BSc (Hons) Food Science and Technology (Minor: Food Entrepreneurship) (with 6-month internship) – A307

1. **Objectives**

The increasing growth in the global food industry can be linked to favourable economic & cultural transformation, change in lifestyles and needs of consumers, who are more willing to experiment with different cuisines, tastes and new brands. Moreover, today, there is an increase in awareness and concern for wellness and health, providing opportunities for development of new functional foods such as high protein, high antioxidant, low fat, wholegrain and organic food. To keep pace with the global trend, the local food processing sector needs innovative and entrepreneurial professionals who would be the food entrepreneurs of tomorrow. To run a successful business in this competitive food market, food entrepreneurs should have a good business plan and basic understanding about food processing, safety and hygiene, packaging, marketing, and regulatory requirements. This programme aims to produce graduates who will be innovative and have the entrepreneurial flair and abilities to contribute to a food system that can feed the world in a sustainable way. Graduates will also be qualified to work in food processing industries in production and managerial capacities, to teach and carry research and extension in governmental and non governmental institutions and to pursue further education and research in food related disciplines.

The programme offers students the opportunity to undertake a 6-month internship at the end of the third year, in organisations relevant to the field of study. The internship aims at (1) developing technical and practical skills of students in the area of food science and technology and entrepreneurship and (2) familiarizing students with skills that will enable them to contribute to the professionalization of the food sector in Mauritius.

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

- apply scientific principles to control the chemical, physical, microbiological, nutritional and sensory properties of food during manufacture and storage;
- apply methods of preservation and processing to control deterioration and spoilage mechanisms in foods and to produce safe foods;
- apply methods of food analysis to assess quality, nutritive value, safety and compliance with standards;
- participate in the development, implementation and maintenance of comprehensive food safety management systems to protect consumer health;
- demonstrate the ability to manage food businesses and develop strategies in making a food business an economically viable and profitable enterprise;
- contribute to the development and growth of small and medium food enterprises, and food industries;
- recommend measures to prevent and reduce food loss and waste;
- identify, relate and apply the content of academic courses to specific work practices and make a worthwhile contribution in the workplace;
- demonstrate people related skills - communications, interpersonal, and team working;
- demonstrate conceptual skills - researching, collecting and organising information, problem solving, planning and organising, innovation and creativity, systems thinking and self-reliance;
- apply the steps involved in a research process;
- 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

SC - Credit in Mathematics and Chemistry/Biology

2 GCE 'A' Level passes in related approved Science subjects (Mathematics, Chemistry, Physics, Biology, Food Studies, Botany, Zoology, Computer Science or Computing).

Preference will be given to candidates also holding an 'A' Level in either Food Studies or Biology.

4.   Programme Duration

	Normal (Years)	**Maximum (Years)**
Degree:	3 ½	5 ½

5.   Credits per Year: Minimum 18 credits, Maximum 48 credits subject to Regulation 6.

6.   Minimum Credits Required for Award of Undergraduate Degree: 1 0 6   credits

Breakdown as follows:

Degree	Credits from		
	Taught Modules	**Project**	**Internship**
	Core		
	91	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/Centre Examination Office. In case students fail to submit the Portfolio to the External Examiners through the Faculty/Centre 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 module WCS 2200(3) – Writing Case Studies, will be based on the write up and submission of a Case Study. Assessment of the Internship – AGRI 4100(1) 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 module Professional Development AGRI 4101(1) will be based on continuous assessment of students throughout the module and/or submission of a portfolio and for satisfactory completion of the module, a minimum of 40% should be achieved.

Assessment of the module AGRI 1153(1) - Effective Scientific Communication: Principles and Practice I will be based on the submission of a portfolio. For the part on WEB 2.0 tools, participation in all discussion forum on the MOODLE platform and demonstration of the use of the tools (e.g. creation of a blog) should be shown. Assessment of the module AGRI 2279(1) - Scientific Communication: Principles and Practice II, will be based on the submission of a Portfolio.

The modules: AGRI 1153(1) - Effective Scientific Communication: Principles and Practice I and AGRI 2279(1) - Scientific Communication: Principles and Practice II, will carry 2 credits and 1 credit, respectively.

Submission Deadlines for Dissertation

- First Draft: by last week day of February of the Academic Year.
- Final Copy – not later than the last week day of March of the Academic Year:
- Three copies of the dissertation (two spiral-bound copies, printed on both sides in black and white and one soft copy in a single PDF text file on electronic storage media) should be submitted to the Faculty/Centre Registry.
- In addition a soft copy of the dissertation (main body i.e, Introduction up to the last Chapter) should be uploaded on the Turnitin Platform, as a single PDF file in the appropriate class/assignment provided by the Project Supervisor by **3.00 p.m.** In case a student is allocated a Part-Time Supervisor, the class is to be created by the Programme/Project Coordinator.
- All of the above should be submitted not later than the working day (i.e. excluding Saturdays, Sundays and Public Holidays) of March of the academic year by 4.00 pm at latest unless specified otherwise in the Programme of studies.
- Failure to submit the Project/Dissertation through the Turnitin Platform will result in the dissertation of the student, whether the bound copy or the soft copy, being unreceivable.

8. List of Modules

CORE MODULES

Module code	Module Name	Hrs/Yr L+P	No. of credits
AGRI 10107Y(1)	Basic Food Microbiology	45+45	4
AGRI 10108Y(1)	Chemistry and Analysis of Foods I	60+60	6
AGRI 1065Y(1)	Introduction to Food Engineering	45+45	4
AGRI 1012Y(1)	Biochemistry and Nutrition	75+30	6
AGRI 1052Y(1)	Chemistry Fundamentals and Laboratory Techniques	30+60	4
AGRI 1056Y(1)	Introductory Statistics	30+30	3
AGRI 1041Y(1)	Introduction to Agricultural Production	45+0	3
AGRI 1072Y(1)	Introduction to Management in Food Industries	30+30	3
AGRI 10109Y(1)	Basics of Entrepreneurship for Food Businesses	45+0	3
AGRI 1153(1)	Effective Scientific Communication: Principles and Practice I	30+0	2
AGRI 20107Y(3)	Chemistry and Analysis of Foods II	60+30	5
AGRI 2018Y(3)	Unit Operations in Food Processing	30+30	3
AGRI 20108Y(3)	Food Safety and Quality Management	45+45	4
AGRI 20109Y(3)	Food Processing and Packaging Technology	60+30	5
AGRI 20110Y(3)	Molecular Biology and Biotechnology	30+45	3
AGRI 20111Y(3)	Statistical Methods for Food Scientists	30+30	3
AGRI 20112Y(3)	Food Hygiene	45+0	3
AGRI 2279(1)	Effective Scientific Communication: Principles and Practice II	15+0	1
AGRI 2113Y(3)	Food Economics and Marketing	30+30	3
AGRI 3014Y(5)	Food Legislation	45+0	3
AGRI 3017Y(5)	Developments in Food Science and Technology	45+0	3
AGRI 30104Y(5)	Innovative Approaches to Food Loss and Waste Reduction	45+30	4
AGRI 30105Y(5)	New Food Product Design, Development and Testing	45+30	4
AGRI 30106Y(5)	Entrepreneurship and Innovation for Small and Medium Food businesses	45+0	3
AGRI 30107Y(5)	Strategic Management for Food Businesses	45+0	3
AGRI 3000Y(5)	Project	-	9
WCS 2200(3)	Writing Case Studies	9+36	3
AGRI 4101(1)*	Professional Development	15+0	0
AGRI 4100(1)	Internship	6 months	6

AGRI 4101(1) - Professional Development will be delivered before the students embark on the 6-month internship

Total Number of Credits = 106

9. **Programme Plan**: BSc (Hons) Food Science and Technology (Minor: Food Entrepreneurship) (with 6-month internship)

Module code	Module Name	Hrs/Yr L+P	No. of credits
Year 1			
AGRI 10107Y(1)	Basic Food Microbiology	45+45	4
AGRI 10108Y(1)	Chemistry and Analysis of Foods I	60+60	6
AGRI 1065Y(1)	Introduction to Food Engineering	45+45	4
AGRI 1012Y(1)	Biochemistry and Nutrition	75+30	6
AGRI 1052Y(1)	Chemistry Fundamentals and Laboratory Techniques	30+60	4
AGRI 1056Y(1)	Introductory Statistics	30+30	3
AGRI 1041Y(1)	Introduction to Agricultural Production	45+0	3
AGRI 1072Y(1)	Introduction to Management in Food Industries	30+30	3
AGRI 10109Y(1)	Basics of Entrepreneurship for Food Businesses	45+0	3
AGRI 1153(1)	Effective Scientific Communication: Principles and Practice I	30+0	2
	TOTAL	435+300	38

Module code	Module Name	Hrs/Yr L+P	No. of credits
Year 2			
AGRI 20107Y(3)	Chemistry and Analysis of Foods II	60+30	5
AGRI 2018Y(3)	Unit Operations in Food Processing	30+30	3
AGRI 20108Y(3)	Food Safety and Quality Management	45+45	4
AGRI 20109Y(3)	Food Processing and Packaging Technology	60+30	5
AGRI 20110Y(3)	Molecular Biology and Biotechnology	30+45	3
AGRI 20111Y(3)	Statistical Methods for Food Scientists	30+30	3
AGRI 20112Y(3)	Food Hygiene	45+0	3
AGRI 2279(1)	Effective Scientific Communication: Principles and Practice II	15+0	1
AGRI 2113Y(3)	Food Economics and Marketing	30+30	3
WCS 2200(3)	Writing Case Studies	9+36	3
	TOTAL	435+245	33

Module code	Module Name	Hrs/Yr L+P	No. of credits
Year 3			
AGRI 3014Y(5)	Food Legislation	45+0	3
AGRI 30104Y(5)	Innovative Approaches to Food Loss and Waste Reduction	45+30	4
AGRI 3017Y(5)	Developments in Food Science and Technology	45+0	3
AGRI 30105Y(5)	New Food Product Design, Development and Testing	45+30	4
AGRI 30106Y(5)	Entrepreneurship and Innovation for Small and Medium Food Businesses	45+0	3
AGRI 30107Y(5)	Strategic Management for Food Businesses	45+0	3
AGRI 3000Y(5)	Project	-	9
	TOTAL	270+60	29

Year 4			
AGRI 4101(1)	Professional Development	15+0	0
AGRI 4100(1)	Internship	6 months	6

Total Number of Credits = 106