



# Sustainable Energy Massive Open Online Course (MOOC)



University of Vaasa

## SDG focus

☒ Goal 7 – Affordable and Clean Energy

## What did you do?

The University of Vaasa developed a MOOC course for all students who want to be a responsible contributor to the future. A modern society does not work without energy. In this course, students will learn how to produce and use energy so that our society will benefit now and in the future. The course, starting in autumn 2025, emphasises basic understanding, conceptual knowledge, and general awareness of the sustainable production, distribution, and use of energy.

The course focuses on SDG 7, which is to ensure that everyone has access to affordable, dependable, sustainable, and modern energy.

On completing the course, the student can

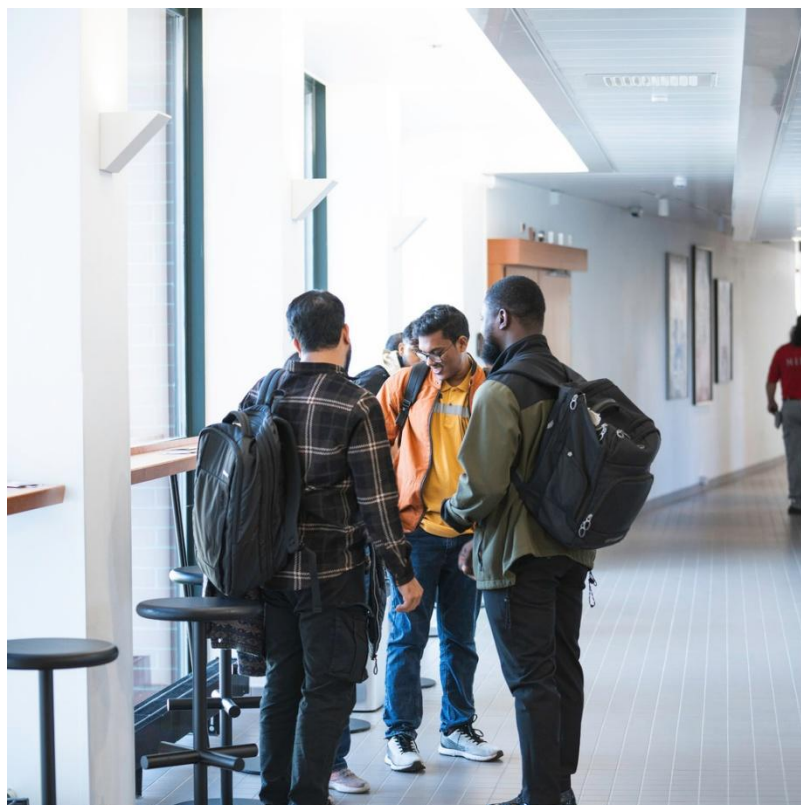
- understand the basic concepts of sustainable energy technologies and their role in achieving sustainability goals
- identify and describe different energy sources, including renewable and non-renewable sources, and their environmental impacts from a life-cycle perspective
- comprehend key global and EU energy policies, climate change frameworks, and sustainable energy strategies

- compare the efficiency and benefits of different renewable energy systems (e.g., solar, wind, bioenergy)
- describe how energy is distributed from production to consumption and understand basic challenges related to energy distribution (e.g., grid management)
- explain the importance and types of energy storage (e.g., batteries, pumped hydro storage).
- reflect on the societal and environmental impacts of different energy technologies and contribute to discussions on sustainable energy transitions
- apply basic sustainability principles when evaluating the pros and cons of various energy systems.

### **What were the benefits and outcomes?**

The course meaningfully advances students' understanding of the sustainable production, distribution, and use of energy and promotes lifelong learning. In addition, the course develops

- problem-solving and decision-making skills (e.g., comparison of energy sources, responsibility)
- analytical and critical thinking skills (e.g., interpretation of energy production and consumption statistics)
- general skills related to ethics, responsibility and sustainability (production, distribution and utilisation of energy).



**Image:** University of Vaasa students

