

# Construction Engineering modules in Academic Year 2021-2022

	Module 1 (23.8.-15.10.2021)	Module 2 (25.10.-17.12.2021)	Module 3 (10.1.-11.3.2022)	Module 4 (14.3.-6.5.2022)
<b>60 ECTS</b> <b>1st year</b> <b>BECO21A3</b>	<b>Orientation to Engineering Studies</b> HAMK Diili 3 ECTS; Algebra 3 ECTS; Introduction to Technical Physics 3 ECTS; Basics of Technical Drawings 3 ECTS; Finnish 1, 3 ECTS	<b>Building Technology and Construction Materials</b> Statics 4 ECTS; Geometry and Linear Algebra 3 ECTS; Building Chemistry 3 ECTS; Construction Materials 3 ECTS; Finnish 2, 2 ECTS	<b>Planning and Implementation of a Building Project</b> Basics of Geotechnics 4 ECTS; Surveying Techniques in Constructions Site 4 ECTS; Basics of Project Management 3 ECTS; Finnish 3, 2 ECTS, Differential Calculus 2 ECTS	<b>Sustainable and Healthy Buildings</b> Sustainability and Housing Health 3 ECTS; Energy Efficiency and Renewable Energy Solutions 4 ECTS; Basics of Building Physics 3 ECTS; Finnish 4, 3 ECTS; Integral Calculus 2 ECTS
<b>60 ECTS</b> <b>2nd year</b> <b>BECOP20A3</b>	<b>Fundamentals of Structural Design</b> Conceptual Design of the Structures 3 ECTS; Technical English 1, 2 ECTS; Concrete Materials Technology 3 ECTS; Basics of Geotechnics 3 ECTS; Strength of Materials 4 ECTS	<b>Structural Systems in Buildings</b> Load Bearing Frames of Buildings and their Stability 5 ECTS; Timber Structures 4 ECTS; Foundation Engineering 3 ECTS; Technical English 2, 3 ECTS	<b>Residential Buildings</b> Advanced Timber Structures 4 ECTS; Metering Estimation of Construction 2 ECTS; Structural Analysis 4 ECTS; Building Services Systems (HVAC) 3 ECTS; Building Condition Assessment Technics 2 ECTS	<b>Concrete Structures</b> Building Physics 3 ECTS; Concrete Works 3 ECTS; Concrete Structures 5 ECTS; Advanced Mechanics 4 ECTS
<b>60 ECTS</b> <b>3rd year</b> <b>BECOP19A3</b>	<b>Timber Structures</b> Design of Timber Structures 6 ECTS; BIM in Design of Timber Structures 3 ECTS; Structural Analysis 5 ECTS; Reporting in English 3 ECTS	<b>Renovation</b> Building Physics related to Renovation 3 ECTS; Structures and their Damages 3 ECTS; BIM in Renovation Design 3 ECTS; Healthy Indoor Air 4 ECTS; Improvements in Energy Efficiency 2 ECTS	<b>Design of Steel Structures</b> Design of Steel Structures 1, 5 ECTS; Design of Steel Structures 2, 5 ECTS; Fundamentals in Finite Element Method 5 ECTS	<b>Concrete Structures</b> Structural Design of Reinforced Concrete 4 ECTS; Precast Concrete Structures 4 ECTS; BIM in Concrete Structures 2 ECTS; Mechanics 2, 3 ECTS; Meeting skills 2 ECTS
<b>60 ECTS</b> <b>4th year</b> <b>BECOP18A3</b>	Professional Skills	Work Placement 1	Work Placement 2	Final Thesis

Module extent  
is 15 ECTS

Core  
competence  
module

Profiling  
competence  
module

NOTE! You can  
undertake  
Work  
Placement at  
any time of  
your studies