

**Department of Marine Biology, Microbiology and Biochemistry, School of Marine Sciences  
Cochin University of Science and Technology (CUSAT)**  
([www.cusat.ac.in](http://www.cusat.ac.in))

### **Introduction**

Originally known as University of Cochin, the university came into being in 1971 through an act of the Legislature as a result of a concerted campaign for quality post-graduate education in the State of Kerala. Reorganization of the university into the Cochin University of Science and Technology (CUSAT) saw the fulfillment of the aspirations of the pioneers that spearheaded the movement for establishment of a Science and Technology University in the State. CUSAT has at present 27 departments of study and research offering graduate and post-graduate programmes across a wide spectrum of disciplines in frontier areas of engineering, science, technology, humanities, law and management. During the four decades of its existence, CUSAT has registered steady growth and has earned recognition as one of the highly reputed and internationally acclaimed Indian Universities. The University has academic links and exchange programs with several institutions across the globe.

### **Department of Marine Biology, Microbiology and Biochemistry**

The Department of Marine Biology, Microbiology and Biochemistry (DMMB) is an integral part of the School of Marine Sciences, which is one of only of its kind in India, comprising all branches of marine sciences, such as Departments of Physical Oceanography, Chemical Oceanography, Marine Geology and Geophysics and Atmospheric Sciences under the same school. This provides an ideal platform for interdisciplinary research and has propelled School Alumni to key positions at various marine science-related institutes in India and abroad.

### **Teaching opportunities**

The Department of Marine Biology offers a post-graduate degree programme in Marine Biology (M.Sc. Marine Biology), in addition to research degrees such as Master of Philosophy (M. Phil.) and Ph.D. The Department has excellent facilities for classroom teaching in various subjects such as marine biology, marine biodiversity, marine pollution, oceanography, marine microbiology etc. As the M.Sc. programme is highly interdisciplinary, there is also scope for teaching in chemical oceanography, physical oceanography, marine geology, coastal processes etc. Lab-based courses include instrumentation, planktonology, marine botany, marine microbiology, fish pathology, biochemistry etc. to name a few. While the intake for the M.Sc. programme is around 20 per year, there are nearly 70 full-time research scholars in the department engaged in research on various aspects of marine sciences. The Department does not offer any undergraduate programmes.

The School of Marine Sciences, and particularly DMMB, welcome Fulbright scholars for active interaction with the academic community of the school. They could contribute to teaching for post-graduate students, M. Phil. or Ph.D. (as part of course work). There is also ample scope for partnering in research projects with the department faculty.

### **Research opportunities**

DMMB has excellent facilities for basic and applied research. The facilities include a sophisticated central instrumentation lab with state-of-the-art facilities such as HPLC, minus 80 degree freezer, real-time PCR, GC, particle size analyzer, blood analyser, gel documentation system, automated

water quality analyzer, etc. While we have a small research vessel (RV *Kingfisher*) at the School of Industrial Fisheries in the same campus, most of the marine science research-related sampling and observations are carried out onboard the fisheries and oceanographic research vessel (FORV) *Sagar Sampada*, owned by Ministry of Earth Sciences (MoES), Govt. of India. Since DMMB has several projects funded by MoES, we often get a berth in FORV *Sagar Sampada* cruises. DMMB also has a large aquarium and well-maintained museum facility. Faculty of the department are also actively engaged in arctic research.

Considering the research output of the department over the years, MoES has instituted an Earth Science and Technology Cell (ESTC) at School of Marine Sciences, CUSAT, with a focus on marine benthos. Ongoing research programmes funded by MoES include ‘marine biodiversity along Kerala coast’, ‘role of microbenthos in remineralisation of shelf sediments with special reference to those involved in carbon and nitrogen cycle’, ‘role of nitrogen fixing heterotrophs and cyanobacteria in the nitrogen cycle of Cochin estuary and coastal waters of Kochi’, ‘monitoring of harmful algal blooms along Kerala coast’, ‘antimicrobial peptides from marine organisms’ (as a part of drugs from the sea research), ‘marine ecotoxicological studies’ etc. to name a few.

The School of Marine Sciences has an excellent library and Internet facilities. Most departments also have Wi-Fi connectivity. The School of Marine Sciences is located at a lakeside campus, adjoining scenic Cochin back waters and in close proximity with premier research institutes such as the Central Marine Fisheries Research Institute (CMFRI), the Central Institute of Fisheries Technology (CIFT) and the National Institute of Oceanography (NIO), which could facilitate the visiting researcher to network with these institutions in case required.

### **Accommodation**

CUSAT has very good guest house facility which is located at the main campus (14 Km away from the lakeside campus). However, university buses operate between the main campus and lakeside campus in the morning and evening. Public transport is well developed and commuting should not be a problem. There are also several guest houses and other low-cost accommodations available near the lakeside campus.

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