

Curriculum at LAB University of Applied Sciences  
2021-2022

**Bachelor of Culture and Arts, Industrial Design 21S, full-time studies, Lahti**

Code	Name	1 y	2 y	3 y	4 y	ECTS total
<b>ID21SLTI-1008 Core Competences</b>						<b>15</b>
AY00CE71	Developing Professional Competences 1	3				3
AY00CE72	Developing Professional Competences 2		1			1
AY00CE73	Developing Professional Competences 3			1		1
A300CJ89	Orientation to Sustainability Thinking	2				2
KE00CE74	Intercultural Awareness	3				3
KE00CE75	English for Professional Communication	5				5
<b>ID21SLTI-1009 Professional Core Competences</b>						<b>100</b>
<b>ID21SLTI-1026 Working Life Language Skills</b>						<b>6</b>
K200CE69	Finnish 1	3				3
K200CE70	Finnish 2		3			3
KS00BT59	Expert Communication Skills		4			4
KR00BU42	Swedish for Work, Spoken	1				1
KR00BU43	Swedish for Work, Written	1				1
<b>ID21SLTI-1016 Foundation Studies in Fine Arts</b>						<b>15</b>
AM00CN22	Color, Form and Composition	5				5
AM00CN23	Visual Design	5				5
AM00CN24	Art History	5				5
<b>ID21SLTI-1017 Basic Studies in Design</b>						<b>30</b>
AM00CN25	Introduction to Design	5				5
AM00CN26	Visual Design Tools	5				5
AM00CN27	Ergonomics and Accessibility	5				5
AM00CN28	Marketing Communication and Branding	5				5
AM00CN29	Working in CAD	5				5
AM00CN30	Basics of Service Design	5				5
<b>ID21SLTI-1018 Basic Studies in Industrial Design</b>						<b>20</b>
AM00CN31	Workshop license		5			5
AM00CN32	Presentation Methods		5			5
AM00CN33	Structures and Materials		5			5
AM00CN34	CAD, 3D and visualization		5			5
<b>ID21SLTI-1019 Core Studies in Industrial Design</b>						<b>19</b>

AM00CN35	Usability, User Interfaces and Interaction Design		5			5
AM00CN36	Advanced Prototyping		5			5
AM00CN37	VR/XR/AR for Design			5		5
AM00CM29	Design for Manufacturing				4	4
<b>ID21SLTI-1020 The Creative Professional</b>						<b>10</b>
AM00CD93	A More Sustainable Life – International project		5			5
AM00CN38	Business Skills and Professional Practices			5		5
<b>ID21SLTI-1012 Complementary Competences</b>						<b>80</b>
<b>ID21SLTI-1028 Studio 1</b>						<b>20</b>
AM00CM60	Sustainable Design Studio		20			20
<b>ID21SLTI-1029 Studio 2</b>						<b>20</b>
AM00CM79	Product Design Studio			20		20
<b>ID21SLTI-1023 Studio 3</b>						<b>20</b>
AM00CM78	Product Development Studio			20		20
<b>ID21SLTI-1024 Studio 4</b>						<b>20</b>
AM00CM67	Intelligent Mobility Studio				20	20
<b>ID21SLTI-1013 Practical Training</b>						<b>30</b>
HA00CE76	Practical Training		5	5		10
HA00CE77	Practical Training 2			10		10
HA00CE78	Practical Training 3				10	10
<b>ID21SLTI-1014 Thesis</b>						<b>15</b>
AO00CE79	Thesis planning				5	5
AO00CE80	Thesis research and writing				5	5
AO00CE81	Thesis publication				5	5

## **ID21SLTI-1008 Core Competences: 15 ECTS**

### **AY00CE71 Developing Professional Competences 1: 3 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 career path 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

### **AY00CE72 Developing Professional Competences 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

### **AY00CE73 Developing Professional Competences 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 competencies during job recruitment processes
- give feedback on tuition and services and thus participate in the development of education

### **A300CJ89 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

### **KE00CE74 Intercultural Awareness: 3 ECTS**

#### **Learning outcomes**

Students are able to

- understand cultural similarities and differences
- work effectively with international partners
- analyze business and work life cultures including Finland using different cultural frameworks
- understand culture adaptation and adjustment.

### **KE00CE75 English for Professional Communication: 5 ECTS**

#### **Learning outcomes**

A student is able to

- identify the characteristics of academic texts and to apply academic conventions to their writing
- demonstrate critical thinking and find, evaluate and use information effectively
- communicate clearly and effectively in different generic and field-specific workplace situations both orally and in writing
- function collaboratively in contemporary working environments in English.

## **ID21SLTI-1009 Professional Core Competences: 100 ECTS**

### **ID21SLTI-1026 : 6 ECTS**

#### **K200CE69 Finnish 1: 3 ECTS**

##### **Learning outcomes**

The student is able to

- identify and use the course vocabulary and phrases for common everyday situations
- tell about oneself and understand basic questions
- read and write simple sentences related to the course topics.

#### **K200CE70 Finnish 2: 3 ECTS**

##### **Learning outcomes**

The student is able to

- communicate in most common everyday situations
- understand slowly and clearly spoken Finnish when the topic and the vocabulary are familiar
- understand and write a simple message or text
- use the basic vocabulary and some grammatical structures of Finnish.

#### **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.

#### **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.

## **ID21SLTI-1016 Foundation Studies in Fine Arts: 15 ECTS**

### **AM00CN22 Color, Form and Composition: 5 ECTS**

#### **Learning outcomes**

Students are be able to

- use visual exercises to express colour theory and interrelations and also composition theory
- verbally describe the impressive, expressive and symbolic nature of colours and colour combinations, geometric forms and composition elements
- creatively apply the rules of colour interaction, forms and composition
- discuss the classical colour theories, composition theory and their application in fine arts and design.

### **AM00CN23 Visual Design: 5 ECTS**

#### **Learning outcomes**

The student is able to

- present their work to peer audiences and evaluate them critically
- make use of various visual idea generation methods
- use personal observations and emotions as a starting point for creative thinking
- make connections between visual arts and other forms of visual culture
- analyse, interpret and explain contemporary visual culture.

### **AM00CN24 Art History: 5 ECTS**

#### **Learning outcomes**

Students are able to

- describe the basics of Western visual arts, architecture and other visual culture, from prehistory to modern times
- use the research concepts of art history and visual culture
- view their professional field as part of artistic practice and the visual environment
- use their knowledge of phenomena in art history in their professional development and work.

## **ID21SLTI-1017 Basic Studies in Design: 30 ECTS**

### **AM00CN25 Introduction to Design: 5 ECTS**

#### **Learning outcomes**

The student is able to

- explain the term design and describe how design affects the development of everyday life, society and businesses

- make use of design thinking and some of the typical design process and methods for solving problems.

### **AM00CN26 Visual Design Tools: 5 ECTS**

#### **Learning outcomes**

The student is able to

- use the basic terms and concepts of digital tools in discussion
- use the basic functions in typical digital tools of visual design in their field of study
- utilize visual design tools to carry out assignments
- find guides and information about the use of more advanced tools in design software.

### **AM00CN27 Ergonomics and Accessibility: 5 ECTS**

#### **Learning outcomes**

The student is able to

- apply the basics of ergonomics in their design work
- apply the principles of accessibility and design-for-all in their design work

### **AM00CN28 Marketing Communication and Branding: 5 ECTS**

#### **Learning outcomes**

The student is able to

- explain the concept, contents and characteristics of marketing thought
- use the methods of marketing communication and branding in their professional activity
- draw up a marketing plan
- select appropriate methods and channels for marketing communication and branding.

### **AM00CN29 Working in CAD: 5 ECTS**

#### **Learning outcomes**

The student is able to

- perform basic workflows using industry standard CAD software and is able to use basic terminology of CAD work
- independently use CAD software as a design tool
- create work drawings using CAD software.

### **AM00CN30 Basics of Service Design: 5 ECTS**

#### **Learning outcomes**

The student is able to

- use service design terminology, methods and processes in design work
- function as a member of a multidisciplinary team in a goal-oriented way
- apply design thinking to assignments and problem solving
- recognize the importance of foresight in service design
- produce visual presentations of services.

## **ID21SLTI-1018 Basic Studies in Industrial Design: 20 ECTS**

### **AM00CN31 Workshop license: 5 ECTS**

#### **Learning outcomes**

The student is able to

- use the workshops in a safe manner, follow rules and instructions and justify her/his actions with given instructions
- with guidance use the most common tools and devices as well as techniques in the workshop
- manufacture the given assignments under supervision.

### **AM00CN32 Presentation Methods: 5 ECTS**

#### **Learning outcomes**

The student is able to

- create a visual presentation of a design
- facilitate discussion by drawing
- create finalized presentation materials and work drawings
- explain the possibilities and restrictions of both hand drawn and digital presentation methods.

### **AM00CN33 Structures and Materials: 5 ECTS**

#### **Learning outcomes**

The student knows how to

- describe the basic principles of designing structures
- assess materials from the perspectives of durability, serviceability, aesthetics and product costs
- design functional structures and select appropriate materials for a design

### **AM00CN34 CAD, 3D and visualization: 5 ECTS**

#### **Learning outcomes**

The student is able to

- perform basic 3D-modelling and visualisation workflows using CAD software and is able to use the terminology of 3D-modelling
- apply previously learned CAD skills in more advanced CAD assignments and 3D-modelling
- compare different modelling techniques and formats.

## **ID21SLTI-1019 Core Studies in Industrial Design: 19 ECTS**

### **AM00CN35 Usability, User Interfaces and Interaction Design: 5 ECTS**

#### **Learning outcomes**

The students are able to

- use knowledge of usability psychology and best practices in their design work
- choose, design and implement interactivity in a context savvy way
- recognize common interaction styles and patterns in graphical user interfaces and platforms

- analyze interaction design and explain design choices orally, literally and visually
- utilize user information in design.

### **AM00CN36 Advanced Prototyping: 5 ECTS**

#### **Learning outcomes**

Students are be able to

- compare and choose materials for a model
- demonstrate a command of three-dimensional sketching
- independently use appropriate modelling tools and equipment in an assignment.

### **AM00CN37 VR/XR/AR for Design: 5 ECTS**

#### **Learning outcomes**

The students are able to

- define the concepts of VR (Virtual Reality), XR (eXtended Reality) and AR (Augmented Reality) and to discuss the application possibilities of these and other comparable technologies
- to design solutions in which XR/AR technologies and methods support user experience, learning, marketing communication or other customer needs.

### **AM00CM29 Design for Manufacturing: 4 ECTS**

#### **Learning outcomes**

Students are able to

- Understand how manufacturing methods and material selection might affect the design process
- Describe manufacturing processes considering designed applications, users and economic impacts
- Define and differentiate diverse manufacturing processes in mass production of products
- Understand and explain the effect of material selection in a production process of a concept
- Define the key function of production tools on final product features
- Highlight key production prerequisites in transformation of design to a final product balancing aesthetic and functionality

### **ID21SLTI-1020 The Creative Professional: 10 ECTS**

### **AM00CD93 A More Sustainable Life – International project: 5 ECTS**

#### **Learning outcomes**

The student is able to

- work in her or his respective professional role within an international team
- communicate professionally in an international setting
- take the various aspects of sustainability into account in their professional work.

### **AM00CN38 Business Skills and Professional Practices: 5 ECTS**

#### **Learning outcomes**



The student is able to

- identify entrepreneurial competence requirements and evaluate their personal competencies
- identify and assess opportunities and plan a business operation in the business environment of their chosen field
- identify common contract types, legislation and practices specific to their chosen field
- take into account copyright law and intellectual property rights in their work.

## **ID21SLTI-1012 Complementary Competences: 80 ECTS**

### **Courses included in the study module**

Each studio is a 20 credit course. First studio-course listed for each semester is the default choice in the student's programme. Alternative studio-course choices are also listed and can replace the default choice depending on the study path of the student. Please consult your tutor teacher about alternative studio-courses.

## **ID21SLTI-1028 Studio 1: 20 ECTS**

### **AM00CM60 Sustainable Design Studio: 20 ECTS**

#### **Learning outcomes**

This studio course includes the following parts and their respective learning goals:

#### Sustainable Design Theory (5 ECTS)

The student is able to

- describe the principles and opportunities of environmental and ethical thinking in design
- acquire information about product life cycles, materials, manufacturing methods, legislation and eco-efficient technologies and practices
- describe eco-efficient product development strategies.

#### Sustainable Design Workshop (15 ECTS)

The student is able to

- design products with consideration of life cycles, materials, manufacturing methods, legislation and eco-efficient technologies and practices
- use systemic thinking and understands the basics of innovation ecosystems
- use eco-efficient product development strategies.

## **ID21SLTI-1029 Studio 2: 20 ECTS**

### **AM00CM79 Product Design Studio: 20 ECTS**

#### **Learning outcomes**

The student is able to

- use industrial design and innovation methods in an appropriate way
- analyze an assignment and work towards its goals and limitations
- produce design solutions solving the assignment's challenges
  
- apply multiple product development processes and methods

- produce prototypes as a part of design work
- work as a part of a multidisciplinary team
- create necessary documentation and present the designed product for a client.

### **ID21SLTI-1023 Studio 3: 20 ECTS**

### **AM00CM78 Product Development Studio: 20 ECTS**

#### **Learning outcomes**

The student is able to

- understand different approaches to the product development process
- recognize the role of innovations and foresight as a part of the product development process
- design within the limitations of manufacturing and understands the relationship between design and production
- understand the basics of manufacturing supply chains and subcontracting
- use foresight and create innovations in the product development process
- apply mainstream materials and methods of manufacture in their design work
- work in their own professional role within a multidisciplinary team.

### **ID21SLTI-1024 Studio 4: 20 ECTS**

### **AM00CM67 Intelligent Mobility Studio: 20 ECTS**

#### **Learning outcomes**

The student is able to

- design solutions for the needs of personal and public mobility
- present their concepts and designs both visually and by prototyping
- take a systemic approach to mobility solutions and design solutions that take sustainability and regulatory issues into account.

### **ID21SLTI-1013 Practical Training: 30 ECTS**

### **HA00CE76 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 into the work done in practical training

### **HA00CE77 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 into the work done in practical training

### **HA00CE78 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 into the work done in practical training

### **ID21SLTI-1014 Thesis: 15 ECTS**

### **AO00CE79 Thesis planning: 5 ECTS**

#### **Learning outcomes**

The student can

- 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.

### **AO00CE80 Thesis research and writing: 5 ECTS**

#### **Learning outcomes**

The student can

- implement the thesis on the basis of an approved thesis plan.

### **AO00CE81 Thesis publication: 5 ECTS**

#### **Learning outcomes**

The student can

- 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.