Scientific Communication and IT for Agriculture S2	30+0	2

AGRI 2266(3) - Scientific Communication and IT for Agriculture will be done in Semester 2 in Year 2

YEAR 3

CORE MODULES

<u>Code</u>	<u>Module Name</u>	<u>Hr / Yr</u>	<u>Credits</u>
		<u>L+P</u>	
AGRI 3116Y(5)	Sustainable AgriFood Value Chain Development	60 + 0	4
AGRI 3174Y(5)	Ecosystem-Based Agriculture and Sustainable Natural Resource Management	45+45	4
AGRI 3175Y(5)	Food Security Policies, Regionalisation and Globalisation	60+45	5
AGRI 3176Y(5)	Innovation and Entrepreneurship in Agri-Food Ventures	30+45	3
AGRI 3177Y(5)	Food Security, Climate Change, and Sustainable Development	45+30	4
AGRI 3000Y(5)	Project	-	9

YEAR 4

<u>Code</u>	<u>Module Name</u>	<u>Duration</u>	<u>Credits</u>
AGRI 3200(5)	Internship	6 months	6
AGRI 3117(5)	Professional Development	15 hr	-

AGRI 3117(5) – Professional Development will be included in the 6 months internship

Total Number of Credits = 110