26.09.2023

Curriculum at LAB University of Applied Sciences
2024-2025

Bachelor of Engineering, Environmental Engineering 24K, part-time studies, Lahti

Code	Name	1 y	2 y	3 y	4 y	ECTS total
TLTIENTEC24KM-1001	**Common studies**					**15**
AY00BU56	Developing professional competence 1	1				1
AY00BU57	Developing professional competence 2	1				1
AY00BU58	Developing professional competence 3		1			1
A300CE13	Orientation to Sustainability Thinking	2				2
KE00BT61	English for Work	4				4
KR00BU42	Swedish for Work, Spoken		1			1
KR00BU43	Swedish for Work, Written		1			1
KS00BT59	Expert Communication Skills	4				4
TLTIENTEC24KM-1002	**Professional Core Competence**					**90**
TLTIENTEC24KM-1003	**Basics of mathematics and physics**					**15**
AT00BT67	Basic studies in mathematics	3				3
AT00BT68	Mathematics in Technology 1	3				3
AT00BT69	Mathematics in Technology 2		3			3
AT00BT70	Basic studies in physics	3				3
AT00BY87	Physics of enviromental engineering	3				3
TLTIENTEC24KM-1004	**Basics of environmental engineering**					**15**
AT00CP39	Ecosystems and Climate Change	5				5
AT00CP40	Water technology	5				5
AT00CP41	Contaminated Soil and waste Management	5				5
TLTIENTEC24KM-1005	**Environmental chemistry and projects**					**15**
AT00CP42	Chemistry in Environmental Engineering	5				5
AT00CP43	Environmental Chemistry and Monitoring	5				5
AT00CP50	Applied Projects and Laboratories in Environmental Engineering	5				5
TLTIENTEC24KM-1006	**Material, energy and environmental efficiency**					**15**
AT00CP45	Technical and biological material cycles	5				5
AT00CP46	Material efficiency in business	5				5
AT00CP47	Energy technology and efficiency	5				5
TLTIENTEC24KM-1007	**Circular economy guiding methods**					**15**
AT00CP48	Circular Economy and Responsibility Management		5			5

	methods in Business					
AT00CP49	Circular economy business models and product design		5			5
AT00CP44	Environmental Impact Management		5			5
TLTIENTEC24KM-1008	**Digitalisation in the circular economy**					**15**
AT00CP51	Computer Aided design and modelling		5			5
AT00CP52	GIS and digital applications		5			5
AT00CP53	Life Cycle Analyses		5			5
TLTIENTEC24KM-1009	**Complementary Competence**					**90**
TLTIENTEC24KM-1010	**Circular Economy applied studies and projects**					**15**
AT00CU82	Circular Economy applied studies and projects					0
AT00CP55	Heat Pump Applications					0
AT00CP56	Construction demolition waste recycling					0
AT00CP57	Material Audit					0
AT00BY71	Environmental Legislation and Administration					0
TLTIENTEC24KM-1011	**From data to machine learning**					**15**
AT00BY42	Data analysis and visualization					0
AT00BY43	Machine Learning					0
TLTIENTEC24KM-1012	**Production economy**					**15**
AT00BZ30	LEAN and 5S					0
AT00BZ31	Hybrid end use applications					0
AT00BZ32	Production Management					0
TLTIENTEC24KM-1013	**Sustainable energy management**					**15**
AT00BY81	Energy efficiency					0
AT00BY82	Renewable Energy Forms					0
AT00BY83	Sustainable Resource Efficiency Project					0
TLTIENTEC24KM-1014	**Environmental, Health, Quality and Security Management**					**15**
AT00CK20	EHQS-systems, Standards and Auditing					0
AT00CK21	Environmental Management Tools, Certificates and Reporting					0
AT00BY90	Project and risk management					0
TLTIENTEC24KM-1015	**Circular Economy Co-Creation Hubs**					**15**
AT00CK18	Career and Business Idea Development					0
AT00CK17	Laboratories for Sustainable Material Cycles					0
AT00CK19	Circular Economy RDI-projects					0
TLTIENTEC24KM-1016	**Development of the living environment**					**15**
AT00BY84	Development of the living environment					0
AT00BY85	Town planning					0
AT00BY86	Planning Residential Surroundings					0

TLTIENTEC24KM-1017 The municipality as an operating environment						**15**
AT00BY93	The municipality as an operating environment					0
AT00BY94	Development project of municipality					0
TLTIENTEC24KM-1022 Working life projects						**15**
AT00CZ00	Applied environmental projects 1					0
AT00CZ01	Applied environmental projects 2					0
AT00CZ02	Applied environmental projects 3					0
TLTIENTEC24KM-1018 Machine and automation technology						**15**
TLTIENTEC24KM-1019 LUT University Studies						**15**
TLTIENTEC24KM-1020 Practical Training						**30**
HA00CD55	Practical Training					0
HA00BU60	Practical Training 2					0
HA00BU61	Practical Training 3					0
TLTIENTEC24KM-1021 Thesis						**15**
AO00BU62	Thesis Planning			5		5
AO00BU63	Thesis Project			5		5
AO00BU64	Thesis Report			5		5

TLTIENTEC24KM-1001 Common studies: 15 ECTS

AY00BU56 Developing professional competence 1: 1 ECTS

Learning outcomes
The student is able to
- plan their own learning and cooperate in situations related to their own field of studies
- recognize their own competence and the needs to develop them further and to plan their careerpath observing them
- act as a group member
- operate in the learning environments of LAB University of Applied Sciences
- picture their own field of studies and its future skills- give feedback on tuition and services and thus participate in the development of education

AY00BU57 Developing professional competence 2: 1 ECTS

Learning outcomes
The student is able to
- utilize various learning opportunities in curriculum
- recognize and aim their own competences to be in level with the future career requirements
- create a study plan that supports the future career goal
- give feedback on tuition and services and thus participate in the development of education

AY00BU58 Developing professional competence 3: 1 ECTS

Learning outcomes
The student is able to
- identify themselves as a learner and develop their own learning skills
- evaluate innovative or alternative future competences required in their own field
- recognize and aim their own competences to be in level with the future career requirements
- masters the professional concepts of their own field and is able to point out their competenciesduring job recruitment processes
- give feedback on tuition and services and thus participate in the development of education

A300CE13 Orientation to Sustainability Thinking: 2 ECTS

Learning outcomes
Identify and define central concepts and frameworks related to sustainability. Recognize the interconnectedness of economic, social and environmental sustainability issues. Understand and develop own individual role in driving sustainability.

Evaluation criterias
Level 1

Pass-Fail

KE00BT61 English for Work: 4 ECTS

Learning outcomes
Proficiency level: B2

The student is able to
- communicate clearly and effectively in different generic and field-specific workplace situations both orally and in writing
- find, evaluate and use information effectively
- function collaboratively in international working environments.

KR00BU42 Swedish for Work, Spoken: 1 ECTS

Learning outcomes
The student is able to
- convey and validate arguments
- use vital field-specific vocabulary
- communicate essential matters about their education, work experience and tasks
- present their field-specific operational environment
- communicate in various working life situations in Swedish.

The student completes the Public Administration Language Test in Swedish.

KR00BU43 Swedish for Work, Written: 1 ECTS

Learning outcomes
The student is able to
- use vital field-specific vocabulary

- communicate essential matters about their education, work experience and tasks
- understand and produce various short texts related to studies and working life
- acquire information on their field in Swedish
-use online dictionaries.

The student completes the Public Administration Language Test in Swedish.

KS00BT59 Expert Communication Skills: 4 ECTS

Learning outcomes
Proficiency level: C2

The student masters Finnish language as a mother tongue in all professional spoken and written communication situations.

TLTIENTEC24KM-1002 Professional Core Competence: 90 ECTS

TLTIENTEC24KM-1003 Basics of mathematics and physics: 15 ECTS

AT00BT67 Basic studies in mathematics: 3 ECTS

Learning outcomes
Student is able to
- calculate and simulate mathematical expressions
- solve geometric and trigonometric problems

AT00BT68 Mathematics in Technology 1: 3 ECTS

Learning outcomes
Student is able to:
- regognise different polynomial equations and polynomial graph
- solve inequalities
- solve simultaneous equations with the software
- solve basic space vectors
- utilise space vectors
- solve exponential and logarithm functions

AT00BT69 Mathematics in Technology 2: 3 ECTS

Learning outcomes
Student is able to
- solve challenging functions
- solve basic derivation functions and utilise derivation in practice
- solve integrated polynomial functions and utilise integration in practice
- solve trigonometrical problems

AT00BT70 Basic studies in physics: 3 ECTS

Learning outcomes
Student is able to
- understand the purpose of the physics in technology
- describe and utilize the SI-unit system and implement
- solve mathematical problems in kinematics, mechanics and thermodynamics
- utilize vectors

AT00BY87 Physics of enviromental engineering: 3 ECTS

Learning outcomes
The student can
- describe electrical phenomena behind technological development
- mathematically solve problems related to electricity and the decibel scale
- apply digital solutions to electricity-related phenomena
- describe noise control problems from the perspective of wave motion theory

TLTIENTEC24KM-1004 Basics of environmental engineering: 15 ECTS

AT00CP39 Ecosystems and Climate Change: 5 ECTS

Learning outcomes
The student is able to:
- explain the main principles of ecosystems and nutrient cycles
- identify human impacts on ecosystems, especially the reasons for and results of climate change
- identify ecosystem services and to reflect on their effects in society
carry out teamwork, applying reporting and information acquisition skills

AT00CP40 Water technology: 5 ECTS

Learning outcomes
The student
- knows the basic principles of sustainable water and energy supply options and the most common technologies involves
- understands the importance of sustainable, safe and economical water and energy supply as part of public service activities
- can identify the effects of climate change on water and energy supply, as well as the effects of energy supply on climate change
- learns teamwork skills, as well as how to search for information about the subject area and to communicate about it

AT00CP41 Contaminated Soil and waste Management: 5 ECTS

Learning outcomes
The student knows:
- the main methods of management and regulation in the field

- how to emphasise the impact of circular economy as part of sustainable waste management solutions
- how to identify key emission sources that cause soil and groundwater contamination
- the main principles of assessing the need for soil rehabilitation and the main rehabilitation methods

TLTIENTEC24KM-1005 Environmental chemistry and projects: 15 ECTS

AT00CP42 Chemistry in Environmental Engineering: 5 ECTS

Learning outcomes
The student is able to:
- name inorganic and organic compounds
- connect the importance of functional groups to the properties and behaviour of environmental pollutants in different environmental matrices
- calculate heats of reaction and understand the basics of thermochemistry
- understand the basics of combustion and use combustion reactions to make flue gas calculations
- use the electrochemical series of metals and understand the basics related to oxidation-reduction reactions and corrosion in practice
- carry out basic calculations related to acids and bases and understand in practice the basics related to pH measurement, acid-base titration and neutralisation

AT00CP43 Environmental Chemistry and Monitoring: 5 ECTS

Learning outcomes
The student is able to:
- identify harmful substances in the environment, their key properties and behavior in different environmental matrices
- evaluate the effects of the properties of harmful substances in representative sampling
- use samplers and field tests/field meters/field equipment commonly used in environmental sampling
– know the basic principles of fieldwork, online monitoring and laboratory work and their reliability assessment as part of quality assurance

AT00CP50 Applied Projects and Laboratories in Environmental Engineering: 5 ECTS

Learning outcomes
The student is able to:
- work in working life-based projects
- understand the main principles of project and teamwork
- apply know-how and different development methods to project and laboratory activities
- write a report according to the instructions given and present the results of his/her work

TLTIENTEC24KM-1006 Material, energy and environmental efficiency: 15 ECTS

AT00CP45 Technical and biological material cycles: 5 ECTS

Learning outcomes
The Student:
- understands the importance of the sustainable consumption and use of technical and biological materials
- learns ways in which the consumption of particularly natural, non-renewable materials can be reduced
- gets basic information about planning and business models according to circular economy principles, which take into account the importance of material choices during the entire life cycle of products, processes and services
- identifies the value chains of selected industries, in terms of the material cycles involved

AT00CP46 Material efficiency in business: 5 ECTS

Learning outcomes
The student is able to:
- explain the common industrial material recycling processes and the technical solutions involved
- determine the key actors and current development areas in recycling
- understand basic solutions and practices for developing material efficiency
- carry out a material audit
- prepare an enterprise's material flow analysis
- explain the importance and practices of industrial symbiosis and material recycling as part of circular economy
- promote industrial symbioses between companies

AT00CP47 Energy technology and efficiency: 5 ECTS

Learning outcomes
The student is able to:
- recognize the basic principles of the social importance of sustainable energy supply
- know the most common forms of energy production and their environmental effects
- explain the change in the energy sector, from non-renewable to renewable energy sources
- to recognize factors affecting the company's energy efficiency
- recognize the importance and effects of the circular economy and climate change in the energy sector
- use teamwork skills, and to search for information on the subject area and communicate about it

TLTIENTEC24KM-1007 Circular economy guiding methods: 15 ECTS

AT00CP48 Circular Economy and Responsibility Management methods in Business: 5 ECTS

Learning outcomes
The Student:
- knows methods of forecasting the future and knows how to apply the information obtained in the environmental field
- knows the basic principles of different international agreements, about EU legislation and strategies and their impacts on the activities in various sectors
- understands the opportunities involved in green transition and circular economy in the

environmental sector
- can explain the basic principles of environmental/quality management and of certain selected tools and systems
- understands logistic chains and their importance in circular economy

AT00CP49 Circular economy business models and product design: 5 ECTS

Learning outcomes
The student is able to:
- explain circular economy business models
- describe the main principles of cost accounting
- understand the product development process according to circular economy and the impact of value chains on it

AT00CP44 Environmental Impact Management: 5 ECTS

Learning outcomes
The student is able to:
- identify the main environmental impacts of different industries
- explain the basic techniques for minimising the harmful environmental impacts of enterprises
- explain the regulations and objectives related to environmental impact assessment
- analyse environmental data using statistical methods
- describe how project-level environmental impact assessment progresses and understand the assessment methods in general use
- describe the participatory procedures related to processes and the factors influencing their success
- study existing environmental impact assessment cases and report on them

TLTIENTEC24KM-1008 Digitalisation in the circular economy: 15 ECTS

AT00CP51 Computer Aided design and modelling: 5 ECTS

Learning outcomes
The student is able to:
- identify the potential of computer-aided design
- understand the basics of cad drawing and prepare simple drawings with the aid of the programme's basic functions
- explain the main principles of 3D- and data modelling of the built environment
- identify possible application of different modelling methods in the environmental field

AT00CP52 GIS and digital applications: 5 ECTS

Learning outcomes
The student is able to:
- identify the impacts and opportunities of digitalisation and industry 4.0 in the environmental sector
- understand the main principles of machine learning and programming
- explain applications of spatial data and use the QGIS spatial data programme (or a similar one)
- utilise various environmental databases

- recognise the risks of digitalisation and understand the significance of cyber security

AT00CP53 Life Cycle Analyses: 5 ECTS

Learning outcomes
The student is able to:
- describe the stages of the life cycle of products, as well as the environmental factors related to them
- understand commonly used life cycle methods and their uses
- carry out a life cycle analysis for the selected product

TLTIENTEC24KM-1009 Complementary Competence: 90 ECTS

TLTIENTEC24KM-1010 Circular Economy applied studies and projects: 15 ECTS

AT00CU82 Circular Economy applied studies and projects: 5 ECTS

Learning outcomes
The student is able to:
- use different research methods and apply the principles of project and teamwork
- do various applied laboratory exercises and analyze the results obtained
- apply knowledge and follow instructions in accordance with the assignment
- write a report according to the instructions and presents the results of his work

AT00CP55 Heat Pump Applications: 5 ECTS

Learning outcomes
The student is able to:
- know the importance of heat pumps in the Finnish energy system
- explain the operating principle of the heat pump and the concept of heat coefficient
- name the most important components of a heat pump
- explain the most common heat sources of heat pump systems and their utilization methods
- evaluate the suitability of different heat pump systems for different purposes
- identify the factors affecting the dimensioning of heat pump systems in heating the property

AT00CP56 Construction demolition waste recycling: 5 ECTS

Learning outcomes
The student is able to:
- describe the basics of building demolition process management and material flows
- know the industry's business networks and industrial symbioses
- know the basics of the legislation related to the demolition of buildings
- make observations about the demolition process of buildings based on environmental and material expertise
- identify areas for development using a case study

AT00CP57 Material Audit: 5 ECTS

Learning outcomes
The student is able to:
- know the basics and benefits of production material efficiency and waste reduction
- know the operating principles of Motiva's material review model
- manage the steps of material review implementation
- prepare a Sankey diagram based on the company's material flows
- report the results of the company's material audit

AT00BY71 Environmental Legislation and Administration: 3 ECTS

Learning outcomes
- Find up-to-date information related to environmental legislation from free and
paid information services
- Outline the responsibilities of environmental legislation and various environmental management level tasks
- Apply key laws and regulations of the environmental legislation through practical examples

TLTIENTEC24KM-1011 From data to machine learning: 15 ECTS

AT00BY42 Data analysis and visualization: 10 ECTS

Learning outcomes
The student is able to
- utilize mathematical methods to analyze and to predict phenomena
- utilize a modern statistical tool
- visualize data to identify its properties, analysis interpretation and to facilitate further processing

AT00BY43 Machine Learning: 5 ECTS

Learning outcomes
The student is able to
- take advantage of both supervised and unsupervised machine learning in an appropriate way
- implement the fitting of the machine learning model
- take advantage of the supply of cloud services
- take into account the ethical guidelines of the authorities and the technology industry
- make use of existing machine learning ecosystems and equipment

TLTIENTEC24KM-1012 Production economy: 15 ECTS

AT00BZ30 LEAN and 5S: 5 ECTS

Learning outcomes
The student is able to:
- know LEAN and 5S principles
- define how to use LEAN and 5S in production management

- define production line information collection typically related to LEAN and 5S
- know LEAN and 5S tools
- know improvement possibilities in production line by LEAN and 5S

AT00BZ31 Hybrid end use applications: 5 ECTS

Learning outcomes
The student is able to:
- know different material properties
- know different hybrid material properties
- define hybrid product manufacturing possibilities and limitations
- define end use applications for hybrid products
- make hybrid products tests in laboratory

AT00BZ32 Production Management: 5 ECTS

Learning outcomes
The student is able to:
- define key concepts and development methods related to production and production strategy
- development of production strategy and methods
- development of production infrastructure
- development a supply chain strategy

TLTIENTEC24KM-1013 Sustainable energy management: 15 ECTS

AT00BY81 Energy efficiency: 5 ECTS

Learning outcomes
The student is able to
- identify the main aspects of the different stages of the energy chain (acquisition, production and consumption)
- regognize different methods and technologies to promote energy efficiency and security of supply, and knows their significance at the local and global level
- describe the role of digitalisation as part of energy efficient solutions now and in the future
- utilise different tools when assessing and comparing energy efficiency and more sustainable energy forms, for example in energy consulting

AT00BY82 Renewable Energy Forms: 5 ECTS

Learning outcomes
The student is able to
- describe how different forms of renewable energy are generated and the targets set for their increased use
- regognize the main concepts connected with decentralized energy production and the related targets
- compare the environmental and cost impacts of different forms of energy and to evaluate their suitability for different uses

AT00BY83 Sustainable Resource Efficiency Project: 5 ECTS

Learning outcomes
The student is able to
- describe how to search and apply information required to carry out resource efficiency and water management -related projects
- choose the most suitable methods to perform different energy-related assignments
- act as a responsible member of a team, and to present and report on a project according to the University reporting guidelines

TLTIENTEC24KM-1014 Environmental, Health, Quality and Security Management: 15 ECTS

AT00CK20 EHQS-systems, Standards and Auditing: 5 ECTS

Learning outcomes
The student is able to
- have the knowledge and understanding of ISO 9001
- understand the requirements for quality management systems based on ISO 9001
- learn how to audit a quality management system
- how to plan, perform and report quality management system audits
- sustainable product design and qualifications
- information Security frameworks

AT00CK21 Environmental Management Tools, Certificates and Reporting: 5 ECTS

Learning outcomes
The student is able to
- understand what the main contents of sustainability reports is and what is required from companies to include in their report
- EU regulations such as EU taxonomy
- understand the Non-Financial Reporting Directive (NFRD)
- understand the forthcoming Corporate Sustainability Reporting Directive (CSRD)
- sustainability reporting in accordance with the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD)
- know the Global Reporting Initiative (GRI) standards

AT00BY90 Project and risk management: 5 ECTS

Learning outcomes
The student is able to:
- understand the signification of the risk management in different administrative and industrial sectors
- identify, evaluate, quantify and monitor potential risks
- make suggestions for risk avoidance and reductions
- project management tools in efficient project management

TLTIENTEC24KM-1015 Circular Economy Co-Creation Hubs: 15 ECTS

AT00CK18 Career and Business Idea Development: 5 ECTS

Learning outcomes
The student is able to
- factors influencing entrepreneurial attitude in personal, organizational and society levels
- idea and innovation development methods
- what kind of support services, tools and methods exist to develop business ideas
- what kind of circular business models exist and importance of innovation in business models
- how to make a project/business plan, start the business and plan business acceleration

AT00CK17 Laboratories for Sustainable Material Cycles: 5 ECTS

Learning outcomes
The student is able to
- to identify different textile fibers and plastics
- sort and treat different recyclable materials by various methods
- estimate the energy content of selected materials

AT00CK19 Circular Economy RDI-projects: 5 ECTS

Learning outcomes
The student is able to
- basic principles of the RDI -project and how to apply them into the real-life projects
- importance of networking, team building and management methods
- European Union’s research, development and innovation (RDI) funding
- project ideation and brainstorming, how to pitch project ideas, how to carry out project and project reporting

TLTIENTEC24KM-1016 Development of the living environment: 15 ECTS

AT00BY84 Development of residential environments: 5 ECTS

Learning outcomes
The student can
- Create a development plan for a residential environment and plan it with the most commonly used building types
- Create a description and illustrations of the environment
- Apply suitable software for the work

AT00BY85 Town planning: 5 ECTS

Learning outcomes
The student can

- structure the different stages of the town planning process
- prepare an urban area development map of the residential area with its provisions, an area development report and prepare
building system instructions for the area
- apply suitable software for the work

AT00BY86 Planning Residential Surroundings: 5 ECTS

Learning outcomes
The student can
- prepare and scale a plan for the surroundings of a residential area
- consider the green environment and handling of rainwater in the area
- apply suitable software for the work

TLTIENTEC24KM-1017 The municipality as an operating environment: 15 ECTS

AT00BY93 Municipality as an Operating Environment: 5 ECTS

Learning outcomes
The student can
- acquire information on the regional administration reform and understands its impact on the municipalities
- understand the principles of a municipality as an operating environment and the appropriate decision-making principles
- understand starting points for general level planning and knows how to prepare and structure information on and
for master plans
- create development plans based on municipal needs

AT00BY94 Development project of municipality: 10 ECTS

Learning outcomes
The student can
- apply planning software to illustrate structured or created information
- acquire knowledge and create a report for the basis of a development project and make use of geographical data
- observe the site considering the environmental aspects
- prepare development suggestions in a project based on reviews and acquired data

TLTIENTEC24KM-1022 Working life projects: 15 ECTS

AT00CZ00 Applied environmental projects 1: 5 ECTS

Learning outcomes
The student is able to:
- use the concepts related to the project in a coherent and justify their actions on the basis of the knowledge base

- find starting points, needs and criteria for project activities
- to act purposefully, to assess the activity and make suggestions for improvement
- applied to the project a variety of different techniques, methods and ways of working
- operate safely, ethically and customer-oriented
- to act responsibly and in a target group and as otherwise required by the project in interactive situations

AT00CZ01 Applied environmental projects 2: 5 ECTS

Learning outcomes
The student is able to:
- use the concepts related to the project in a coherent and justify their actions on the basis of the knowledge base
- find starting points, needs and criteria for project activities
- to act purposefully, to assess the activity and make suggestions for improvement
- applied to the project a variety of different techniques, methods and ways of working
- operate safely, ethically and customer-oriented
- to act responsibly and in a target group and as otherwise required by the project in interactive situations

AT00CZ02 Applied environmental projects 3: 5 ECTS

Learning outcomes
The student is able to:
- use the concepts related to the project in a coherent and justify their actions on the basis of the knowledge base
- find starting points, needs and criteria for project activities
- to act purposefully, to assess the activity and make suggestions for improvement
- applied to the project a variety of different techniques, methods and ways of working
- operate safely, ethically and customer-oriented
- to act responsibly and in a target group and as otherwise required by the project in interactive situations

TLTIENTEC24KM-1018 Machine and automation technology: 15 ECTS

TLTIENTEC24KM-1019 LUT University Studies: 15 ECTS

TLTIENTEC24KM-1020 Practical Training: 30 ECTS

HA00CD55 Practical Training: 10 ECTS

Learning outcomes
The student is able to
- describe work-related phenomena and use related concepts
- act in a productive way, following the practices of the workplace and the ethical principles of the profession
- use the techniques, work methods, models and processes that they have learnt

- act in a customer-oriented way in interactive situations in the workplace and in the cooperation network
- evaluate and develop their own competence int the work done in practical training

HA00BU60 Practical Training 2: 10 ECTS

Learning outcomes
The student is able to
- describe work-related phenomena and use related concepts
- act in a productive way, following the practices of the workplace and the ethical principles of the profession
- use the techniques, work methods, models and processes that they have learnt
- act in a customer-oriented way in interactive situations in the workplace and in the cooperation network
- evaluate and develop their own competence int the work done in practical training

HA00BU61 Practical Training 3: 10 ECTS

Learning outcomes
The student is able to
- describe work-related phenomena and use related concepts
- act in a productive way, following the practices of the workplace and the ethical principles of the profession
- use the techniques, work methods, models and processes that they have learnt
- act in a customer-oriented way in interactive situations in the workplace and in the cooperation network
- evaluate and develop their own competence int the work done in practical training

TLTIENTEC24KM-1021 Thesis: 15 ECTS

AO00BU62 Thesis Planning: 5 ECTS

Learning outcomes
The student is able to:
- describe the objectives and core contents of their thesis
- plan and describe the stages of the thesis process
- take into account the possible research permit and copyright issues

AO00BU63 Thesis Project: 5 ECTS

Learning outcomes
The student is able to:
- implement the thesis on the basis of an approved thesis plan.

AO00BU64 Thesis Report: 5 ECTS

Learning outcomes
The student is able to:
- present the results or output of their thesis
- report on their thesis in writing in accordance with the thesis guidelines of LAB University of Applied Sciences
- write a maturity test.