4TU.Energy Curriculum Overview

4TU .Energy

ENERGY FOR LIFE

- MSc Energy for life-molecular nutritional physiology of energy metabolism (6 ECTS)
- BSc Thermodynamics of life processes (6 ECTS)

CHEMISTRY FOR ENERGY

- MSc Inorganic materials science (5 ECTS)
- MSc Advanced catalysis (5 ECTS)
- BSc Separation Technology (5 ECTS)
- MSc Sustainable chemicals (5 ECTS)
- MSc Catalytic processes & materials (5 ECTS)
- MSc Electrochemistry: Fundamentals & techniques (5 ECTS)
- MSc Electrochemical engineering (2.5 ECTS)

HYDROGEN

- MSc Hydrogen technology (5 ECTS)

BATTERIES

- BSc Electrical power systems (5 ECTS)
- BSc Energy storage (5 ECTS)
- MSc Decentral power generation and active networks (5 ECTS)
- MSc 4TU Responsible sustainability challenge (15 ECTS)
- BSc Dynamics of energy systems (5 ECTS)

SYSTEM TRANSITION

- BSc Energy management (5 ECTS)
- MSc Capita selecta economic matters for climate assessment (3 ECTS)
- BSc Energy, economy and society (5 ECTS)
- MSc Physical modelling (6ECTS)
- BSc Modelling dynamic systems (6 ECTS)
- MSc Energy management (4 ECTS)
- MSc Optimization of sustainable energy systems (5 ECTS)
- BSc Honors part energy transitions (15 ECTS)
- MSc Critical sustainable futures (2 ECTS)
- MSc Sustainable engineering (5 ECTS)
- BSc Energy transition & sustainability (9 ECTS)
- BSc Energy transition challenges (15 ECTS)
- BSc Principles of biobased economy (6 ECTS)
- MSc Circular sustainable business development (5 ECTS)
- BSc Economics and governance of energy transitions (6 ECTS)
- MSc Life cycle analysis (3 ECTS)
- MSc Stakeholder analysis in sustainability transitions (2 ECTS)
- BSc Sustainable electrical distribution networks (3 ECTS)
- BSc Sustainable impact (5 ECTS)
- MSc Sustainability and justice (2 ECTS)
- MSc Power system dynamics (4 ECTS)

RENEWABLE ENERGY SOURCES

- BSc Reliability of sustainable power systems (3 ECTS)
- BSc Introduction to electrical power engineering (6 ECTS)
- BSc Energy efficiency (3 ECTS)
- MSc Energy conversion technology (5 ECTS)
- BSc Electrical energy conversion (5 ECTS)
- MSc Electrical power systems of the future (4 ECTS)
- MSc Physical aspects of energy and sustainable development(5 ECTS)
- MSc Floating offshore wind energy (3 ECTS)
- MSc Airborne wind energy (3 ECTS)
- MSc Energy from biomass (5 ECTS)
- MSc Renewable energy: sources, technology applications (6 ECTS)
- BSc Sustainable energy supply (5 ECTS)
- BSc Sustainable energy sources (5 ECTS)
- MSc Solar energy (5 ECTS)
- MSc Geo-energy engineering application (6 ECTS)
- BSc Mechanics and transport by flow in porous media (5 ECTS)
- MSc Physics of energy materials (6 ECTS)
- BSc Renewable Energy Technology (3 ECTS)

EARTH SYSTEMS

- BSc Honors part 1 nuclear fusion (15 ECTS)
- BSc Physics of energy: sources, transport and storage (5 ECTS)
- BSc Energy storage and transport (5 ECTS)
- BSc Energy (5 ECTS)
- MSc Business model for sustainable energy (5 ECTS)
- MSc Water management (4 ECTS)
- MSc Sustainability and law (3 ECTS)
- MSc Psychology of sustainability (5 ECTS)
- MSc Environmental management (4 ECTS)
- BSc Energy transition perspectives (0 ECTS)
- BSc Climate change: understanding the causes and solutions (5 ECTS)
- MSc Sustainability politics and policies (5 ECTS)
- MSc Policy and sustainability (3 ECTS)
- MSc The sustainability game (2 ECTS)
- BSc Sustainable civil engineering (0 ECTS)
- MSc Digital twin earth for water, energy, and food security (5 ECTS)
- MSc Cyber security of power grids (4 ECTS)
- BSc Mineral resource geology and modelling (5 ECTS)
- MSc Climate physics (9 ECTS)
- MSc Grand challenges and applied earth sciences (9 ECTS)

COMPUTER SYSTEMS

- MSc Intelligent electrical power grids (4 ECTS)
- MSc Distributed energy management for smart grids (5 ECTS)
- MSc Digitalization & sustainability (2 ECTS)

HEAT

- MSc Energy storage (5 ECTS)
- MSc Transport phenomena (5 ECTS)
- MSc Advanced thermal energy storage (2.5 ECTS)

BUILT ENVIRONMENT

- BSc House and anchoring in the landscape (10 ECTS)
- BSc Construction materials and sustainability (5 ECTS)
- BSc Health & sustainable living environment (5 ECTS)
- BSc Introduction building physics and material science (5 ECTS)
- MSc Building integrated photovoltaics (5 ECTS)
- BSc Circularity and energy performance in the built environment (5 ECTS)
- BSc Residential building and residential environment (10 ECTS)
- BSc Construction and climate design (5 ECTS)
- BSc Introduction building performance (5 ECTS)
- MSc Energy, water and nutrient cycles in the built environment (6 ECTS)

TU Delft Delft University of Technology | TU/e EINDHOVEN UNIVERSITY OF TECHNOLOGY | UNIVERSITY OF TWENTE. | WAGENINGEN UNIVERSITY & RESEARCH

*Courses written in **purple** are co-organized courses in 4TU context;
*More course info in hyperlinks or attachments is available on digital version online;
*Digital version and feedback channel will be open soon on our website.

4TU.