ANNEX II. (LEARNING OUTCOMES)

Higher education institution: University of Rijeka, Faculty of Civil Engineering (114)
Year of accreditation process: 2025
Headquarters: Rijeka
Date of creation: 5/5/2025

ANNEX II. (LEARNING OUTCOMES)

TABLES RELATED TO ASSESSMENT AREA II. STUDY PROGRAMMES AND LIFELONG LEARNING PROGRAMMES

NOTE: These tables contain compulsory learning outcomes for a single study programme. Please add the code and description for each learning outcome (LO) in the separate table below.

Table 2.1. Learning outcomes of the study programme for the evaluated academic year

Civil Engineering (Professional undergraduate study programme, 981, 3635)

Learning outcomes* of the study programme	LO01	LO02	LO03	LO04	LO05	LO06	LO07	LO08	LO09	LO10
Total number of courses per learning outcome	23	18	23	9	15	22	30	34	22	25
Physical Education (1/2)										+
Physical Education (2/2)										+
Mathematics I	+							+		
Geometric Graphics I			+			+	+	+		+
Computer Applications			+	+	+		+	+	+	
Mathematics II	+							+		
Engineering Mechanics I	+					+	+	+		
Engineering Mechanics II	+					+	+	+		
Physics	+							+		
Architectural Structures I	+	+	+		+	+	+	+	+	+
Construction Technology	+	+	+		+		+	+	+	+
Construction Management	+	+	+		+		+	+	+	+
Introduction to Design I		+	+			+	+	+	+	+
Introduction to Spatial Planning			+				+	+	+	+
Environmental Protection			+		+	+		+		+
Civil Engineering Materials		+		+			+	+	+	+

Learning outcomes* of the study programme	LO01	LO02	LO03	LO04	LO05	LO06	LO07	LO08	LO09	LO10
Civil Engineering Regulations				+	+	+	+	+	+	+
Construction Economics	+	+	+		+		+	+	+	+
Vocational Practice	+			+			+	+	+	+
Final Year Project	+	+	+	+	+	+	+	+	+	+
Water Supply and Sewerage	+				+	+	+			
Concrete and Masonry Structures	+	+	+			+	+	+	+	
Steel Structures	+	+	+		+	+	+	+	+	+
Geotechnical Engineering	+	+	+	+		+	+	+		
Applied Geology	+	+	+	+			+	+		
Installations						+	+	+		+
Introduction to structural design	+	+	+			+				
Basics of Concrete and Masonry Structures	+	+	+			+	+		+	+
The English Language							+	+		
German Language							+	+		
Geodesy				+	+			+	+	
Timber Structures	+	+	+			+	+	+	+	+
Prefabricated Structures			+		+	+		+	+	+
Final Works in Architecture	+	+	+		+	+	+	+	+	+
Introduction to Road Design	+	+	+			+	+	+	+	+
Architectural Structures II	+	+	+		+	+	+	+	+	+
Engineering Informatics	+		+	+				+		+
Geometric Graphics II			+			+	+	+		+
Construction History		+			+		+	+	+	+
Hydraulic Structures						+	+		+	

* Each programme learning outcome (LO) has a number/code which is assigned by the higher education institution. Please add this number/code to each learning outcome in the left column.
Legend of a list of LOs:

Learning outcome number/code	Learning outcome description
LO01	Apply the methods of designing and constructing simpler structures and systems using basic principles, theories, and regulations relevant to civil engineering and other related fields, as well as theoretical knowledge in the fields of mathematics, physics, and basic engineering sciences
LO02	Explain the properties of building materials and the basic construction and craftsmanship details of structures and systems
LO03	Participate in the development of technical documentation and propose appropriate technical solutions in the process of designing standard structures and systems, taking into account the environmental impact of the use of the material
LO04	Participate in the implementation of laboratory and field tests and analyze and interpret the measured data
LO05	Design the basic organizational and technological processes of constructing more simple structures, taking into account the environmental impact of the design technology
LO06	Design elements of simpler structures and systems complying with applicable domestic and foreign regulations and guidelines
LO07	Use professional and scientific literature efficiently and apply acquired knowledge and skills to new circumstances
LO08	Interpret and discuss expert information using technical terms in Croatian and foreign languages
LO09	Organize and plan work stages in order to successfully complete a project
LO10	Work efficiently and collaboratively in a group/team taking into account professional and ethical principles

Civil Engineering (University undergraduate study programme, 60, 2974)

Learning outcomes* of the study programme	LO01	LO02	LO03	LO04	LO05	LO06	LO07	LO08	LO09	LO10	LO11	LO12
Total number of courses per learning outcome	32	12	13	18	17	26	13	24	43	43	16	32
Mathematical Analysis II	+				+							
Strength of Materials II	+			+	+			+	+	+		+
Fluid Mechanics	+				+	+			+	+		+
Civil Engineering Regulations						+	+		+	+	+	+
Bridges	+					+		+	+	+	+	+
Water Resources and Systems						+	+		+	+		
Mechanics I	+				+				+	+		+
Hydrology	+				+	+			+	+		
Soil and Rock Mechanics	+		+		+	+			+	+		
Introduction to Steel Structures	+	+		+		+		+	+	+		+
Introduction to Hydraulic Engineering	+			+		+		+				
Construction Management and Technology					+	+	+		+	+	+	+
Geotechnical Engineering	+	+	+	+		+	+	+	+	+	+	+

Learning outcomes* of the study programme	LO01	LO02	LO03	LO04	LO05	LO06	LO07	LO08	LO09	LO10	LO11	LO12
Construction Economics				+		+			+	+	+	+
Fieldwork						+			+	+	+	+
Final Year Project	+	+	+	+	+	+	+	+	+	+	+	+
Introduction to Coastal Engineering	+	+		+		+		+	+		+	+
Structure and Characteristics of Materials	+		+						+	+		
Engineering Materials	+		+		+			+	+	+	+	+
Urban Roads and Intersections						+	+	+	+	+		+
Environmental Protection	+					+	+	+		+		+
Building and Constructing English									+	+		
Introduction to Spatial Planning						+	+	+		+		
Introduction to Building Physics	+		+			+	+	+	+			
Mechanics II	+				+				+	+		+
Strength of Materials I	+			+	+			+	+	+		+
Structural Mechanics I	+			+				+	+	+		+
Structural Mechanics II	+			+				+	+	+		+
Introduction to Road Design	+	+		+		+		+		+		
Experimental Soil Mechanics					+				+	+		+
Applied Geology			+		+				+	+		+
Constructive Geometry		+		+				+	+			+
Introduction to Structural Engineering Design	+	+	+			+	+	+	+	+	+	+
Railway Engineering	+	+				+			+	+	+	+
Basics of Concrete Structures		+		+		+		+	+	+		+
Physics	+								+	+		
Engineering Informatics	+		+	+	+			+	+	+	+	+
Constructive Geometry	+	+		+		+		+	+	+		+
Mathematics 1	+								+	+		
Introduction to Civil Engineering		+	+						+	+	+	+
The English Language									+	+		
German Language									+	+		
Elements of Building Construction	+	+	+	+		+	+	+	+	+	+	+
Geodesy	+			+	+	+	+	+	+	+	+	+
Engineering Materials	+		+		+	+			+	+	+	+

Learning outcomes* of the study programme	LO01	LO02	LO03	LO04	LO05	LO06	LO07	LO08	LO09	LO10	LO11	LO12
Mathematics 2	+								+	+		+
Fundamentals of Statics	+							+	+	+		
Geology			+	+	+		+		+	+		

* Each programme learning outcome (LO) has a number/code which is assigned by the higher education institution. Please add this number/code to each learning outcome in the left column.
Legend of a list of LOs:

Learning outcome number/code	Learning outcome description
LO01	Solve and analyze standard engineering problems using theoretical knowledge in the fields of mathematics, physics, and basic engineering sciences
LO02	Explain and draw the basic construction details of structures and systems
LO03	Identify the difference in structure and analyze the properties of building materials
LO04	Participate in the creation of technical documentation of more complex structures and systems
LO05	Participate in the implementation of laboratory and field tests and analyze and interpret the measured data
LO06	Apply methodology and regulation relevant to civil engineering and other related fields
LO07	Plan and design the basic organizational and technological processes of constructing standard structures and systems, taking into account the principles of sustainable development and the environmental impact of structures and systems
LO08	Design standard structures and systems using theoretical knowledge and complying with applicable domestic and foreign regulations and guidelines, taking into account the environmental impact
LO09	Use professional literature efficiently and apply acquired knowledge and skills to new circumstances
LO10	Interpret and discuss expert information using technical terms in Croatian and foreign languages
LO11	Organize and plan work stages in order to successfully complete the project
LO12	Work efficiently and collaboratively in a group/team taking into account professional and ethical principles

Civil Engineering (Professional graduate study programme, 1091, 3697)

Learning outcomes* of the study programme	LO01	LO02	LO03	LO04	LO05	LO06	LO07	LO08	LO09	LO10	LO11	LO12
Total number of courses per learning outcome	8	9	9	10	9	9	8	11	8	9	6	7
Special Chapters of Engineering Mathematics					+	+		+				
Public Buildings and Spaces	+	+	+	+	+	+	+	+	+	+	+	+
Final Year Specialisation Project	+	+	+	+	+	+	+	+	+	+	+	+
Transport Infrastructure				+				+	+	+		
Construction of Marinas and Ports	+	+	+	+	+	+	+	+	+	+		+
Water-course Restoration	+	+	+	+	+	+	+	+	+	+	+	+
Pavement Management	+	+	+	+	+	+	+	+				
Road Traffic Safety		+	+	+	+			+		+		
Industrial Construction Heritage	+	+	+	+	+	+	+	+	+	+	+	+
Building Maintenance	+	+	+	+		+	+	+	+	+	+	+
Tourist Constructions	+	+	+	+	+	+	+	+	+	+	+	+

* Each programme learning outcome (LO) has a number/code which is assigned by the higher education institution. Please add this number/code to each learning outcome in the left column.

Legend of a list of LOs:

Learning outcome number/code	Learning outcome description
LO01	Know and explain theories and regulations relevant to coastal construction and utility systems
LO02	Apply specialized knowledge in the field of coastal construction and utility systems
LO03	Participate in the planning of utility systems, respecting the principles of sustainable development and coastal construction
LO04	Apply the rules and guidelines of construction regulations in the construction and maintenance of coastal structures and communal systems
LO05	Conduct field research and collect data necessary for the implementation of the project
LO06	Propose and evaluate economically, environmentally, and socially acceptable solutions to engineering problems
LO07	Evaluate the project and the execution of works in the coastal zone in order to preserve indigenous architectural values of the coastal areas
LO08	Use professional literature efficiently and apply acquired knowledge and skills to new circumstances
LO09	Use technical terms and technical terminology in Croatian and foreign languages when writing and presenting professional papers
LO10	Analyze and interpret expert information in order to prepare projects, plans and studies
LO11	Organize and plan work stages in order to successfully complete expert projects
LO12	Efficiently coordinate the tasks of spatial planning and maintenance of structures and utility systems, work with a group, and cooperate with members of the group, both from one's own and members of other professions, taking into account professional and ethical principles

Learning outcomes* of the study programme	LO01	LO02	LO03	LO04	LO05	LO06	LO07	LO08	LO09	LO10	LO11	LO12	LO13
Total number of courses per learning outcome	40	45	38	40	22	24	34	31	44	49	42	26	19
Reinforcing Soil and Rocks	+	+	+	+	+		+	+	+	+	+		
Water Supply and Drinking Water Treatment	+	+	+	+	+		+	+	+	+	+	+	
Drainage and Wastewater Treatment		+	+	+	+		+		+	+	+		
Hydraulic Structures	+	+	+	+	+		+		+	+	+		
Water Resources Management		+	+	+	+		+		+	+	+	+	
Engineering Hydrology	+	+		+		+			+	+	+	+	+
Hydraulic Regulations and Meliorations	+	+	+	+	+	+	+		+	+		+	
Coastal Engineering	+	+	+	+	+	+	+		+	+	+	+	
Experimental Hydraulics	+	+				+	+	+	+	+			
Waste Management		+	+	+	+				+	+	+	+	
Theory and Technology of Concrete	+	+		+	+	+	+		+	+	+	+	
Operations Research and Linear Programming	+									+	+		
Testing of Structures	+	+		+		+		+	+	+	+	+	
Project Management		+	+	+	+		+		+	+	+	+	+
Public Buildings and Spaces		+	+	+			+		+	+	+	+	+
Road Intersections and Crossroads		+	+	+			+		+	+	+		
Theory of Elasticity	+	+						+	+	+	+	+	+
Steel Structures		+	+	+			+	+		+	+		
Urban Water Systems	+	+	+	+	+		+	+	+	+	+		+
Master Thesis	+	+	+	+	+	+	+	+	+	+	+	+	+
Underground Structures and Tunnels	+	+	+	+	+	+	+	+	+	+	+		
Engineering Rock Mechanics	+	+			+	+	+	+		+	+		
Introduction to Composite Structures		+	+	+	+	+	+	+		+	+		
Traffic Engineering	+	+	+	+		+				+	+	+	
Probability Theory and Statistics	+					+		+	+	+	+		+
Computational Hydraulics	+			+	+			+	+	+			+
Numerical Modelling	+			+			+	+	+	+			+
Urban Traffic		+	+	+			+		+	+	+	+	
Concrete and Masonry Structures 1	+	+	+				+	+	+	+	+		

Learning outcomes* of the study programme	LO01	LO02	LO03	LO04	LO05	LO06	LO07	LO08	LO09	LO10	LO11	LO12	LO13
Soil Dynamics	+	+				+		+	+	+	+		
Numerical Modelling in Geotechnical Engineering	+	+	+				+	+	+	+	+		
Testing and Monitoring in Geotechnical Engineering	+	+	+	+		+				+	+		
Stability of Structures	+	+	+	+		+		+	+	+	+	+	+
Lightweight Structures	+	+	+	+			+	+	+	+	+		
Flexible Pavement Structures	+	+	+	+	+	+	+		+	+	+	+	+
Dynamics of Structures	+	+	+	+		+		+	+	+	+	+	+
Theoretical Soil Mechanics	+	+				+		+	+	+	+		
Foundation Engineering	+	+	+	+	+	+	+	+	+	+	+	+	
Slope Stability	+	+	+	+		+	+	+	+	+		+	+
Geotechnical Structures	+	+	+	+	+	+	+	+	+	+	+	+	
Timber Structures	+	+	+	+		+		+	+	+	+	+	+
Concrete and Masonry Structures 2	+	+	+				+	+	+	+	+		
Precast Concrete Structures		+	+	+			+	+	+	+			+
Solid Bridges	+		+	+	+		+		+	+	+	+	
Prestressed Concrete Structures	+			+				+					
Earthquake Engineering	+	+	+				+	+	+	+			+
Road Design	+	+	+	+	+	+	+		+			+	
Spatial Planning		+	+	+			+		+	+	+	+	+
GIS and the basics of spatial analysis	+	+	+	+	+		+		+	+	+		
Plate and Shell Structures	+	+	+	+		+		+	+	+	+	+	+
Energy Methods in Applied Mechanics	+	+	+	+				+	+	+	+	+	+

* Each programme learning outcome (LO) has a number/code which is assigned by the higher education institution. Please add this number/code to each learning outcome in the left column.
Legend of a list of LOs:

Learning outcome number/code	Learning outcome description
LO01	Solve complex engineering problems using theoretical knowledge in the fields of mathematics, physics, and basic engineering sciences
LO02	Apply advanced theoretical knowledge and skills in specialized civil engineering fields in order to plan, design, execute and maintain structures and systems with effective application of the rules and guidelines of applicable construction regulations
LO03	Apply planning and design methodologies relevant to civil engineering and other related fields
LO04	Propose and evaluate variant solutions to engineering problems in accordance with the principles of sustainable development
LO05	Evaluate and select technological construction processes and the environmental impacts of adopted structure and system solutions
LO06	Create a program and conduct laboratory and field research, and analyze and interpret the collected data
LO07	Design parts of or entire structures and systems applying applicable domestic and foreign regulations and guidelines
LO08	Create a numerical model of the behavior of materials, structural elements, constructions, and engineering systems
LO09	Communicate own ideas, analyzes and conclusions related to more complex construction solutions using professional and scientific terminology in Croatian and foreign languages
LO10	Use professional and scientific literature efficiently and apply acquired knowledge and skills to new circumstances
LO11	Organize and plan work stages in order to successfully complete a research or professional project
LO12	Effectively manage a group, work with a group, and cooperate with members of the group, both from one's own and members of other professions in order to create and execute more complex projects, taking into account professional and ethical principles
LO13	Understand the importance of education through lifelong learning in order to acquire new knowledge and personal development in terms of scientific and applied scientific research

Civil Engineering (Doctoral study programme, 684, 3416)

No data!

Table 2.2. Table linking units of learning outcomes (LO) from the qualification standard with programme outcomes

– to be completed only when there is a qualification standard in the CroQF Register with which the study programme must comply

Civil Engineering (Professional undergraduate study programme, 981, 3635)

No data!

Civil Engineering (University undergraduate study programme, 60, 2974)

No data!

Civil Engineering (Professional graduate study programme, 1091, 3697)

No data!

Civil Engineering (University graduate study programme, 378, 3206)

No data!

Civil Engineering (Doctoral study programme, 684, 3416)

No data!