Ocean Engineering

Ocean engineering is the application of basic engineering principles to the analysis, design, construction, and management of systems that operate in the ocean environment or near shore. Typical ocean engineering application areas include: beach protection and nourishment, coastal structures and erosion, wave and current structure interaction, development of ocean energy resources, instrumentation for coastal and offshore measurements, marine dredging and dredged material placement, ocean mining, offshore petroleum recovery, offshore structures and vessels, marine hydrodynamics, marine risers, moored and towed systems, numerical and physical modeling, ports and harbors, remotely operated and autonomous underwater vehicles, renewable ocean energy systems, search and salvage, suspended and dissolved constituent transport, subsea pipelines and cables, seafloor pipeline and umbilical layouts, flow assurance, submersible vehicles, sustainable and resilient ocean systems, and underwater acoustics. Employment opportunities exist with private industry, defense contractors, consulting firms, and government agencies. Ocean engineering students are encouraged to pursue summer internships and study abroad programs and may participate in the University cooperative education program. The undergraduate program in ocean engineering in the Department of Ocean Engineering at Texas A&M University is accredited by the Engineering Accreditation Commission of ABET, www.abet.org.

The mission of the Ocean Engineering Program is to conduct research, serve the public, and educate students in a broad program of instruction encompassing traditional and emerging areas of ocean engineering. Graduates are prepared for entering engineering practice, continuing onto graduate study, life-long learning and professional development. Students develop a sense of professionalism and an appreciation for the obligations of a professional engineer. The Program offers ocean engineering continuing education activities for the people and marine industry of the state, nation and international community. The Program serves the public and engineering profession in Texas and the nation through participation of faculty and students in public and professional activities. Applied and fundamental research is conducted that contributes to the better understanding of ocean engineering and supports student educational development.

The program educational objectives of the Ocean Engineering Program are:
1. Graduates contribute to the ocean engineering profession and society.
2. Graduates gain employment in ocean engineering and related engineering fields with private and government organizations.
3. Graduates advance to positions of increased responsibility and develop professionally through training, technical conferences, and continuing education activities.
4. Some graduates become professional engineers and members of ocean engineering related professional societies.
5. Some graduates pursue graduate studies in ocean engineering and related fields and receive post baccalaureate degrees.

The Department of Ocean Engineering is a two-campus department with campuses located in College Station and Galveston, Texas.

The laboratory facilities accessible to the Department of Ocean Engineering are among the most comprehensive in the nation for testing offshore, underwater, and coastal systems. The College Station facilities are located in the Offshore Technology Research Center, Zachry Engineering Education Complex, and the Haynes Engineering Building. These facilities include a large deep water wave basin, a wave channel, fluid dynamics laboratory equipment, and data acquisition systems. The facilities in Galveston include naval architecture, fluid dynamics, and geotechnical experimental equipment, and two wave channels. The Galveston campus also provides access to the Gulf of Mexico through the use of small boats and research vessels that are available for education and research. Additional information is available on the Department of Ocean Engineering website: http://engineering.tamu.edu/ocean.

Before commencing course work in the major, students must be admitted to the major or have the approval of the department head.

Faculty

Allen, David, Senior Lecturer and Director and Department Advisor of graduate and undergraduate programs
Ocean Engineering
PHD, Texas A&M University, 1980

Amini, Noushin, Research Assistant Professor
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Sweetman, John A, Professor
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**Majors**

- Bachelor of Science in Ocean Engineering (http://catalog.tamu.edu/undergraduate/engineering/ocean/ocean-engineering-bs)