



## Presentation of the study programme

# 1<sup>st</sup> CYCLE PROFESSIONAL BACHELOR DEGREE PROGRAMME **CONSTRUCTION MANAGEMENT (BA)**

Valid from study year 2021/2022 | Valid study programme from 20/01/2021

University of Ljubljana, Faculty of Civil and Geodetic Engineering

## INFORMATION ABOUT THE STUDY PROGRAMME

### 1. Basic data

Programme name	<b>Construction Management</b>
Programme characteristics	
Type	professional bachelor degree
Cycle	1 <sup>st</sup> cycle
KLASIUS-SRV	Professional higher education (first cycle Bologna)/professional higher education (first cycle Bologna) (16203)
ISCED	<ul style="list-style-type: none"> <li>• architecture, urbanism and civil engineering (58)</li> </ul>
KLASIUS-P	<ul style="list-style-type: none"> <li>• Civil Engineering (not specified in detail) (5820)</li> <li>• Materials and structures (5821)</li> <li>• Construction management (5822)</li> <li>• Traffic structures (5823)</li> </ul>
KLASIUS-P-16	<ul style="list-style-type: none"> <li>• Building and civil engineering (0732)</li> </ul>
Frascati	<ul style="list-style-type: none"> <li>• Technical sciences (2)</li> </ul>
Level SOK	Level SOK 7
Level EOK	Level EOK 6
Level EOVK	First cycle
Areas/modules/orientations	<ul style="list-style-type: none"> <li>• No subdivision (study programme)</li> <li>• Structures (module)</li> <li>• Organisation (module)</li> <li>• Traffic (module)</li> </ul>
Member of University of Ljubljana	<ul style="list-style-type: none"> <li>• Faculty of Civil and Geodetic Engineering, Jamova 2, 1000 Ljubljana, Slovenia</li> </ul>
Duration (years)	3
Number of ECTS per year	60
Implementation of study	full time, part-time

### 2. Basic goals of the programme

- Educating graduates to acquire extensive general basic knowledge from the area of civil engineering, important for independent work in practice and at the same time some basic knowledge from the areas that facilitate their search for job.
- To allow students to get practical experiences from civil engineering in the beginning as well as during the study.
- To offer students a programme with elective contents that offer more detailed insight into some practical skills from the area of civil engineering and the related knowledge areas within the faculty and the university.
- To allow students to change to related first cycle study programmes and to continue with second cycle study, by taking into account the conditions foreseen by this programme.
- To allow international comparability and possibilities of changing study programmes by harmonising the study programme with the guidelines from the renewed study programmes according the Bologna Declaration based on which graduates can continue their second cycle studies in Europe and find job within the European Union.
- To increase progression of students and provide better quality by introducing regular study, with the development of general tutorship by students and teachers as well as tutorship for specific courses.
- To assure harmonisation of the programme with minimum requirements set out by the Association FEANI and thus programme accreditation for the EUR ING title.

Students acquire the necessary basic knowledge from fundamental natural and IT courses, basic knowledge from the fundamental courses of civil engineering and basic knowledge from professional civil engineering courses. Within elective courses in the second and third year, students may specialise and start preparing for further study according to the programmes of second cycle.

Within the study, students acquire traditional knowledge upgraded with the latest achievements, delivered in a contemporary manner with modern technology. They learn about all specifics of Slovenia and Europe as a consequence of special historic, social-economic or geographic characteristics. By working in groups, within a project

work and theme tasks they get accustomed to team work, public presentation and working with customers. With practical work in the field and in laboratories the graduates acquire the necessary skills to work in civil engineering.

To strengthen the acquired professional skills, the programme foresees continuous practical work and four-week practical training in construction and similar companies, representing also the target employment areas. Students finish the study with a thematically oriented and applicative diploma work.

The result of the programme with such structure is graduates with extensive theoretic and detailed professional knowledge, with competences to perform independent tasks from the area of civil engineering in Slovenia and in Europe.

### 3. General competences

With the study of Construction Management students acquire general competences such as:

- basic knowledge from the area of civil engineering,
- ability to use knowledge in practice,
- ability to be autonomous in professional work,
- development of communication skills and abilities, especially communication in international environment,
- taking into account safety, functional, economic, environmental and ecologic aspects of work,
- ability to learn,
- ability to take decisions,
- oral and written communication skills in the Slovenian language,
- basics of computer science,
- ethic reflection and commitment to professional ethics,
- knowledge of a foreign language,
- cooperative skills, abilities to work in a group and in international environment.

### 4. Course-related competences

With the study of Construction Management students acquire mainly course-related competences such as:

- professional knowledge from the area of civil engineering: mainly from the field of design, organisation, management and regulation of construction works and construction manufacturing, computer-aided design, ecology, spatial planning and environmental issues,
- independent design of individual structural elements,
- understanding interdependencies between technical and environmental problems and the ability to conceive and design environment-friendly building structures,
- performing specific less demanding tasks from the area of civil engineering for independent and team work as well as cooperation in managing existing technological procedures of the activities described in the first paragraph,
- recognizing, formulating and solving realistic, generally typical work problems by using different procedures,
- managing basic knowledge from the area of civil engineering (natural sciences, mathematics, information science, mechanics, building materials) and ability to connect knowledge with different areas and applications,
- application of knowledge in specialised areas of civil engineering (structures, traffic, hydraulics, construction management),
- development of skills and abilities in using knowledge from the area of civil engineering,
- knowledge and understanding of the basics and historic development of civil engineering,
- understanding general structure of the basic discipline and its link with sub-disciplines,
- application of information-communication technology and systems, most frequently used in civil engineering practice.

### 5. Conditions for enrolment

To enrol to the professional bachelor degree programme Construction Management the candidates are required to:

- a) pass school-leaving exam in a four-year secondary school programme;
- b) professional matura exam;
- c) or matura exam.

Candidates also meet the criteria for enrolment, if they finish education of the same level abroad.

## 6. Selection criteria when enrolment is restricted

In case of restricted enrolment, candidates will be selected according to:

- general success in school-leaving exam or (professional) matura exam 60 %
- general success in the 3<sup>rd</sup> and the 4<sup>th</sup> year 40 %.

## 7. Criteria for recognising knowledge and skills acquired before enrolment in the programme

Knowledge conforming in contents and scope to the contents of the courses in the programme Construction Management may be acknowledged. The recognition of knowledge and skills acquired before the enrolment is subject to the decision by the Study Board of the Department of Civil Engineering of UL FGG based on student's written application, certificates and other documents that prove successful acquisition of knowledge and the contents of the knowledge, and in accordance with the Rules on procedure and criteria for the recognition of informally acquired knowledge and skills, adopted at the 15<sup>th</sup> meeting of the Senate of UL, 29.5.2007.

Based on the approval of the acquired knowledge by the departmental Study Board, the knowledge will be evaluated with the same number of ECTS credit points as defined for the related course.

## 8. Methods of assessment

The assessment methods are in accordance with [the Statute of University of Ljubljana](#) and listed in the Course Syllabi.

## 9. Conditions for progression through the programme

### Conditions for progression from one year to another

Students are allowed to enrol to the second study year after completing by the end of the academic year all the obligations foreseen by the study plan thus achieving 60 credit points according to ECTS. Students may enrol to the third study year after completing by the end of the academic year the obligations foreseen by the study plan and achieving at least 54 credit points according to ECTS.

Exceptionally, students may apply for enrolment to the next study year, if they complete all mandatory contents according to the study programme and achieve at least 45 credit points in the current year and gives evidence of justified reasons. Justified reasons are defined by the UL Statute. Exceptional enrolment is the course of the decision by the Study Board of the Department of Civil Engineering at UL FGG.

Faculty of Civil and Geodetic Engineering has been offering tutorship and supervision for its students for several years. Students are offered mentors of individual years from the very first year of study, and smaller groups of students have individual tutors who will either be academic staff members or higher year students who will help their protégés in choosing study orientations, elective courses etc.

Students with above-average study results are allowed to advance at a faster rate. An adequate decree thereof shall be adopted by the UL FGG Senate based on a candidate's application and on opinion of the UL FGG Study Board. The decree also defines the principles of faster advancement.

### Conditions for repeated enrolment in the same year

Failing to meet all the obligations defined by the study programme for the advancement in the next year, students may enrol in the same year for the second time. They are entitled to the repeated enrolment only once for the duration of the study, provided that they achieve at least 30 credit points according to ECTS.

## 10. Transfers between study programmes

Transfer between programmes shall mean termination of education in the student's original study programme (first programme) and continuation of education in the first cycle professional study programme of Construction Management (second programme), in which a part of the completed study requirements from the first study programme are recognised as completed.

Transfers are possible from the first cycle study programmes, and until their expiration also from the undergraduate study programmes adopted after June 11 2004, where the competences of the finished studies are comparable and according to the acknowledgement criteria at least half of the obligations according to ECTS from the first study programme related to compulsory courses of the second study programme can be acknowledged. Considering the scope of acknowledged obligations from the first study programme in the Republic of Slovenia or abroad student may enrol to the same or higher year in the second study programme. Transferring students shall fulfil the conditions for the enrolment to the second study programme.

Applications of candidates for the transfer to the first cycle in the first cycle professional study programme Construction Management and the scope of acknowledged obligations in the study programme will be examined individually by the Study Board of the Department of Civil Engineering. If in the procedure of acknowledging obligations for the purpose of transfer the candidate is approved at least the amount of credit points and those point that are required for the enrolment to a higher year of the first cycle professional study programme Construction Management, the candidate may enrol to the higher year of the first cycle professional study programme Construction Management.

### **11. Conditions for completion of the study**

Students finish the study by accomplishing the foreseen obligations totalling 180 credit points according to ECTS, including practical training and diploma thesis.

### **12. Conditions for completion of individual parts of the programme**

The Study is uniform.

### **13. Qualification, professional or academic title (male)**

- diplomirani inženir gradbeništva (VS)  
(first cycle graduate in civil engineering)

### **14. Qualification, professional or academic title (female)**

- diplomirana inženirka gradbeništva (VS)  
(first cycle graduate in civil engineering)

### **15. Qualification, professional or academic title (abbreviation)**

- dipl. inž. grad. (VS)

## STUDY PROGRAMME COURSES WITH FOORSEEN COURSE COORDINATORS

### 16. No subdivision (study programme)

#### 1<sup>st</sup> year, mandatory

	Code	Course title	Lecturers	Contact hours					Independent work	Total hours	ECTS	Semester	Elective
				Lectures	Seminar	Seminar tutorials	Laboratory tutorials	Other work					
1.	964	Physics	Jure Kokalj	45	15	30	0	0	90	180	6	Winter	no
2.	973	Engineering Communication	Tomo Cerovšek	30	0	0	15	0	45	90	3	Winter	no
3.	965	Engineering Mathematics I	Gašper Jaklič, Ganna Kudryavtseva	45	0	45	0	0	90	180	6	Winter	no
4.	966	Municipal Economics and Construction Legislation	Maruška Šubic-Kovač	30	0	30	0	0	60	120	4	Winter	no
5.	968	Buildings	Mitja Košir	60	15	0	45	0	120	240	8	Winter	no
6.	963	Introduction to Civil Engineering		45	0	0	0	0	45	90	3	Winter	no
7.	967	Geodetic Engineering	Dušan Kogoj	30	0	0	15	0	45	90	3	Summer	no
8.	974	GIS and Spatial Records	Marijan Žura	15	15	15	0	0	45	90	3	Summer	no
9.	971	Construction and Building Materials	Violeta Bokan-Bosiljkov, Vlatko Bosiljkov	45	0	0	45	0	90	180	6	Summer	no
10.	970	Hydromechanics and Hydraulics	Franc Steinman, Matjaž Četina	45	15	0	30	0	90	180	6	Summer	no
11.	972	Computer Science	Matevž Dolenc, Vlado Stankovski	30	15	0	15	0	60	120	4	Summer	no
12.	969	Statics	Igor Planinc	60	0	60	0	0	120	240	8	Summer	no
		<b>Total</b>		<b>480</b>	<b>75</b>	<b>180</b>	<b>165</b>	<b>0</b>	<b>900</b>	<b>1800</b>	<b>60</b>		

**2<sup>nd</sup> year, mandatory**

	Code	Course title	Lecturers	Contact hours					Independent work	Total hours	ECTS	Semester	Elective
				Lectures	Seminar	Seminar tutorials	Laboratory tutorials	Other work					
1.	997	Engineering Mathematics II	Marjeta Kramar Fijavž, Gašper Jaklič	45	0	30	0	0	75	150	5	Winter	no
2.	998	Fundamentals of Soil Mechanics	Matej Maček, Vladimir Vukadin	45	0	0	25	5	75	150	5	Winter	no
3.	999	Surface Drainage	Mario Krzyk, Simon Rusjan	30	15	15	0	0	60	120	4	Winter	no
4.	1005	Design and Construction of Roads	Peter Lipar	45	0	0	45	0	90	180	6	Winter	no
5.	1001	Strength of Materials	Dejan Zupan	60	0	45	0	0	105	210	7	Winter	no
6.	1271	Elective course		15	15	15	0	0	45	90	3	Winter	yes
7.	1002	Geotechnical Constructions	Boštjan Pulko	60	10	0	45	5	120	240	8	Summer	no
8.	1544	Timber Structures	Drago Saje, Jože Lopatič	30	0	30	0	0	60	120	4	Summer	no
9.	1004	Fundamentals of Concrete and Masonry Structures	Tatjana Isaković	60	0	60	0	0	120	240	8	Summer	no
10.	1000	Structural Analysis	Matija Gams, Tatjana Isaković	30	0	30	0	0	60	120	4	Summer	no
11.	1574	Elective course		45	0	45	0	0	90	180	6	Summer	yes
		Total		465	40	270	115	10	900	1800	60		

**3<sup>rd</sup> year, mandatory**

	Code	Course title	Lecturers	Contact hours					Independent work	Total hours	ECTS	Semester	Elective
				Lectures	Seminar	Seminar tutorials	Laboratory tutorials	Other work					
1.	1143	Concrete Objects	Jože Lopatič, Sebastjan Bratina	30	0	30	0	0	60	120	4	Winter	no
2.	1144	Organisation and Management of Construction Works	Jana Šelih	45	0	45	0	0	90	180	6	Winter	no
3.	1546	Fundamentals of Steel Structures	Jože Korelc, Leon Hladnik	45	15	45	0	0	105	210	7	Winter	no
4.	1545	Technological Processes	Andrej Kryžanowski, Igor Planinc	30	0	45	0	0	75	150	5	Winter	no
5.	1272	Elective course		30	0	0	30	0	60	120	4	Winter	yes
6.	1768	Module course 1		30	0	0	30	0	60	120	4	Winter	yes
7.	1145	Practical Training (4 weeks)	Andreja Istenič Starčič	6	0	0	0	160	74	240	8	Summer	yes
8.	1538	Diploma Work		0	0	0	0	150	150	300	10	Summer	yes
9.	1768	Module course 2		30	0	0	30	0	60	120	4	Summer	yes
10.	1768	Module course 3		30	0	0	30	0	60	120	4	Summer	yes
11.	1768	Module course 4		30	0	0	30	0	60	120	4	Summer	yes
		Total		306	15	165	150	310	854	1800	60		



**Elective courses**

	Code	Course title	Lecturers	Contact hours					Independent work	Total hours	ECTS	Semester	Elective
				Lectures	Seminar	Seminar tutorials	Laboratory tutorials	Other work					
1.	1270	Fire resistance of Structures	Tomaž Hozjan	45	0	30	0	0	75	150	5	Summer, Winter	yes
		Total		45	0	30	0	0	75	150	5		

**Structures (module)****3<sup>rd</sup> year, mandatory**

	Code	Course title	Lecturers	Contact hours					Independent work	Total hours	ECTS	Semester	Elective
				Lectures	Seminar	Seminar tutorials	Laboratory tutorials	Other work					
1.	1147	Fundamentals of Earthquake Engineering	Matjaž Dolšek	30	0	0	30	0	60	120	4	Winter	yes
2.	1148	Bioclimatic Buildings	Mitja Košir	30	0	0	30	0	60	120	4	Summer	yes
3.	1149	Steel Buildings	Leon Hladnik	30	0	0	30	0	60	120	4	Summer	yes
4.	1150	Computer-Aided Design of Structures	Matija Gams, Tatjana Isaković	30	0	0	30	0	60	120	4	Summer	yes
5.	1151	Concrete Bridges	Jože Lopatič	30	0	0	30	0	60	120	4	Summer	yes
		Total		150	0	0	150	0	300	600	20		

## Organisation (module)

### 3<sup>rd</sup> year, mandatory

				Contact hours									
	Code	Course title	Lecturers	Lectures	Seminar	Seminar tutorials	Laboratory tutorials	Other work	Independent work	Total hours	ECTS	Semester	Elective
1.	1154	Quality Assurance and Quality Control	Jana Šelih	30	0	30	0	0	60	120	4	Winter	yes
2.	1155	Fundamentals of Economics in Civil Engineering	Jana Šelih, Primož Banovec	30	0	30	0	0	60	120	4	Summer	yes
3.	1153	Project Planning and Management	Aleksander Srdić	30	0	30	0	0	60	120	4	Summer	yes
4.	1152	Building Land Development and Valuation	Maruška Šubic-Kovač	30	0	30	0	0	60	120	4	Summer	yes
Total				120	0	120	0	0	240	480	16		

## Traffic (module)

### 3<sup>rd</sup> year, mandatory

				Contact hours									
	Code	Course title	Lecturers	Lectures	Seminar	Seminar tutorials	Laboratory tutorials	Other work	Independent work	Total hours	ECTS	Semester	Elective
1.	1157	Traffic	Tomaž Maher	30	0	0	30	0	60	120	4	Winter	yes
2.	1156	Geotechnics of Traffic Structures	Janko Logar	30	0	0	30	0	60	120	4	Summer	yes
3.	1158	Intelligent Transportation Systems	Tomaž Maher	30	0	0	30	0	60	120	4	Summer	yes
4.	1159	Design and Construction of Railways	Bogdan Zgonc	30	0	0	30	0	60	120	4	Summer	yes
Total				120	0	0	120	0	240	480	16		

## **17. Possibilities of elective courses and mobility**

Elective courses are foreseen: one in the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> semester (3 ECTS, 6 ECTS and 4 ECTS, respectively) and elective modules in the 5<sup>th</sup> and 6<sup>th</sup> semester (16 ECTS). Among elective courses from UL FGG, students are recommended to select courses also from other modules of this programme and from other study programs of UL FGG. External elective courses may be selected anywhere.

Student may transfer 30 ECTS points of the programme (one study semester, regardless of mandatory and elective units) from any other area of civil engineering, provided there exists an adequate agreement signed with UL FGG.