Offshore & Dredging Engineering concerns the sustainable utilization of resources and space in the ocean environment. On the one hand, this relates to the extraction of resources such as energy and materials, while preventing irreversible impact on the environment, and on the other the responsible use of space in synergy with this environment, for instance for the development of offshore wind parks. Offshore & dredging engineers play a pivotal role the energy transition and in achieving multiple United Nations sustainable development goals.

Programme
Offshore & Dredging Engineering is a multidisciplinary programme offered by the Faculty of Mechanical, Maritime and Materials Engineering and the Faculty of Civil Engineering & Geosciences. As a participant in the programme, you will pursue both theoretical and applied studies, including a multidisciplinary project and your final thesis project.

Specializations
- **Offshore Renewable Energy**
  Offshore Engineering plays a significant role in contributing to the energy transition. The ocean offers a vast and untapped potential for energy generation from the marine environment - including offshore wind, tidal, wave, floating solar and ocean thermal energy. Technological advances and innovation are required to reduce lifetime costs of the energy generated. The specialization Offshore Renewable Energy provides the required engineering basis with courses in Bottom-Founded Offshore Structures, Floating Structures & Offshore Moorings and Structural Mechanics.

- **Dredging Engineering**
  Dredging Engineering focuses on the design and maintenance of dredging equipment with the goal of durable implementation of dredging projects. The sea-mining industry is also moving to deeper and deeper waters. Although operation depths
do not currently exceed 150m, it is expected that within 10 years dredging and sea-mining will reach 500m to 3000m, requiring new technologies for resource recovery, as well as monitoring and control systems. Dredging Engineering includes courses in Dredging Processes I & II and Pumps & Slurry Transport.

**Structural Design & Analysis**

Structural Design and Analysis focuses on mastering and advancing your knowledge when applied for design and analysis of steel and composite floating structures used by the maritime, offshore, dredging and renewable energy industries. Think about floating wind structures, tidal energy structures, “Pioneering Spirit” of Allseas, “Prelude” an FLNG of Shell, or the “Sleipnir” a new generation semisubmersible largest crane vessel in the world which is designed for worldwide offshore heavy lifting by HMC. Before these structures can be designed and analysed a lot of new knowledge is needed.

**Thesis opportunities**

Within each specialization, there is the opportunity to conclude the master with a thesis in more subject areas than the specializations alone. The thesis opportunities within the Offshore & Dredging Engineering master are in abundance. Feel free to ask the professors for more information.

**Career prospects**

This MSc programme in its current setting is unique in the world, due to the availability of a broad range of offshore and dredging companies and research institutes especially in the Netherlands. After finishing the MSc Offshore and Dredging Engineering, your career perspectives are excellent:

- Leading Engineers in the Offshore and Dredging Industry;
- Renewable Energy Developers at Established Energy Suppliers;
- Innovating Entrepreneurs at Ocean Energy Start-Ups.

Offshore and Dredging Engineers are indispensable for the Energy Transition and the pursuit of a sustainable future for everyone.