

# DEPARTMENT OF OCEAN ENGINEERING

## 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 program 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](http://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 undergraduate ocean engineering program within the Department of Ocean Engineering at Texas A&M University will produce graduates who will:

- Work in ocean engineering and related engineering fields with private and government organizations;
- Advance to positions of increased responsibility and develop professionally through training, technical conferences, and continuing education activities; and adapt to emerging technologies and issues;
- Become professional engineers and members of ocean engineering related professional societies; and
- 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> (<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  
Ocean Engineering  
PHD, Texas A&M University, 1980

Amini, Noushin, Research Assistant Professor  
Ocean Engineering  
PHD, Texas A&M University, 2011

Chang, Kuang-An, Professor  
Ocean Engineering  
PHD, Cornell University, 1999

Chen, Hamn C, Professor  
Ocean Engineering  
PHD, The University of Iowa, 1982  
PHD, University of Iowa, 1982

Chung, Jin-Sug, Associate Professor Of The Practice  
Ocean Engineering  
PHD, University of Michigan, 1991

Cordes, Laurie, Assistant Lecturer  
Ocean Engineering  
MS, Texas A&M University, 1993

Duran Vinent, Orencio, Assistant Professor  
Ocean Engineering  
PHD, University of Stuttgart, 2007

Falzarano, Jeffrey M, Professor  
Ocean Engineering  
PHD, University of Michigan, Ann Arbor, 1990

Figlus, Jens, Associate Professor  
Ocean Engineering  
PHD, University of Delaware, 2010

Fuerth, Mirjam, Assistant Professor  
Ocean Engineering  
PHD, University of Southampton, Southampton, UK, 2014

Girimaji, Sharath S, Professor  
Ocean Engineering  
PHD, Cornell University, 1990

Horrillo, Juan J, Associate Professor  
Ocean Engineering  
PHD, University of Alaska at Fairbanks, 2006

Jameson, Antony, Professor  
Ocean Engineering  
PHD, University of Cambridge, 1963

Jin, Chung-Kuk, Research Assistant Professor  
Ocean Engineering  
PHD, Texas A&M University, 2019

Kaihatu, James, Professor  
Ocean Engineering  
PHD, University of Delaware, 1994

Kang, Heonyong, Assistant Professor  
Ocean Engineering  
PHD, Texas A&M University, 2014

Kim, Moohyun, Professor  
Ocean Engineering  
PHD, Massachusetts Institute of Technology, 1988

Koola, Paul M, Professor of the Practice  
Ocean Engineering  
PHD, Indian Institute of Technology, Madras, 1991

Panchang, Vijaykumar G, Regents Professor  
Ocean Engineering  
PHD, University of Maine, 1985

Paredes Tobar, Lenin Marcelo, Assistant Professor  
Ocean Engineering  
PHD, University of Sao Paulo, Sao Paulo, Brazil, 2012

Parihar, Arun, Assistant Lecturer  
Ocean Engineering  
MEN, University of Houston, 2008

Perlin, Marc, Professor  
Ocean Engineering  
PHD, University of Florida Gainesville, 1989

Rodriguez, Ignacio J, Distinguished Professor  
Ocean Engineering  
PHD, Colorado State University, 1967

Sekaran, Aarthi, Research Assistant Professor  
Ocean Engineering  
PHD, Texas A&M University, 2012

Song, Youn K, Research Assistant Professor  
Ocean Engineering  
PHD, Texas A&M University, 2013

Subramanian, Rahul, Lecturer  
Ocean Engineering  
PHD, University of Michigan, 2012

Sweetman, John A, Professor  
Ocean Engineering  
PHD, Stanford University, 2001

Witherden, Freddie, Assistant Professor  
Ocean Engineering  
PHD, Imperial College London, United Kingdom, 2015

Wood, Amanda L, Instructional Associate Professor  
Ocean Engineering  
PHD, University of Houston, 2010

## Majors

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