

BSc (Hons) Marine Science and Technology - SC304 (Under Review)

1. Rationale & Objectives

The need for Mauritius is strong to diversify the economy by developing new sectors. The Seafood Hub and the proposed Land Based Oceanic Industry look promising sectors for new employment and national income generation, but are severely constrained by lack of appropriately trained or skilled manpower. The University of Mauritius endeavours to help bridge some of this gap by offering the needed training through this programme.

Modern marine science entails a multidisciplinary approach and application of relevant marine technology offers the potential for exploring and exploiting the sea for human benefits. This programme provides a basic understanding of how the ocean functions, and gives the background not only for use and exploitation of the marine environment and its resources, but also to deal with the many challenges of how we maximise resource yields without compromising ecological integrity, farm marine species without degrading the coastal environment, expand tourism without dislocating its very ecological assets and promote a marine industry on a sustainable basis for Mauritius.

All three years of the degree programme are based on a modular system with students following the equivalent of six 90-hour modules each year. A combination of compulsory 'core' modules and a choice of 'optional/elective' modules provides a well structured degree whilst at the same time allowing students to freely study the areas of marine science and technology in which they have the keenest interest and also undertake a research project under guidance in the final year.

The programme provides an opportunity to acquire a thorough foundation in Marine Science and Technology with a view to developing skills for higher studies, research and entrepreneurship in the marine sector. Graduates with this qualification can seek employment as Education, Scientific and Environmental Officer in the public sector as well as in the private seafood and marine industry sectors. Adequate attention will also be paid towards the personal development of students in acquiring professional competence and a sense of community responsibility.

| Year | Core Modules | Elective Modules | Project | Credits Earned | Total |
|--------|--|-----------------------|--------------------|--------------------|-------|
| Year 1 | Four (6 credits each) + one (3 credits) ^a | One (6 credits) | - | 24 6 3 3 | 33 |
| Year 2 | Four (6 credits each) + one (3 credits) ^b | One (6 credits) | - | 24 6 3 | 33 |
| Year 3 | Four (6 credits each) | One (6 credits) | One (6 credits) | 24 6 6 | 36 |
| Total | 14 core modules | 3 elective modules | 1 project | 102 credits | |

Core modules: 78 credits; Elective modules: 18 credits; Project: 6 credits; ^aIT module;
^bstatistics module

2. General Entry Requirements

As per General Entry Requirements for admission to the University for undergraduate degrees.

3. Programme Requirements

Credit in five subjects (School Certificate) including Mathematics.
Pass at GCE 'A' Level in Biology or equivalent.

4. Programme Duration

Minimum: 3 years
Maximum: 5 years

5. Credits per Year

Minimum 18, Maximum 48, subject to regulation 4.

6. Minimum Credits Required for Award of Undergraduate Degree: 102

Breakdown as shown in table below, subject to regulation 4.

| Degree | Core Taught Modules | Project | Electives |
|---------------|----------------------------|----------------|------------------|
| | 78 | 6 | 18 |

7. Assessment

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

Assessment of a module will be based on a written examination (of 2-3-hour duration) and on continuous assessment done during the semester/year. The continuous assessment will count for 20-30% of the overall percentage mark for the module, except for a programme where the structure makes for other specific provision(s). Continuous assessment may be based on laboratory work, and/or assignments and should include at least 1 class test.

Written examinations 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 (unless otherwise stated).

A minimum of at least 30% should be attained in each of continuous assessment and written examination, with an overall total of 40% for a candidate to pass a module. 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.

Projects will carry 6 credits for degree award. They will be carried out normally in the area of marine science and technology.

8. List of Modules

CORE MODULES (84 credits)

| Code | Module Name | Hrs/Year L+P/Visits | Credits |
|--------------|---|------------------------|---------|
| MST 1001Y(1) | Marine Biology & Ecology | 75+30 | 6 |
| MST 1002Y(1) | Physical Oceanography, Meteorology & Climate Change | 75+30 | 6 |
| MST 1003Y(1) | Introductory Marine Chemistry & Analytical Techniques I | 75+30 | 6 |
| MST 1004Y(1) | Marine Pollution | 75+30 | 6 |
| CSE 1010e(1) | Introduction to Information Technology | O.E. | 3 |
| MST 2001Y(3) | Ichthyology, Fisheries Biology & Management | 60+60 | 6 |
| MST 2002Y(3) | Marine Aquaculture Techniques & Business Management | 60+60 | 6 |
| MST 2003Y(3) | Dynamical Oceanography & Ocean Remote Sensing | 75+30 | 6 |
| MST 2004Y(3) | Marine Biogeochemistry & Analytical Techniques II | 70+40 | 6 |
| MST 2005Y(3) | Research Methods | 30+30 | 3 |
| MST 3001Y(5) | Marine Biotechnology | 75+30 | 6 |
| MST 3002Y(5) | Marine Natural Product Chemistry | 75+30 | 6 |
| MST 3003Y(5) | Marine Resources & Law of the Sea | 75+30 | 6 |
| MST 3004Y(5) | Integrated Coastal Zone Management | 75+30 | 6 |
| MST 3000Y(5) | Project/Dissertation | - | 6 |

ELECTIVES (18 credits)

| | | | |
|--------------|--|-------|---|
| MST 1005Y(1) | Biochemistry, Molecular Biology & Bioinformatics | 75+30 | 6 |
| MST 1006Y(1) | Sustainable Development | 90+0 | 6 |
| MST 2006Y(3) | Coastal Engineering | 75+30 | 6 |
| MST 2007Y(3) | Sustainable Marine Tourism | 80+20 | 6 |
| MST 3005Y(3) | Public Health, Food Hygiene & Food Processing | 60+60 | 6 |
| MST 3006Y(3) | Environmental Management Tools | 75+30 | 6 |