

Curriculum at Lahti University of Applied Sciences 2019-2020

Open studies, MOTARI, technology, 2019

Code	Name	1 y	ECTS total
LA00BN98	Study skills - Mooc	2	2

TEAVOMO19-1001 Valmentavat opinnot 15

LA00BH85	Preparatory studies in English	3	3
LA00BH86	Preparatory studies in Swedish	3	3
LA00BI95	Preparatory studies in Finnish	3	3
LA00BH89	Preparatory studies in mathematics, Faculty of Technology	3	3
LA00BH90	Preparatory studies in mathematics, Faculty of Business and Hospitality Management	3	3

TEAVOMO19-1002 Common core competence 10

LA00BE73	English for Work	3	3
LA00BE74	Swedish language, Oral Communication	1	1
LA00BE75	Swedish language, Written Communication	2	2
LA00BE76	Professional communication	4	4

TEAVOMO19-1003 Professional core competence 20

TEAVOMO19-1004 Mechanical Engineering 20

TE00BF61	Basics of Mechanics		0
TE00BF62	Basics of Automation		0
TE00BF63	Workshop		0
TE00BH11	Mathematical tools		0

TEAVOMO19-1006 Energy and Environmental Engineering 20

TE00BF85	Ecosystems and Environmental Protection		0
TE00BF86	Environmental Chemistry and Safety		0
TE00BF87	Water, Waste and Energy Technology		0
TE00BH11	Mathematical tools		0

TEAVOMO19-1007 Wood Technology 20

TE00BF45	Work Safety and Safe Use of Machines		0
TE00BF46	Wood as Raw Material		0
TE00BF47	Product Manufacturing Project		0
TE00BH11	Mathematical tools		0

LA00BN98 Study skills - Mooc: 2 ECTS

TEAVOMO19-1001 : 15 ECTS

LA00BH85 Preparatory studies in English: 3 ECTS

Learning outcomes

The student is able to

- master the basic structures of the language well enough to be able to manage further language studies
- understand everyday English
- discuss and write about familiar topics

LA00BH86 Preparatory studies in Swedish: 3 ECTS

Learning outcomes

The student is able to

- form sentences in order to be able to cope in simple communication situations
- use basic vocabulary related to, for example, social interaction

LA00BI95 Preparatory studies in Finnish: 3 ECTS

Learning outcomes

The student is able to

- identify the main aspects of language planning
- develop their competence in writing

LA00BH89 Preparatory studies in mathematics, Faculty of Technology: 3 ECTS

Learning outcomes

The student is able to

- basic mathematical calculations
- calculate and simulate mathematical expressions
- basics of equation
- apply math in problem solving
- solve geometric and trigonometric problems

LA00BH90 Preparatory studies in mathematics, Faculty of Business and Hospitality Management: 3 ECTS

Learning outcomes

The student is able to

- basic mathematical calculations
- basics of percentage calculation
- basics of equation

TEAVOMO19-1002 Common core competence: 10 ECTS

LA00BE73 English for Work: 3 ECTS

Learning outcomes

The student is able to

- recognise the different sources and tools to help them improve their English skills
- gain confidence and manage in written and oral communication situations required in professional studies and in the work life
- describe their education and qualifications
- understand the terminology and concepts of their own field

LA00BE74 Swedish language, Oral Communication: 1 ECTS

Learning outcomes

The student is able to

- express and justify their opinions
- use the key terminology of their own field
- tell about their education, work experience and duties e.g. in job-seeking situations
- present a company of their own trade

LA00BE75 Swedish language, Written Communication: 2 ECTS

Learning outcomes

The student is able to

- use the key terminology of their own field
- tell about their education, work experience and duties e.g. in job-seeking situations
- write a job application
- obtain information related to their own field of studies in Swedish e.g. on the Internet
- use online dictionaries

LA00BE76 Professional communication: 4 ECTS

Learning outcomes

The student is able to

- plan and produce grammatically correct texts
- write an article or an essay that fulfils the criteria of a scientific text related to their own field of studies
- perform actively in professional group communication situations
- retrieve information from a variety of sources and evaluate it critically

TEAVOMO19-1003 Professional core competence: 20 ECTS

TEAVOMO19-1004 Mechanical Engineering: 20 ECTS

TE00BF61 Basics of Mechanics: 5 ECTS

Learning outcomes

The student is able to

- apply a design method in the design of a device
- model the mechanical parts of a simple device
- design the parts of the device that are under tensile or compression stress

TE00BF62 Basics of Automation: 5 ECTS

Learning outcomes

The student

- is able to make performance specifications and a functional diagram for a device
- is able to plan the electric control of an automated device
- is able to select sensors, electrical components and actuators suitable for the device
- has a basic knowledge of the structure of a control unit

TE00BF63 Workshop: 5 ECTS

Learning outcomes

The student

- is able to operate safely in the mechanical and electrical workshops
- knows the basics of machining and welding
- knows the basics of electrical engineering and electronics
- is able to carry out the practical tasks required by a project

TE00BH11 Mathematical tools: 5 ECTS

Learning outcomes

The student

- has the basic mathematical skills needed in engineering
- is able to describe the mechanical phenomena behind the developments in technology
- can solve mechanical problems using mathematics

TEAVOMO19-1006 Energy and Environmental Engineering: 20 ECTS

TE00BF85 Ecosystems and Environmental Protection: 3 ECTS

Learning outcomes

The student can

- describe the principles of how ecosystems work and what factors influence them
- analyse different ecosystem services and evaluate their significance
- describe how people's actions affect the environment (including climate change) and knows methods to prevent them
- the concept of urban ecology and how it is related with natural ecosystems

TE00BF86 Environmental Chemistry and Safety: 6 ECTS

Learning outcomes

The student is able to

- identify the most common environmentally harmful substances and how they behave in the environment
- use the central legislation dealing with environmentally harmful substances
- name and identify inorganic and organic compounds
- know health impacts caused by harmful substances
- carry out laboratory tasks connected with environmental chemistry

TE00BF87 Water, Waste and Energy Technology: 6 ECTS

Learning outcomes

The student is able to

- describe the general operation of Finland's waste, energy and water management
- tell why it is important to reduce the amount of waste and how it can be influenced
- tell what kind of challenges and opportunities there are related with urban and rural water management
- tell what kind of challenges and opportunities there are in the energy field in Finland and globally
- search for information on the topic and apply the information

TE00BH11 Mathematical tools: 5 ECTS

Learning outcomes

The student

- has the basic mathematical skills needed in engineering
- is able to describe the mechanical phenomena behind the developments in technology
- can solve mechanical problems using mathematics

TEAVOMO19-1007 Wood Technology: 20 ECTS

TE00BF45 Work Safety and Safe Use of Machines: 5 ECTS

Learning outcomes

The student

- is able to describe regulations in work safety legislation on the safety and health of the work environment
- knows how to find and use notices concerning safe use of harmful and dangerous substances
- knows how to use the machines in the workshop according to safety regulations
- is able to use a CNC router in a correct and safe way

TE00BF46 Wood as Raw Material: 5 ECTS

Learning outcomes

The student

- can describe the properties and special features of wood
- is able to assess the use of wood as a renewable natural resource
- is able to assess the use of wood for energy and the ecological impact of the use of wood
- knows how to take the special features of wood into account when designing products

TE00BF47 Product Manufacturing Project: 5 ECTS

Learning outcomes

The student

- is able to use measuring devices
- is able to work in a design team
- knows how to use the basic machinery of the woodworking industry and is able to work with them
- is able to make wooden products according to technical drawings

TE00BH11 Mathematical tools: 5 ECTS

Learning outcomes

The student

- has the basic mathematical skills needed in engineering
- is able to describe the mechanical phenomena behind the developments in technology
- can solve mechanical problems using mathematics