

Energy and Environmental Technology

Apply now

WHAT IS ENERGY AND ENVIRONMENTAL TECHNOLOGY?

Energy technology deals with the production of energy, its conversion (power or heat generation, for example), transportation, storage and use. Energy production consumes scarce resources, creates serious problems for the environment and nature, accelerating climate change, for example. That necessitates close collaboration of energy technology and environmental technology. Environmental technology is an engineering discipline that deals with processes to protect the environment and even regenerate nature already damaged.

WHERE DO I COME ACROSS ENERGY AND ENVIRONMENTAL TECHNOLOGY IN EVERYDAY LIFE?

In your everyday life you must surely sometimes see wind turbines. They are a great example of energy technology and regenerative energies. You also come into contact with energy technology every time you use a technical device or plug one into a power socket. The power first had to be generated and then to reach you. Whenever you throw something into the trash, use the bathroom or drink water from the faucet you come across environmental technology, which deals inter alia with waste management, or recycling, waste disposal and waste water purification.

IN WHICH AREAS OF ENERGY AND ENVIRONMENTAL TECHNOLOGY DOES THE TU HAMBURG DO RESEARCH?

The TU Hamburg has three so-called competence areas in which it conducts research. One of them is Green Technologies, focusing on sustainable, environment-friendly, green research topics. You will work on the exciting challenges of the energy turnaround

(the transition to sustainable energy supplies by means of renewables) and increasingly scarce resources. Regenerative Energies deals with energy production at sea and from the sea, such as by offshore wind farms or harnessing wave energy. In other areas, for example, work is under way on how to store renewable energies and how to get them to you and other consumers. Other research areas are secure water supplies, protection of waterways and soils, and recycling reusable materials from waste.

WHAT WILL I LEARN IN MY STUDIES?

In your B.Sc. course you will learn, in addition to math, mechanics, electrical engineering, fluid mechanics, thermodynamics, chemistry and material sciences, a lot about power stations, regenerative energies and the environment. In lectures, exercises and project teams you can extend your knowledge ever wider and deeper. After your B.Sc. you can develop into a real expert and either study for a master's in Energy and Environmental Technology or specialize further and study for an M.Sc. in Regenerative Energies.

WHAT IS REQUIRED OF ME?

The fundamentals of physics and chemistry are required. So is a great deal of math, which is the basis of further studies. You should therefore be interested in science and technology. As a student you will often need to motivate yourself to learn something. There is very little obligation to attend and the exam is not until the very end of the semester. So you will need to be a hard worker and to have staying power. But campus life at the TU Hamburg and the many AGs, or working groups, provide great opportunities to find learning groups and get to know students in higher semesters.

FURTHER STUDIES?

With a B.Sc. in energy and environmental technology you can go on to study for a master's in the following subjects:

- [Energy and Environmental Technology](#)
- [Regenerative Energies](#)
- [Chemical and Bioprocess Engineering](#)
- [Joint Masters in Environmental Studies: Cities and Sustainability](#)
- [International Management and Engineering](#)