

FIRST DEGREE full-time STUDY PLAN (B.Sc. Eng.)

field of study: **CIVIL ENGINEERING** *academic profile*

approved by the Faculty Council on 15/05/2019

(valid for students who started their studies in the academic year 2019/2020)

SEMESTER I (15 weeks)										
No.	Course	Course code	Hours per week						Hours per semester	ECTS points
			L	C	LC	SW	P	S		
1	Mathematics I	EN-B1S11001	2	2					60	5
2	Physics I (E)	EN-B1S11002	2	1					45	4
3	Chemistry (for civil engineering) (E)	EN-B1S11003	2		1				45	4
4	Descriptive geometry	EN-B1S11004	1				2		45	4
5	OHS training and basics of ergonomics (HES)	EN-B1S11005	1						15	1
6	Engineering geology and petrography	EN-B1S11006	2			1			45	3
7	Technical drawing and engineering graphics	EN-B1S11007	1			2			45	4
8	Information technology with BIM elements	EN-B1S11008	1			2			45	4
9	Intellectual property protection (HES)	EN-B1S11009	1						15	1
RAZEM			13	3	1	5	2	0	360	30

SEMESTER II (15 weeks)										
No.	Course	Course code	Hours per week						Hours per semester	ECTS points
			L	C	LC	SW	P	S		
1	Foreign language I	EN-B1S21010		2					30	2
2	Mathematics II (E)	EN-B1S21011	1	1		2			60	5
3	Theoretical mechanics (E)	EN-B1S21012	2	2					60	5
4	Physics II – basics of building physics	EN-B1S21013	1				1		30	3
5	Engineering geodesy	EN-B1S21014	1			2			45	3
6	Civil engineering materials (E)	EN-B1S21015	2		2				60	5
7	Hydraulics and hydrology	EN-B1S21016	1				1		30	3
8	Architectural design using the BIM model	EN-B1S21017	1			2			45	4
RAZEM			9	5	2	6	2	0	360	30

SEMESTER III (15 weeks)										
No.	Course	Course code	Hours per week						Hours per semester	ECTS points
			L	C	LC	SW	P	S		
1	Foreign language II	EN-B1S31018		2					30	2
2	Mathematics III - Statistics	EN-B1S31019	1	1					30	3
3	General building engineering (E)	EN-B1S31020	2	2			2		90	6
4	Concrete technology (E)	EN-B1S31021	1		2				45	4
5	Basics of road engineering	EN-B1S31022	1				1		30	2
6	Strength of materials (E)	EN-B1S31023	2		1		2		75	6
7	Building physics (E)	EN-B1S31024	2		1		1		60	5
8	Physical education I	EN-B1S31025		2					30	0
9	Elective course (HES)	EN-HES S102.....	2						30	2
RAZEM			11	7	4	0	6	0	420	30

SEMESTER IV (15 weeks)										
No.	Course	Course code	Hours per week						Hours per semester	ECTS points
			L	C	LC	SW	P	S		
1	Foreign language III	EN-B1S41026		2					30	2
2	Elective course from the field of building installations	EN-B1S41027	2						30	2
3	Basics of concrete structures design (E)	EN-B1S41028	2		1		2		75	7
4	Basics of steel structures design (E)	EN-B1S41029	2		1		2		75	7
5	Construction works technology (E)	EN-B1S41030	2				2		60	5
6	Structural mechanics (E)	EN-B1S41031	2	2			2		90	7
7	Physical education II	EN-B1S41032		2					30	0
RAZEM			10	6	2	0	8	0	390	30

SEMESTER V (15 weeks)										
No.	Course	Course code	Hours per week						Hours per semester	ECTS points
			L	C	LC	SW	P	S		
1	Foreign language IV	EN-B1S51033		2					30	2
2	Basics of bridge structures	EN-B1S51034	1				1		30	2
3	Concrete structures (E)	EN-B1S51035	2				2		60	5
4	Road building engineering	EN-B1S51036	1		1		1		45	4
5	Masonry and timber structures (E)	EN-B1S51037	2				2		60	5
6	Organization of building works	EN-B1S51038	2				2		60	5
7	Elective course in the field of individual entrepreneurship	EN-B1S51039						1	15	1
8	Soil mechanics (E)	EN-B1S51040	2		2				60	5
9	Building law (HES)	EN-B1S51041	1						15	1
RAZEM			11	2	3	0	8	1	375	30

MAJOR: Civil Engineering

(common courses for the entire major)

SEMESTER V (15 weeks)										
No.	Course	Course code	Hours per week						Hours per semester	ECTS points
			L	C	LC	SW	P	S		
1	Foundations (E)	EN-B1S61042	2				2		60	4
2	Basics of investment economics and cost calculations (E)	EN-B1S61043	1			2			45	4
3	Geotechnical field training	EN-B1S61044								2
RAZEM			3	0	0	2	2	0	105	10

Student is required to complete:

- work experience placement (EN-B1S71059) - practical training in a selected construction company
6 weeks during summer holidays (the date is chosen by the student);
- geotechnical field training** (EN-B1S61044) - **2 weeks** during summer holidays after semester VI.

ELECTIVE COURSES

Specialty 1 - Building Structures

SEMESTER VI (15 weeks)										
No.	Course	Course code	Hours per week						Hours per semester	ECTS points
			L	C	LC	SW	P	S		
4	Strengthening building structures	EN-B1S61145	1				1		30	3
5	Measurement diagnostics of effort of building structures	EN-B1S61146	1		3				60	5
6	Computer static analysis of structures with BIM technology application	EN-B1S61147	1			2			45	4
7	Steel hall structures (E)	EN-B1S61148	2				2		60	5
8	Computer aided design of building structures with BIM technology application	EN-B1S61149				2			30	3
RAZEM			5	0	3	4	3	0	225	20

Specialty 2 - Road Construction

SEMESTER VI (15 weeks)										
No.	Course	Course code	Hours per week						Hours per semester	ECTS points
			L	C	LC	SW	P	S		
4	Basics of traffic engineering	EN-B1S61250	1				2		45	4
5	Road pavements	EN-B1S61251	2				1		45	4
6	Road and street design with BIM technology application (E)	EN-B1S61252	2			3			75	7
7	Road materials technology (E)	EN-B1S61253	2		2				60	5
RAZEM			7	0	2	3	3	0	225	20

Specialty 3 - Building Process Engineering

SEMESTER VI (15 weeks)										
No.	Course	Course code	Hours per week						Hours per semester	ECTS points
			L	C	LC	SW	P	S		
4	Durability of building objects	EN-B1S61354	1			2			45	4
5	Computer aided implementation of construction works with BIM technology application	EN-B1S61355	1			2			45	4
6	Technology of building products	EN-B1S61356	1				1		30	3
7	Maintenance of buildings	EN-B1S61357	1				1		30	3
8	Basics of thermal diagnostics of buildings (E)	EN-B1S61358	2		1	1	1		75	6
RAZEM			6	0	1	5	3	0	225	20

Civil Engineering

(common courses for the entire major)

SEMESTER VII (15 weeks)										
No.	Course	Course code	Hours per week						Hours per semester	ECTS points
			L	C	LC	SW	P	S		
1	Work experience placement	EN-B1S71059								6
2	BSc seminar	EN-B1S71060						2	30	2
3	BSc thesis	EN-B1S71061								14
RAZEM			0	0	0	0	0	2	30	22

Specialty 1 - Building Structures

ELECTIVE COURSES

SEMESTER VII (15 weeks)										
No.	Course	Course code	Hours per week						Hours per semester	ECTS points
			L	C	LC	SW	P	S		
4	Composite structures (E)	EN-B1S71162	1				2		45	4
5	Durability and safety of structures with BIM elements	EN-B1S71163	1						15	1
6	Basics of building structure mechanics	EN-B1S71164	1				1		30	3
RAZEM			3	0	0	0	3	0	90	8

Specialty 2 - Road Construction

SEMESTER VII (15 weeks)										
No.	Course	Course code	Hours per week						Hours per semester	ECTS points
			L	C	LC	SW	P	S		
4	Road earthworks and drainage (E)	EN-B1S71265	1				2		45	4
5	Road maintenance and reconstruction	EN-B1S71266	1				2		45	4
RAZEM			2	0	0	0	4	0	90	8

Specialty 3 - Building Process Engineering

SEMESTER VII (15 weeks)										
No.	Course	Course code	Hours per week						Hours per semester	ECTS points
			L	C	LC	SW	P	S		
4	Special concretes and recycling of concrete structures (E)	EN-B1S71367	2		1		1		60	5
5	Low energy buildings and rational use of energy in buildings	EN-B1S71368	1	1					30	3
RAZEM			3	1	1	0	1	0	90	8