Education - Summary

Education is, alongside research, the primary activity of TU Delft. A basic overview of programmes which closely focus on sustainability can be found on the **sustainability website**. In this summary, these programs are briefly elaborated on.

Full master program

Each of the eight TU Delft faculties is the sole coordinator of one or several master programs. Although many of these incorporate sustainability into their curriculum to some degree, just one fully centres around sustainable development.

- **MSc Sustainable Energy Technology**: this program focuses on preparing engineers to become system integrators for the energy transition.

Partnered courses

Some of the education TU Delft offers is part of joint programs with other universities – on a regional, national, or international level. Several of these have sustainability as a core principle.

- **MSc European Wind Energy**: this master program is internationally hosted by four universities. It focuses on different aspects of wind energy technology, with students following the tracks Electrical Power Engineering, Offshore Engineering, or Rotor Design spending at least one semester at TU Delft.
- **MSc Industrial Ecology**: study of the sustainable coexistence of the techno-sphere and the non-human environment is the core aim of this program. This includes concepts such as efficient use of materials, energy systems, waste streams along with an emphasis on circular economy.
- **MSc Metropolitan Analysis, Design and Engineering**: the focus of the program is on the sustainable development of cities. It provides understanding to students on the complex problems arising due to urbanization which includes mobility and logistics, water and waste management, energy, and food security.

Master tracks

Most master programs offered by TU Delft allow students to specialise further in their field by choosing one of several so-called tracks. At times, it is the case that, although the overarching master program does not fully revolve around sustainability, one or more of its tracks do.

- **Environmental Engineering**: this track, offered in MSc Civil Engineering, focusses on climate change mitigation. It equips students with interdisciplinary knowledge in the fields of designing environmental processes, understanding the interaction between humans

and the natural environment, and the closing of water and resource loops.

- **Water Management**: this is also part of MSc Civil Engineering and emphasizes on addressing the challenges of water scarcity, water pollution, and climate change.
- **Aerodynamics and Wind Energy**: the track is offered in the MSc Aerospace Engineering. It focuses on the development of new analysis techniques and applying them in the design of new age wind turbines.
- **Urbanism**: the track is offered by the MSc program in Architecture, Urbanism, and Building technology. It emphasizes on integrating the concepts of urban design, landscape architecture, spatial planning, and engineering.

Minors

Thematic minors are aimed at expanding the horizons of bachelor students. At every faculty, with the exception of the Faculty of Applied Sciences, at least one of these minors centres around sustainable development. Minors organised in cooperation with Leiden University and Erasmus University Rotterdam are marked as such (LDE).

- Faculty of Mechanical, Maritime and Materials Engineering
  - Engineering for Large-Scale Energy Conversion and Storage
- Faculty of Architecture
  - Cities, Migration & Social Spatial Inequality
  - Sustainable Urbanism
- Faculty of Civil Engineering and Geosciences
  - African Dynamics (LDE)
  - Delta Expert
  - Environmental Engineering and Sustainable Design
  - Geo-Resources for the Future (LDE)
- Faculty of Electrical engineering, Mathematics and Computer Science
  - Electrical Sustainable Energy Systems
- Faculty of Industrial Engineering
  - Designing Sustainability Transitions
- Faculty of Technology, Policy and Management
  - Frugal Innovation for Sustainable Global Development (LDE)
  - International Entrepreneurship and Development
  - Responsible Innovation (LDE)
- Faculty of Aerospace Engineering
  - Offshore Wind Energy

MOOCs

Massive Open Online Courses (MOOCs) are offered on the online platform edX for students and professionals around the world. Many of these courses are sustainability based, with an overview of these **provided online**.