



DEPARTMENT OF OCEAN ENGINEERING



The Ocean Engineering Center of IIT Madras was established in 1977 as centre of excellence for the development of technology in the field of ocean engineering. A review committee headed by Prof. M.G.K. Menon reviewed the progress of the Department in 1982 and recommended the formation of full-fledged Department. The Department has been functioning as an academic department since 1982.

The Department was created with the following objectives:

- To create infrastructure and expertise in order to carry out R & D work in areas of Ocean Engineering and related fields, which have direct relevance in the national context.
- To create educational and research opportunities at graduate and doctoral levels.
- To extend educational facilities and train the manpower from industry, R & D organizations and other educational institutions in order to enable them to carry out tasks in the areas of Ocean Engineering.



Prof. S Nallayarasu
Head of the Department



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- To collaborate with user organizations on need-based problems.

The last 40 years have seen a remarkable growth of the Department in terms of expertise and infrastructure facilities and there has been notable success in achieving the above-mentioned objectives. The Department vigorously pursues activities in line with its objectives and remains committed to excellence in its endeavor in education, research, and training programs as well as supporting developmental efforts of marine industries.

Programmes (M.Tech.)

- Ocean Structures (Formerly Ocean Engineering)
Stream 1 : Offshore Structures
Stream 2 : Port, harbour and Coastal structures
Note : Streaming will be based on CGPA of 1st Semester
- Ocean Technology (UoP-MOES)
- Petroleum Engineering

Research areas

Naval architecture

- Ship resistance and Propulsion
- Navigation and Maneuvering
- Underwater Robotics
- AUVs and UAVs
- ML and AI in Naval Architecture

Coastal engineering

- Coastal protection
- Hydrodynamics
- Siltation and dredging
- Climate change
- Tsunami effects

Offshore engineering

- Offshore Structures
- Floating Systems
- Fluid Structure Interaction
- Offshore Renewable Energy

Petroleum engineering

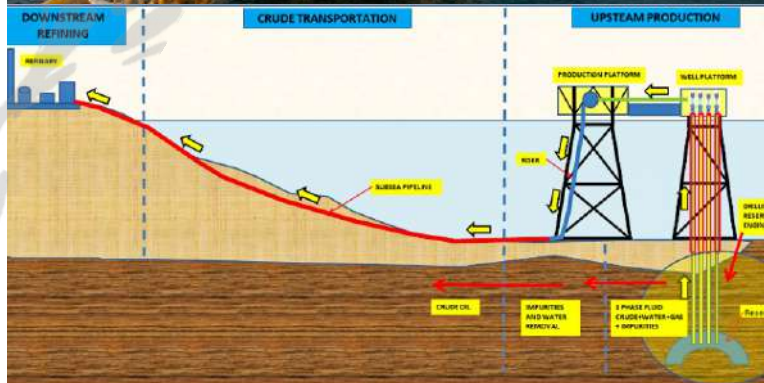
- Reservoir engineering
- Reservoir Fluid Dynamics
- Geomechanics





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Placements





Facilities

The department has state-of-the-art experimental and computational facilities as listed below.

- Wave basin (30m x 30m x 3m)
- Shallow wave basin (20m x 16m x 1m)
- Deep Wave flume (90m x 4m x 2.5m)
- Shallow water wave flume (72mx2mx2.7m)
- Current Flume (30m x 2.0m x 1.8m)
- Glass flume (20m x 0.6m x 1m)
- Towing tank (85m x 3.2m x 2.8m)
- Computing cluster
- Instrumentation Lab & other research labs

Faculty

Dr. S. Nallayarasu
Dr. Abdus Samad
Dr. P. Ananthakrishnan
Dr. K. Murali
Dr. Nilanjan Saha
Dr. Rajiv Sharma
Dr. R. Panner Selvam
Dr. S.A. Sannasiraj
Dr. P. Shanmugam
Dr. S Chandrasekaran
Dr. G. Suresh Kumar
Dr. V. Sriram
Dr. Rajesh Nair
Dr. Deepak Kumar
Dr. R. Vijayakumar
Dr. Suresh Rajendran
Dr. Tarun K. Chandrayadula
Dr. Vijay K G
Dr. K. Narendran
Dr. Abhilash Sharma
Dr. J. Arjun
Dr. V. Sundar
Dr. R. Sundaravadivelu

