2. Integrated Bachelors-Masters in Marine Biology (5 Year)

The Department of Marine Biosciences, under the Faculty of Ocean Science and Technology at Kerala University of Fisheries and Ocean Studies, offers a **Five-Year Integrated Programme in Marine Biology (IPMB)** from the academic year 2026–27.This programme is designed to build a strong and continuous academic pathway from undergraduate to postgraduate level, integrating core biological sciences with oceanography, emerging technologies, and applied marine research. It is structured to produce graduates with both conceptual depth and field-based competence, capable of addressing real-world challenges in marine and coastal ecosystems. The curriculum combines classroom learning with extensive field exposure, laboratory training, computational tools, and research-oriented modules. With a strong emphasis on interdisciplinary learning, the programme integrates areas such as marine ecology, biodiversity, ocean processes, biotechnology, data analysis, and resource management. Being offered within a university dedicated to fisheries and ocean sciences, the programme provides direct linkage to coastal systems, marine industries, and policy-relevant research, ensuring both academic rigor and sectoral relevance.

OBJECTIVES OF THE PROGRAMME

- To develop a strong foundation in biological sciences with specialization in marine systems.
- To provide integrated knowledge of biological, chemical, geological and physical, oceanography.
- To build skills in field sampling, laboratory techniques, and oceanographic instrumentation.
- To strengthen analytical, computational, and data interpretation abilities relevant to marine sciences.
- To introduce students to emerging areas such as blue biotechnology, bioinformatics, and climate resilience.

- To foster research aptitude through progressive training leading to independent dissertation work
- To develop an understanding of marine resource management, conservation, and sustainability.
- To prepare graduates for scientific, technical, and policy-oriented roles in coastal and deep-sea sectors towards realizing the national goals of blue economy.

SCOPE OF THE PROGRAMME

The programme is designed to address the growing demand for trained marine biologist in areas linked to ecosystem health, biodiversity conservation, climate change, and the blue economy.It provides exposure to diverse domains including marine biodiversity, ecosystem dynamics, oceanographic processes, fisheries interfaces, coastal systems, and marine biotechnology. The integration of field-based semesters, particularly in island and coastal environments, ensures practical understanding of marine ecosystems.Graduates are equipped to pursue higher studies, research careers, or technical roles in marine science institutions, environmental agencies, and ocean-related industries.

ELIGIBILITY AND MODE OF ADMISSION

- Candidates must have **passed Plus Two (Higher Secondary) or its equivalent** from a recognized board with a **minimum of 55% marks with Biology as one of the subjects**.
- Admission will be based on **entrance criteria** as prescribed by the University from time to time.
- The selection process may include **academic performance and other evaluation components**, as notified.

INTAKE CAPACITY

Thirty (30) seats plus 30% seats for Lakshadweep residents and 20% for children of fishermen as supernumerary seats

ASSESSMENT AND STANDARDS OF PASSING

Student evaluation will be based on continuous assessment components including assignments, laboratory records, field reports, seminars, case studies, and project work, along with end-semester examinations. The assessment system follows a structured combination of internal and external evaluation in accordance with University regulations. Emphasis is placed on practical competence, analytical ability, and research output in addition to theoretical understanding.

EMPLOYMENT AND ACADEMIC OPPORTUNITIES

Graduates of the programme can pursue opportunities in:

- Marine research institutions and universities
- Environmental monitoring and impact assessment agencies
- Fisheries and coastal resource management sectors
- Marine biotechnology and bioresource industries
- Conservation organizations and policy bodies
- Ocean data analysis and modelling domains

The programme also provides a strong foundation for higher studies, including MSc, PhD, and interdisciplinary research in marine and environmental sciences.

PROGRAMME STRUCTURE OVERVIEW

Total Duration: 5 Years (10 Semesters)

Programme Philosophy

This integrated programme is structured as a progressive academic pathway that moves from fundamental biological and oceanographic principles to advanced specialization and independent research. The initial semesters focus on building a strong base in biology, chemistry, and oceanography. Intermediate stages introduce core marine disciplines, analytical tools, and interdisciplinary concepts. Advanced semesters emphasize specialization, field immersion, and research training, culminating in a

dissertation designed to meet publication standards.

The curriculum places strong emphasis on:

- Field-based learning in coastal and island ecosystems
- Integration of marine biology and blue biotechnology towards blue economy perspective
- Application of statistical, computational, and geospatial tools
- Exposure to real-world marine and fisheries systems
- Development of independent research capability

The programme is designed not just to produce graduates, but to develop marine scientists capable of contributing to research, policy, and sustainable ocean governance.