Univerza v Ljubljani
Fakulteta za gradbeništvo in geodezijo

Presentation of the study programme

1st CYCLE PROFESSIONAL BACHELOR DEGREE PROGRAMME

GEODETIC ENGINEERING AND REAL ESTATE MANAGEMENT (BA)

Valid from 2025/2026 | Valid study programme at 29/01/2025

University of Ljubljana, Faculty of Civil and Geodetic Engineering

INFORMATION ABOUT THE STUDY PROGRAMME

1. Basic data

Programme name	**Geodetic Engineering and Real Estate Management**
Programme characteristics	
Type	professional bachelor degree
Cycle	1st cycle
KLASIUS-SRV	Professional higher education (first cycle Bologna)/professional higher education (first cycle Bologna) (16203)
ISCED	• architecture, urbanism and civil engineering (58)
KLASIUS-P	• Geodesy and cartography (5813)
Frascati	• Technical sciences (2)
Level SOK	Level SOK 7
Level EOK	Level EOK 6
Level EOVK	First cycle
Areas/modules/orientations	• No subdivision (study programme)
Member of University of Ljubljana	• Faculty of Civil and Geodetic Engineering, Jamova 2, 1000 Ljubljana, Slovenia
Duration (years)	3
Number of ECTS per year	60
Implementation of study	full time, part-time

2. Basic goals of the programme

The basic goal of the Professional Bachelor Degree Programme Geodetic Engineering and Real Estate Management is to train expert with professional quality skills and fundamental theoretical and mostly practical knowledge in the fields of geodesy and real estate management. Geodetic Engineering and Real Estate Management

Acquired knowledge:
- enables graduate quick and effective involvement in the work at the time of first employment,
- is a basis for independent follow-up of the profession in the context of lifelong learning,
- is an appropriate basis for the study of geodesy and geoinformation at the second cycle,
- enables transition between related study programmes,
- ensures European comparability of achieved education.

3. General competences

General competences acquired by the graduate of the Geodetic Engineering and Real Estate Management are:
- the ability of defining, understanding in solving applied problems in the fields of geodesy and real estate management,
- the ability to critically assess concrete solutions,
- professional technical, environmental and social responsibility,
- the ability of professional written and oral communication,
- the ability to use selected information technologies in the fields of geodesy and real estate management,
- the ability to connect with other professionals and work in a team with experts from various fields,
- the ability to manage a small geodetic company.

4. Course-related competences

With the programme Geodetic Engineering and Real Estate Management, the graduate acquires mainly the following course- related specific competences:

- knows the role and importance of real estate management in sustainability-oriented society with support of geodesy and geoinformation,
- independently solves all types of typical practical tasks in the field of data recording and less complex real estate rearrangements,

- understands and makes professional use of contemporary geodetic technologies and methodologies to the benefit of creating and maintaining data bases,
- records boundaries of private properties and boundaries of other rights on real estate,
- evaluates real estate market values,
- records and maintains data bases for the needs of real estate taxation,
- knows and interprets the meaning, form, quality, sources, acquisition and maintenance of spatial data for the needs of urban and rural spatial planning and definition of land use,
- takes part in the preparations of spatial acts,
- takes part in planning, design and implementation of interventions into space,
- develops geodetic works:
    - in detailed surveying,
    - in the construction of less complex structures,
    - within legal procedures for the needs of real estate recording,
- maintains land information systems,
- understands cartographic presentations of spatial data,
- cooperates with investors, designers and contractors in interventions into space,
- knows the bases of legal and administrative system important for surveyor as well as for managing and recording space,
- is aware of the importance of the principles of sustainability in the planning and execution of geodetic and construction works, as well as the sustainable management of space and natural resources.

5. Conditions for enrolment

To enrol to the professional bachelor degree programme Geodetic Engineering and Real Estate Management, candidates are required to:

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

6. Selection criteria when enrolment is restricted

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

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

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

Knowledge conforming in contents and scope the contents of the courses in the professional first cycle bachelor degree programme Geodetic Engineering and Real Estate 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 Geodetic 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 15th meeting of the UL Senate, May 29, 2007.

For the acknowledgement of knowledge and skills, the following is considered:

- certificates and other documents evidencing finished courses and other forms of education,
- evaluation of products, services, publications and other own works of students,
- evaluation of knowledge acquired by the student with individual education or empirical learning (possibility of performing study obligations without participation at lectures, tutorials, seminars),
- adequate work experiences are taken into account.

Shall the Study Board of the Department of Geodetic Engineering, UL FGG, establish that the acquired knowledge can

be acknowledged, this is evaluated with the same number of ECTS points as the number of ECTS points of the 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 and achieving 52 credit points according to ECTS. Students are allowed to enrol to the third study year after completing by the end of the academic year all the obligations foreseen by the study plan and achieving at least 50 credit points according to ECTS.

Exceptionally, a student can apply for enrolment in a next study year if he has completed compulsory subjects in accordance with the study programme and has reached at least 45 credit points of the current year and has justified reasons. Eligible grounds are determined in accordance with the UL Statute. The exceptional enrolment is decided by the Study Board of the Department of Geodesy, UL FGG.

Faculty of Civil and Geodetic Engineering has been offering tutorship and supervision for its students for several years. From the first year onwards students shall have mentors of each class, while smaller groups of students will also have individual tutors – teachers and students from higher years, who will help them select orientation, 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 Geodetic Engineering and Real Estate 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 professional study programme Geodetic Engineering and Real Estate Management and the scope of acknowledged obligations in the study programme will be examined individually by the Study Board of the Department of Geodesy. 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 Geodetic Engineering and Real Estate Management, the candidate may enrol to the higher year of the first cycle professional study programme Geodetic Engineering and Real Estate 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 geodezije (VS)
  (first cycle graduate in geodesy)

14. Qualification, professional or academic title (female)

- diplomirana inženirka geodezije (VS)
  (first cycle graduate in geodesy)

15. Qualification, professional or academic title (abbreviation)

- dipl. inž. geod. (VS)

STUDY PROGRAMME COURSES WITH FOORSEEN COURSE COORDINATORS

1st year, mandatory

				Contact hours									
	Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other study forms	Independent work	Total hours	ECTS	Semester	Elective
1.	983	Surveying	Miran Kuhar, Tomaž Ambrožič	60	0	0	60	0	120	240	8	Winter	no
2.	1589	Infrastructural objects	Dušan Žagar, Simona Savšek	30	0	30	0	0	60	120	4	Winter	no
3.	986	Engineering mathematics I	Gašper Jaklič, Nik Stopar	45	0	45	0	0	90	180	6	Winter	no
4.	1596	Software in real estate management	Dejan Grigillo, Samo Drobne	30	0	0	45	0	75	150	5	Winter	no
5.	1599	Legislation on real property management	Gregor Dugar, Marjan Čeh	30	0	30	0	0	60	120	4	Winter	no
6.	1046	Statistics with elements of informatics	Samo Drobne	45	0	30	0	0	75	150	5	Winter	no
7.	988	Cartography and topography	Dušan Petrovič	45	0	45	0	0	90	180	6	Summer	no
8.	1597	Development and planning in space	Mojca Foški	45	0	0	60	0	105	210	7	Summer	no
9.	1598	Terrestrial detail surveying	Simona Savšek	45	0	0	60	0	105	210	7	Summer	no
10.	1594	Analysis of survey measurements I	Bojan Stopar	30	0	30	0	0	60	120	4	Summer	no
11.	1659	Economics and organization of surveying	Marko Hočevar, Marjan Čeh	30	0	30	0	0	60	120	4	Summer	no
		Total		435	0	240	225	0	900	1800	60		

2nd year, mandatory

				Contact hours									

	Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other study forms	Independent work	Total hours	ECTS	Semester	Elective
1.	1591	Engineering mathematics II	Gašper Jaklič, Marjeta Kramar Fijavž	45	0	30	0	0	75	150	5	Winter	no
2.	1658	Analysis of survey measurements II	Bojan Stopar	30	0	30	0	0	60	120	4	Winter	no
3.	1739	Programming and data processing	Krištof Oštir, Matevž Dolenc	45	0	0	45	0	90	180	6	Summer	no
4.	1187	Satellite supported geodetic survey	Miran Kuhar, Polona Pavlovčič Prešeren	45	0	0	45	0	90	180	6	Winter	no
5.	1660	Remote sensing and photogrammetry	Dejan Grigillo	45	0	0	60	0	105	210	7	Winter	no
6.	1041	Geodetic instruments and methods	Tomaž Ambrožič	45	0	0	45	0	90	180	6	Summer	no
7.	1043	Geographic information systems	Marjan Čeh, Samo Drobne,	45	15	60	0	0	120	240	8	Winter	no
8.	1044	Real property cadastres	Marjan Čeh	60	0	0	60	0	120	240	8	Summer	no
9.	1272	Elective course I (FGG or external)		30	0	30	0	0	60	120	4	Summer, Winter	yes
10.	1047	Practical training	Matevž Dolenc, Simona Savšek	6	0	0	0	120	54	180	6	Summer	no
		Total		396	15	150	255	120	864	1800	60		

3rd year, mandatory

				Contact hours									
	Code	Course title	Lecturers	Lectures	Seminar	Tutorials	Clinical tutorials	Other study forms	Independent work	Total hours	ECTS	Semester	Elective
1.	1683	Building land management and valuation	Daniel Kozelj, Maruška Šubic-Kovač	30	15	30	0	0	75	150	5	Winter	no
2.	1186	Methods of spatial analyses in GIS	Samo Drobne	30	15	0	30	0	75	150	5	Winter	no
3.	1042	Geodesy for building construction	Božo Koler	45	0	0	45	0	90	180	6	Winter	no
4.	1189	Reference systems in geodesy	Miran Kuhar	45	0	30	0	0	75	150	5	Winter	no
5.	1272	Elective course II (FGG)		30	0	30	0	0	60	120	4	Summer, Winter	yes
6.	1273	Elective course III (FGG or external)		45	0	30	0	0	75	150	5	Summer, Winter	yes
7.	1684	Detailed urban planning	Gregor Čok	45	0	30	0	0	75	150	5	Summer	no
8.	1188	Land management	Marjan Čeh, Anka Lisec	45	0	0	30	0	75	150	5	Summer	no
9.	1693	Field work	Tomaž Ambrožič	0	0	0	0	105	105	210	7	Summer	no
10.	1273	Elective course IV (FGG)		45	0	30	0	0	75	150	5	Summer, Winter	da
11.	1694	Diploma work		0	0	0	0	120	120	240	8	Summer	no
		Together		360	30	180	105	225	900	1800	60		

Elective courses

				Contact hours									
	Lectures	Seminar	Lectures	Lectures	Seminar	Tutorials	Clinical tutorials	Other study forms	Independent work	Total hours	ECTS	Semester	Elective
1.	1204	Topographic photogrammetry	Dejan Grigillo	30	0	0	30	0	60	120	4	Summer, Winter	yes
2.	1206	Mass valuation of real properties in GIS	Marjan Čeh	30	0	30	0	0	60	120	4	Summer, Winter	yes
3.	1208	Standards in geodesy and engineering	Simona Savšek, Polona Pavlovčič Prešeren	15	30	15	0	0	60	120	4	Summer, Winter	yes
4.	1213	Measurements of higher accuracy	Aleš Marjetič	30	15	0	30	0	75	150	5	Summer, Winter	yes
5.	1212	Location-based services	Bojan Stopar, Dušan Petrovič, Samo Drobne	30	15	0	30	0	75	150	5	Summer, Winter	yes
6.	1205	Housing and municipal economics	Daniel Kozelj, Maruška Šubic-Kovač	30	0	30	0	0	60	120	4	Summer, Winter	yes
7.	1606	Environmental protection and spatial planning	Mojca Foški	30	0	30	0	0	60	120	4	Summer, Winter	yes
8.	1209	Applied remote sensing	Krištof Oštir	30	0	30	0	0	60	120	4	Summer, Winter	yes
9.	1049	Engineering surveying	Božo Koler	45	0	0	30	0	75	150	5	Summer, Winter	yes
10.	1607	Agrarian land operations	Marjan Čeh, Anka Lisec	45	0	0	30	0	75	150	5	Summer, Winter	yes
11.	1608	Cartographic reproduction	Dušan Petrovič	30	0	0	30	0	60	120	4	Summer, Winter	yes
		Total		345	60	135	180	0	720	1440	48		

16. Possibilities of elective courses and mobility

Elective courses are foreseen: one in 4th semester (5 ECTS), two in 5th semester (4 ECTS each) and one in 6th semester (5 ECTS). The study programme proposes 10 elective professional courses (Topographic Photogrammetry, Residential and Municipal Economics, Mass Real Estate Valuation in GIS, Environmental Protection and Environmental Ethics, Standards in Geodesy and Engineering, Applicable Remote Sensing, Geodesy in Engineering, Cadastral Land Development, Location-based Services, Surveying of Increased Precision and Sports Education). Among other elective courses from UL FGG, students are recommended to select courses from traffic infrastructure and hydrology. Among external elective courses from other faculties, members of UL, other universities and higher education institutions in Slovenia or abroad, especially the contents from the areas of law or real estate legislation, economy or real estate management, administration, communicology, computer science, foreign language, etc., are recommended.

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