Degree Programme in Energy and Environmental Technology, Curricula 2024

Professional Studies

1 op = 1 ECTS

1. Academic year

Orientation to Field and Studies (5 cr)
Engineering English and Communication Skills (5 cr)
Introductory Project and Professional Communication (5 cr)
Engineering Swedish / Finnish as a Second Language: Finnish at Work (5 cr)
Industrial Business (5 cr)
Applications, Programming and Reportage (5 cr)
Work Placement 1 (15 cr)
Fundamentals of Engineering Mathematics (5 cr)
Fundamentals of Chemistry (5 cr)
Fundamentals of Physics (5 cr)
Functions and differentials (5 cr)
Engineering Physics (5 cr)
Basics of Energy and Environmental Technology (5 cr)

Compulsory studies in both major subjects
Energy Production Technologies studies
Environmental Engineering studies

Professional identity and skills

Environmental Engineering | **Major subject** | Energy Production Technologies

2. Academic year

Measurement Systems and Data Handling (5 cr)
Life Cycle Analysis and Circular Economy (5 cr)
Environmental Management (5 cr)
Thermodynamics (5 cr)
Environmental Chemistry (5 cr)
Fluid Mechanics and Basics of Heat Transfer (5 cr)
Fundamentals of Hydraulics and Mechanics of Materials (5 cr)
Material and Energy Efficiency (5 cr)
Basics of Environmental Protection (5 cr)
Design of Heat Exchangers (5 cr)
Basics of Welding Engineering and Manufacturing methods (5 cr)
Air Pollution Engineering (5 cr)
Computer-Aided Design (5 cr)
Energy Technology of Power Plant (5 cr)
Electrical Engineering and Electric Machines (5 cr)
Environmental Chemical Analysis (5 cr)
Water Treatment Technologies (5 cr)
Work Placement 2 (15 cr)
Equipment and Processes in Environmental Engineering (5 cr)
Multidisciplinary Innovation Project (10 cr)

3. Academic year

Waste Treatment Technology (5 cr)
Water in Municipal Services (5 cr)
Energy Economics (5 cr)
Basics of Nuclear Technology (5 cr)
Boilers and Steam Generators (5 cr)
Steam and Gas Turbines (5 cr)
Water Management Systems (5 cr)
Piping and Plant Design (5 cr)
Distributed and Renewable Energy (5 cr)
Special assignment in Energy and environmental engineering (5 cr)
District Heating Engineering (5 cr)
Clean Water and Sewage Piping Design and Maintenance (5 cr)
Measurement Systems, Condition Monitoring and Maintenance in Power Plants (5 cr)
Computer Aided Environmental Engineering Applications (5 cr)
Resource Effective Society (5 cr)
Power Plants (5 cr)
Work Placement 1 & 2 (15 cr + 15 cr)

4. Academic year

Elective study module or elective studies (15 cr)
Planning of the Thesis Work (5 op)
Execution of the Thesis Work (5 op)
Reporting of the Thesis and Maturity Test (5 op)

Last updated 1 December, 2023