



CAPACITY BUILDING, RESEARCH & CONSULTANCY IN THE MARINE SCIENCES: PROMISES AND LIMITATIONS

Strengthening ocean observing in Africa

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FACULTIES AT UOM AND THE OCEAN ECONOMY

All Faculties at UoM contribute to the Ocean Economy:

Major Contributors:

- Faculty of Science
- Faculty of Agriculture
- Faculty of Engineering

Other Faculties:

- Faculty of Law & Management: Governance/Legal/Management
- Faculty of Social Sciences & Humanities: Social aspects and Economics
- Faculty of Information Communication and Digital Technologies

Multidisciplinary approaches are encouraged and have been implemented.

UNDERGRADUATE PROGRAMMES

Current:

- BSc (Hons) Agriscience and Aquaculture Technology
- BSc (Hons) Aquaculture
- BSc (Hons) Biological Sciences
- BSc (Hons)
- BSc (Hons) Geomatics
- BSc (Hons) Marine Environmental Sciences
- Diploma in Forestry and Fisheries (Rodrigues)

Upcoming:

- BEng (Hons) Marine Engineering – in collaboration with the Ministry of Ocean Economy, Marine Resources & Shipping
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POSTGRADUATE PROGRAMMES

Current:

- MSc Aquaculture
- MSc Coastal and Ocean Management
- MSc Marine Science

Upcoming:

- MSc Biotechnology - with specialisation in Blue Biotechnology
 - MSc Climate Change Adaptation & Risk Reduction – in collaboration with the Ministry of Environment
 - MSc Coastal Engineering – in collaboration with the Ministry of Environment
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PROGRAMMES: PROMISES

- Attract many students
 - High female to male ratio
 - Students from Seychelles, Madagascar, Swaziland
 - Aug 2019: all UG programmes free to Mauritian Nationals
 - Aug 2019: all UG and PG programmes converted to the European Credit Transfer System
 - Research-led teaching on most modules
 - Substantial practical and fieldwork component
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PROGRAMMES: LIMITATIONS

- Although modules are currently competently taught by UoM staff, it is not always possible to deliver research-led teaching that falls outside our expertise
 - Physical infrastructure
 - Equipment
 - Access to the ocean limited to coastal areas
 - Placement opportunities
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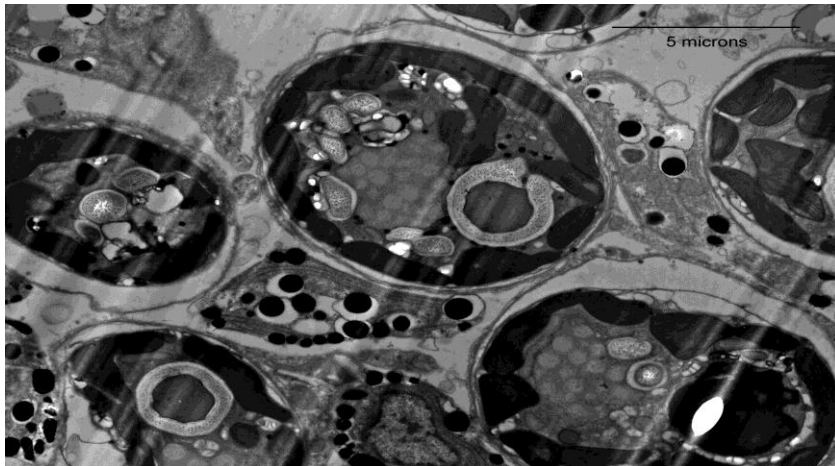
Major Research Themes

- Conservation of marine biodiversity and ecosystems
- Identification and assessment of potential candidates for aquaculture
- Isolation, assessment and production of bioactive compounds from marine organisms
- Development of environmentally-friendly antifouling agents
- Development of a web portal for Ocean Data Management



Major Research Themes

- Studies on coral bleaching and resilience
- Effects of climate change parameter and disease on marine organisms
- Genetic studies and DNA barcoding studies on marine organisms
- Marine pollution
- Integrated Coastal Zone Management
- Assessing seafood quality



CAPACITY BUILDING AND FUNDING FOR RESEARCH

Capacity building:

- Over 30 MPhil/PhD students in ocean-related research (high female to male ratio)
- Training of research assistants
- Training of undergraduate students/interns
- Postdoctoral fellows
- Academic staff on training workshops

Major sources of funding:

- UoM
 - Mauritius Research Council
 - Tertiary Education Commission
 - WIOMSA
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POLES OF RESEARCH EXCELLENCE

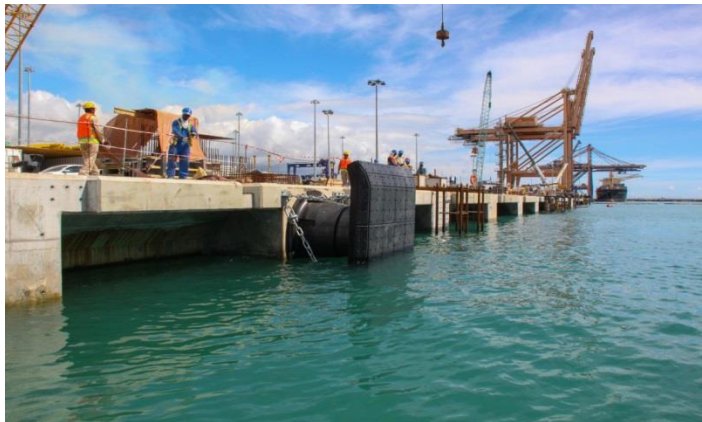
- Twelve research groups consisting of UoM academic staff and external collaborators
 - Independent of Faculties
 - Relevant PREs that undertake ocean-related research include:
 - Sustainable Marine Biodiversity
 - Molecular Life Sciences
 - Sustainable Energy and Waste Engineering
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Selection of International Partners

- University of Delaware (USA)
- University of Stanford (USA)
- University of Southampton (UK)
- University of Aberdeen (UK)
- University of Western Australia/Ocean Institute
- Scottish Association of Marine Science
- ESRI – ArcGIS (South Africa)
- University of Rhodes (South Africa)
- John Hopkins University (US)
- Indian Institute of Technology (India)
- CSIR (India)
- Ministry of Earth Science (India)
- Second Institute of Oceanography, China

Major Consultancies/Collaborations

- Environmental Monitoring and Management
- Marine environmental Study for the construction of Eco-tourism projects
- Coral translocation and water quality assessment
- Climate Change Adaptation Programme in the Coastal Zone of Mauritius



Short Courses/Conferences

- Short course in Sustainable Aquaculture
- Training Workshop on Coral Diseases and Monitoring
- Australia Awards Africa Training Course: in collaboration with the University of Wollongong, Australia
- 11th WIOMSA Symposium 2019

RESEARCH & CONSULTANCY: PROMISES & LIMITATIONS

Promises:

- Increasing output in areas of priority
- Increasing research funding for projects
- Facilitation of consultancies
- Inclusive

Limitations:

- Physical infrastructure
 - Access to the ocean
 - Limited access to state-of-the-art equipment
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SOME PLATFORMS FOR PROMOTING COLLABORATION

Regional collaboration

- **E-learning platform**
 - **Mobility of Academics**
 - **Mobility of Students**
 - **Placement opportunities/internships**
 - **Sharing of Laboratories-Reference laboratory**
 - **Financially supporting regional research projects**
 - **Organisation of annual events – Conferences/Symposium/Seminars**
 - **Encouraging joint publications – Books/Guidelines/Policy Briefs/Scientific Papers**
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Thank you for your kind attention