

Curriculum at LAB University of Applied Sciences 2020-2021

Master of Engineering, Digital Solutions, Lahti

Code	Name	1 y	ECTS total
YDIGT20SLTI-1003 Core competence			20
YY00BW95	Digital Solutions for the New Era	5	5
YY00BW96	Development as a form of change	5	5
TE00CF70	Machine learning	5	5
YY00CB89	Data Analyzation and Visualization	5	5
YDIGT20SLTI-1006 Complementary competence			10
TE00BR03	IoT	5	5
LA00BO58	Gamification	5	5
YDIGT20SLTI-1007 Thesis			30
YO00BU70	Thesis Planning	10	10
YO00BU71	Thesis Project and Reporting	20	20

YDIGT20SLTI-1003 Core competence: 20 ECTS

YY00BW95 Digital Solutions for the New Era: 5 ECTS

Learning outcomes

The student is able to

- assess an individual's and organisation's digital maturity
- describe new development trends of digital solutions
- design a digital solution that supports an organisation's service, function, or product

YY00BW96 Development as a form of change: 5 ECTS

Learning outcomes

The student is able to

- to search and analyze the latest information in the field of development and innovation
- use research and development methods properly
- critically evaluate the results and impact of development and innovation activities

TE00CF70 Machine learning: 5 ECTS

YY00CB89 Data Analyzation and Visualization: 5 ECTS

Learning outcomes

The student is able to

- examine the properties of the data in terms of further processing
- utilize mathematical methods in data analysis
- utilize a modern statistical tool
- visualize data and analysis in a way that utilizes further processing
- produce a reproducible research

YDIGT20SLTI-1006 Complementary competence: 10 ECTS

TE00BR03 IoT: 5 ECTS

Learning outcomes

The student is able to

- understand the contribution of IoT to the significant increase in the amount of data, understand the nature of sensor data and know the basic principles of data processing at the sensor level
- understand the basic structure of IoT devices
- store measurement results in a database and understand the usability of time series databases
- transfer the measurement results to the cloud service using the standard IoT protocol
- describe the structures of different IoT network architectures and their integration into larger information systems
- take into account the specific security risks of IoT technologies

LA00BO58 Gamification: 5 ECTS

Learning outcomes

The student is able to

- recognise similar activities in games as well as the opportunities through games in digitally operating environments
- plan strategies and tactics which can be integrated into the game mechanics of digital services
- use the core concepts of games, planning models as well as applicable code examples

YDIGT20SLTI-1007 Thesis: 30 ECTS

YO00BU70 Thesis Planning: 10 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.

YO00BU71 Thesis Project and Reporting: 20 ECTS

Learning outcomes

The student is able to

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

- 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
- as a maturity test, write a blog post, a press release or an article.