

The background features a dark blue gradient representing the ocean. At the top right, a semi-transparent 3D model of an offshore oil rig is shown. A vertical yellow line, representing a riser, extends from the rig down to a subsea wellhead. At the bottom of the image, several subsea manifolds and wellheads are connected by yellow pipelines. On the left side, a faint silhouette of an offshore rig is visible in the distance.

SUBSEA ENGINEERING

SUBSEA.EGR.UH.EDU

EXPLORING THE DEPTHS OF UNDERWATER ENERGY

UNIVERSITY of **HOUSTON** | ENGINEERING

WHAT IS SUBSEA ENGINEERING?

Thousands of feet below the dark ocean waters, subsea engineers shine, carrying out some of the most important and challenging work in the offshore petroleum industry. Subsea engineers have multidisciplinary knowledge and are experts on the equipment, tools and infrastructure required for harnessing energy from the depths of the sea. Ultradeep underwater production environments present unique challenges to engineers, particularly deepwater operations where temperature, pressure and corrosion test the durability of submerged equipment and tools. Most subsea engineering operations depend on automation and remote procedures to construct and repair components beneath the surface of the water.

WHY THE UNIVERSITY OF HOUSTON?

The University of Houston is home to the nation's first subsea engineering graduate program and leads the international effort to standardize subsea engineering education at universities around the world. UH heads the Ocean Energy Safety Institute, a partnership between Texas A&M University and the University of Texas at Austin, which aims to ensure the safety of offshore energy production for years to come. UH is also the leader of the Subsea Systems Institute, a collaboration with Rice University, NASA Johnson Space Center, Texas Southern University, Houston Community College and Lone Star College to conduct research and develop technologies to improve the sustainable and safe development of energy resources in the Gulf of Mexico.

WHAT CAN I DO WITH A SUBSEA ENGINEERING GRADUATE DEGREE?

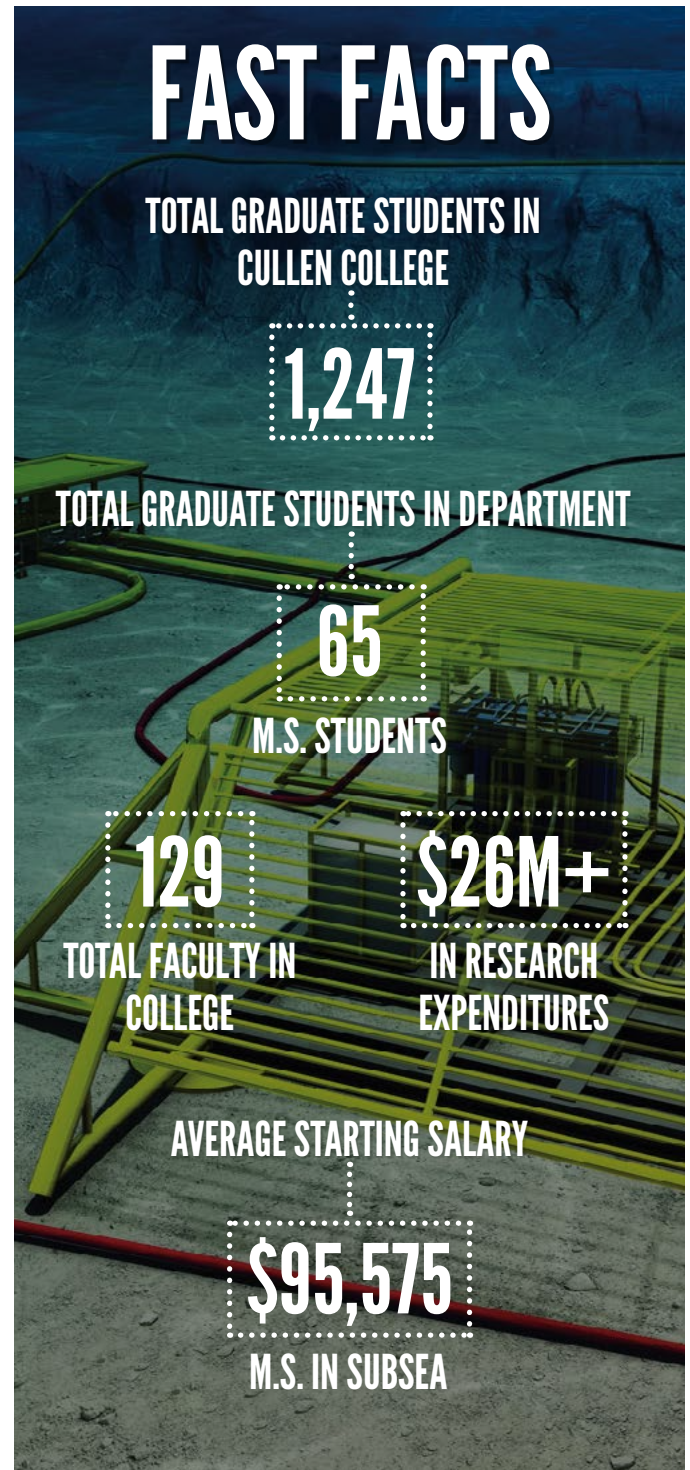
Career opportunities for subsea engineers are fantastic, especially in the city of Houston, the Energy Capital of the World. Offshore oil and gas reserves are increasingly important sources of energy and significant drivers of the international economy. There are billions of barrels of oil and trillions of cubic feet of natural gas predicted to lie within federally-controlled waters in the Gulf of Mexico alone, including off the coast of Texas. The major problem is that the reserves lie underneath 10,000 feet of water, presenting unprecedented engineering challenges. As such, nearly every energy company operating in the offshore sector employs subsea engineers, and demand for engineers with expertise in developing offshore energy resources continues to rise.

Payscale.com reports that that subsea engineers earn an average annual salary of \$95,575.

WHAT TYPES OF GRADUATE DEGREES DO YOU OFFER IN SUBSEA ENGINEERING?

The UH Cullen College of Engineering offers an M.S. degree in subsea engineering. Students may take subsea engineering courses online or in-person.

< Image Credit: AR SubseaServices. A view of FMC Technologies' subsea services offerings. Image not to scale.



FOR MORE INFORMATION

For more information on eligibility and admissions requirements, please visit subsea.egr.uh.edu/graduate-program/master-science