

Curriculum at LAB University of Applied Sciences 2021-2022

Bachelor of Engineering, Civil and Construction Engineering, Double Degree, Lappeenranta

Code	Name	1 y	2 y	ECTS total
CIV21SDDLPR-1002 PROFESSIONAL STUDIES				35
KTE2350	Cultural Studies for Construction	5		5
KTE2351	Building Engineering and Renovation	5		5
KTE2266	Structural Engineering	5		5
KTE2352	Building Physics and Energy Efficiency	5		5
KTE2268	BIM in Building Processes	5		5
KTE2353	Project Work	5		5
AT00CC79	International Project Management	5		5
CIV21SDDLPR-1004 ELECTIVE STUDIES				0
CIV21SDDLPR-1005 PLACEMENT				10
AT00CF01	Placement	10		10
CIV21SDDLPR-1006 THESIS				15
AO00CE85	Thesis planning	5		5
AO00CE86	Thesis research and writing	5		5
AO00CE87	Thesis publication	5		5

CIV21SDDLPR-1002 PROFESSIONAL STUDIES: 35 ECTS

KTE2350 Cultural Studies for Construction: 5 ECTS

Learning outcomes

The student is able to

- understand and use civil and construction engineering English in international building projects
- give presentations and write reports in English
- understand Finnish culture and use the basics of Finnish language.

KTE2351 Building Engineering and Renovation: 5 ECTS

Learning outcomes

Contents
Building engineering and renovation projects in general
Typical structure parts (wall, floors etc.) and frames
Compulsory parts on buildings (windows, doors, etc.)
Typical buildings in Finland from the 1800`s to now.
Fire legislation in Finland
Moisture insulations
BIM in renovations
renovation examinations and field testing
Indoor climate fixings

KTE2266 Structural Engineering: 5 ECTS

Learning outcomes

Contents
The Finnish field of civil engineering, why is Finland different
The basics of the design and building structures
The design documents of structures
The different type of structures: Columns, Slabs, Beams
The different type of manufacturing
Contents concrete
The basics of the design and building of reinforced concrete structures
The design documents of reinforced concrete structures
The characteristics of reinforced concrete
The different type of concrete structures: Columns, Slabs, Beams, Tensioned structures
The different type of concrete manufacturing
Cast on site
Prefabricated constructions
Contents steel
The basics of the design and building of steel structures
The design documents of steel structures
The characteristics of steel structures
The different type of steel structures: Columns, Slabs, Beams
The steel manufacturing
Contents composite structures
The basics of the design and building of composite structures
The characteristics of composite structures
The different type of composite structures: Columns, Slabs, Beams
Contents of wood structures
The basics of the design and building of wood structures
The characteristics of wood materials and structures
The different type of wood structure systems in houses: small houses, halls, block of flats, special structures
Manufacturing processes of basic wood materials and prefabricated elements

KTE2352 Building Physics and Energy Efficiency: 5 ECTS

Learning outcomes

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KTE2268 BIM in Building Processes: 5 ECTS

Learning outcomes

- Learn processes of open BIM in construction and civil engineering and how to use models in projects
- Learn how to use basic tools of BIM

KTE2353 Project Work: 5 ECTS

Learning outcomes

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AT00CC79 International Project Management: 5 ECTS

Learning outcomes

A student will be able

to use practical tools and techniques to plan, deliver and monitor a project
to demonstrate commitment to quality, timeliness, and continuous improvement
to function effectively as a member or a leader in international construction teams
to demonstrate commitment to quality, timeliness, and continuous improvement
to apply key principles of green project management in construction field

CIV21SDDLPR-1004 ELECTIVE STUDIES: 0 ECTS

CIV21SDDLPR-1005 PLACEMENT: 10 ECTS

AT00CF01 Placement: 10 ECTS

CIV21SDDLPR-1006 THESIS: 15 ECTS

AO00CE85 Thesis planning: 5 ECTS

Learning outcomes

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.

AO00CE86 Thesis research and writing: 5 ECTS

Learning outcomes

Student is able to

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

AO00CE87 Thesis publication: 5 ECTS

Learning outcomes

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.