MSc Aquaculture & Ocean Studies (Part-time) – A518

1. Objectives

The oceans, estuaries and freshwater bodies have always played an important role in meeting human needs for food, recreation and other resources. They also provide a livelihood for millions of people throughout the world. Overexploitation or incorrect utilisation has in many parts of the world resulted in negative impacts on aquatic ecosystems, leading to depletion of fish stocks, loss of biodiversity, water pollution, etc. As a result, aquaculture is gaining importance as a multi-disciplinary industry that has the potential to meet human needs while protecting and maintaining ecosystem structure and functions. Through the adoption of an integrated, holistic and ecosystem-based management approach, aquaculture, mariculture and utilisation of ocean resources can be made economically profitable, environmentally sustainable and socially equitable.

This programme has been devised to be in line with Government policy on developing an Ocean Economy for the Republic of Mauritius. Aquaculture, mariculture, utilisation of ocean-based resources such as hydrocarbons, minerals and polymetallic nodules, deep ocean waters, biologically active compounds from coastal and marine plant and animal species for use as fertilisers, pesticides, pharmaceuticals, cosmetics, etc. have major potential in this context. To realize this potential, the country needs trained manpower at various levels, scientifically-generated and reliable data and knowledge, as well as the enabling framework. This programme aims to provide graduates with training in advanced aspects of sustainable aquaculture, in freshwater, coastal and marine ecosystems, and to give them a good grounding in ocean studies, ocean governance and management.

On completion of this programme, the students will have developed knowledge and skills to:

1. Explain the biological and ecological processes of aquatic ecosystems and the organisms living in it, and the various processes governing life in any type of water body.
2. Develop cultures of aquatic organisms (such as fish, crustaceans, echinoderms, corals, sponges, algae, etc.) in a wide range of culture environments (from sea enclosures to semi-extensive ponds and high-tech recirculation systems).
3. Discuss the sensitivity of marine communities in relation to human interventions, including overexploitation, climate change, and habitat destruction.
4. Explain the concept and practices of sustainable governance and ocean management, including local, regional and international regulations.
5. Understand earth and ocean geo-dynamics

2. General Entry Requirements

Successful completion of an undergraduate degree with

- At least a Second Class or a CPA $\geq$ 50%, whichever is applicable or
- A GPA not less than 2.5 out of 4 or equivalent, from a recognised higher education institution.

OR alternate qualifications acceptable to the University of Mauritius.

3. Programme Requirements

A Degree in Agriculture or Environmental Science or Zoology or Biology (with at least minor/specialisation in Aquaculture, Oceanography, Marine Biology, Marine Science, Natural Resource Management, Land and Water Management, or other allied fields), or a Degree in Agriculture or Environmental Science or Zoology or Biology with at least three years full time working experience in the fields of aquaculture, fisheries, seafood, oceanography, marine/ocean sciences, or other allied fields.

4. General and Programme Requirements – Special Cases

The following may be deemed to have satisfied the General and Programme requirements for admission:

- Applicants who do not satisfy any of the requirements as per Regulations 2 and 3 above but submit satisfactory evidence of having passed examinations which are deemed by the Senate to be equivalent to any of those listed.
- Applicants who do not satisfy any of the requirements as per Regulations 2 and 3 above but who in the opinion of Senate, submit satisfactory evidence of the capacity and attainments requisite to enable them to pursue the programme proposed.

5. Programme Duration

	Normal (Years)	Maximum (Years)
Master's Degree (F/T)	1	2
Master's Degree (P/T)	2	4
Postgraduate Diploma (F/T)	1	2
Postgraduate Diploma (P/T)	2	4

6. Credits per Year: Minimum 12 credits subject to Regulation 5.

7. Minimum Credits Required for the Award of:

Master's Degree: 37
Postgraduate Diploma: 25
Postgraduate Certificate: 12

Breakdown as follows:

	Credits from	
	Core Taught Modules	**Project**
MSc degree	25	12
Postgraduate Diploma	25	
Postgraduate Certificate	12	

8. Assessment

Each module will carry 100 marks and will be assessed as follows (unless otherwise specified):

Assessment will be based on a written examination of 2 to 3-hour duration, carrying a weighting of 70%, and continuous assessment carrying 30% of total marks. Written examination for all modules, whether taught in semester 1 or in semester 2 or both, will be carried out at the end of the academic year. There will be a compulsory class test for all modules taught in semester 1, at the end of semester 1 of the given academic year. Continuous assessment will be based on practical classes in and outside the laboratory, case studies, Problem-Based Learning, visits, student-led seminars, literature based research and/or assignments, but should include at least 1 class test.

Written examinations for all the modules, whether taught over one semester or one academic year, will be carried out at the end of the academic year.

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

Submission Deadlines for Dissertation:

- First Draft: by last week day of July of the Academic Year.
- Final Copy: three copies of the dissertation (2 spiral-bound copies and 1 copy on electronic storage media) by last week day of August of the Academic Year by 4.00 p.m at latest.

9. List of Modules

CORE MODULES

Code	Module Name	Hr / Yr L+P	Credits
AGRI 6085Y(1)	Research Methodology and Entrepreneurship	45+45	4
AGRI 6086Y(1)	Aquatic and Ocean Ecosystems and Resources	60+30	5
AGRI 6087Y (1)	Sustainable Aquaculture	60+60	6
AGRI 6088Y(1)	Oceanography	60+60	6
AGRI 6089Y(1)	Environmental Quality and Governance	45+30	4
AGRI 6000Y(1)	Project	-	12
Total Number of Credits = 37			

10. Programme Plan – MSc Aquaculture & Ocean Studies

For Full -Time:

YEAR 1

CORE MODULES

Code	Module Name	Hr / Yr L+P	Credits
AGRI 6085Y(1)	Research Methodology and Entrepreneurship	45+45	4
AGRI 6086Y(1)	Aquatic and Ocean Ecosystems and Resources	60+30	5
AGRI 6087Y (1)	Sustainable Aquaculture	60+60	6
AGRI 6088Y(1)	Oceanography	60+60	6
AGRI 6089Y(1)	Environmental Quality and Governance	45+30	4
AGRI 6000Y(1)	Project	-	12

For Part-Time:

YEAR 1

CORE MODULES

Code	Module Name	Hr / Yr L+P	Credits
AGRI 6085Y(1)	Research Methodology and Entrepreneurship	45+45	4
AGRI 6086Y(1)	Aquatic and Ocean Ecosystems and Resources	60+30	5
AGRI 6087Y (1)	Sustainable Aquaculture	60+60	6

YEAR 2

CORE MODULES

Code	Module Name	Hr / Yr L+P	Credits
AGRI 6088Y(1)	Oceanography	60+60	6
AGRI 6089Y(1)	Environmental Quality and Governance	45+30	4
AGRI 6000Y(1)	Project	-	12

Total Number of Credits = 37