

## Bachelor's Programme in Technology and Engineering Science

### Degree Structure (Total 180 Credits)

#### Language and Communications Studies (All Students 15 Credits)

Language Course 1	2
Language Course 2	3
Language Course 3	2
Language Course 4	4
Language Course 5	4

#### Basic Studies (All Students 137 Credits)

##### General courses

Introduction to B.Sc. Studies	1
Engineering Mathematics 1	6
Engineering Mathematics 2	6
Engineering Physics	3
Engineering Mechanics 1	5
Engineering Mechanics 2	5
Introduction to Computational Science	3
Principles of C-Programming	3
Technical Documentation and 3D Modelling	3
International Co-operation Course Module	5
Project Work 1	5
Project Work 2	15
Internship	4
B.Sc. Thesis	10
B.Sc. Thesis Seminar	2

##### Discipline-specific courses

Manufacturing	3
Materials	3
Engineering Design	3
Basics of Electrical Engineering	3
Electric Circuits	4
Introduction to Electrical Drives	3
Introduction to IoT-Based Systems	4
Fluid Mechanics	3
Engineering Thermodynamics	6
Energy Systems	5
Basics of Renewable Energy Engineering	3
Introduction to Nuclear Power Engineering	3
Measurement and Control Systems	5
Climate Change	5
Introduction to Circular Economy	5
Introduction to Business and Sustainability	3

**Specialist Studies (Students select one specialty) (Each Module 28 Credits)**

**Specialist Studies (Mechanical Engineering)**

Mechatronics	5
Basics of FE-Analysis	4
Engineering Mechanics 3	7
Robotics	5
Production Engineering	7

**Specialist Studies (Electrical Engineering)**

Mechatronics	5
Basics of FE-Analysis	4
Laboratory Course in Electrical Engineering	5
Introduction to Electrical Power Systems	5
Digital Design	3
Introduction to Embedded Systems	6

**Specialist Studies (Energy Technology)**

Basic Course in Life Cycle Assessment	4
Measurements in Energy Technology	2
Machines and Processes in Energy Technology 1	3
Machines and Processes in Energy Technology 2	3
Heat Transfer	6
Energy Technology Laboratories	6
Basics of Power Plant Engineering	4

**Specialist Studies (Environmental Technology)**

Basic Course in Life Cycle Assessment	4
Measurements in Energy Technology	2
Machines and Processes in Energy Technology 1	3
Machines and Processes in Energy Technology 2	3
Introduction to Sustainability	3
Environmental Labelling	4
Sustainable Cities	6
Introduction to Sustainable System Transition	3