

PRESENTATION INFORMATION PUBLICATION

1ST CYCLE UNIVERSITY STUDY PROGRAMME

URBANISM



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UNIVERSITY OF LJUBLJANA,
FACULTY OF ARCHITECTURE

LJUBLJANA, 2013

THE FACULTY

»The Faculty of Architecture in Ljubljana is generally considered one of the best Central European schools of architecture. Confirmation of its quality comes from numerous successful students and graduates, often achieving enviable Results domestically and abroad.«
(P. Gabrijelčič)

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Department of architectural design
Department of urbanism
Department of presentation techniques
Department of composition and design
Department of structures
Department of organisation, technology, management, computer science
Department of history and theory
Institute of architecture and space
Doctoral school of architecture

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1. A short presentation of the Faculty of architecture University of Ljubljana (UL FA) and the First cycle study programme Urbanism

The Ljubljana school of architecture has a long tradition; it is only a year younger than the University of Ljubljana. Its founder was Ivan Vurnik but it was notably marked by Jože Plečnik and later by architect Edvard Ravnikar. These two names made it renowned throughout Europe and the world.

Urbanism is traditionally linked to architecture which belongs to the group of European regulated professions. In most European countries, schools of architecture are the central schools for teaching urbanism. That is why the study of urbanism as an important discipline has always been, by the nature of the course itself, linked to the study of architecture, because it adheres to the rule of the profession, as the famous professor Aldo Rossi says: "The city is architecture (of) architectures and urbanism is only a larger arena of classical architectural tasks."

In Ljubljana, the study of architecture has always been connected to urbanist topics, be it through the first teachers, Plečnik and Vurnik, or later even more so through Ravnikar and his students. The more general urbanistic topics were later joined by interdisciplinary studies of spatial planning at the Faculty of Civil and Geodetic Engineering (UL FGG) and the study of Landscape Architecture at the Biotechnical Faculty (UL BF). In 1984, a new study programme was introduced at the Faculty of Architecture, which implemented a trend towards architecture, urbanism and design. In 1999, postgraduate specialist studies of urbanist planning were organized.

With the transition to the Bologna study system and the adjustment of the Faculty of Architecture's study programme to the requirements of the European Directive of Regulated Professions in 2007, the Faculty had to cancel both study programmes. For this reason, we want the new programme of urbanistic planning and design to fill the void, because the

Ljubljana Faculty of Architecture has been until now the only institution in Slovenia which has taught for the profession of architect-urbanist, whose knowledge and tasks place the professional between the levels of architect and space designer-planer. The existing personnel void is even more detrimental for Slovenia, because the profile of architect-urbanist (town architect) has received new professional competencies in accordance with the new legally defined tasks, and through these architect-urbanists will sharpen their personal professional responsibility when creating and changing spatial policies of municipalities as basic territorial units.

For this purpose, graduates of both levels will have to obtain complex knowledge or general awareness about theoretical and practical aspects of urban planning and design, about planning methods, the legal basis for space arrangements, elements of action planning and strategic evaluation, about the basics of municipal and housing economy, and in-depth knowledge of the public sector operations, from the national level to local levels to the corporate public services. They will need to acquire knowledge about the basics of project and quality management, and, last but not least, master the basics and techniques of urbanistic design, planning and projecting. The role of the proposed programme in the economic and cultural development of the country is evident, because according to the wording of the European directive, 'urbanism, much like architecture, architectural design, quality of buildings, their harmony with the environment, respect for natural and cultural landscape' is a matter of 'public interest' in all European countries.

1.1 international cooperation of the University of Ljubljana Faculty of architecture

University of Ljubljana Faculty of Architecture cultivates competencies in the field of architecture, urbanism and design. The Institute of architecture, which operates at the faculty, performs fundamental research within the above mentioned fields and also in the field

of landscaping and preserving the natural and cultural heritage. In Slovenia, the research programme is directly included into research of spatial development, and in the international arena, it is connected to various research projects and programmes. Faculty of Architecture is a member of European Association for Architectural Education (EAAE). Numerous FA employees are members of the following international associations: ICOMOS (International Council on monuments and Sites), DOCOMOMO (Documentation and conservation of modern Movement Architecture), IAHS (The International Association for Housing Science).

In the field of research work, FA deals with contents connected to architecture, which is testified by the following research programme of RO Institute for the Environment and Spatial Planning: Interdisciplinary Centre of Vernacular Architecture EU in Ljubljana: Programme, Contents, Theoretic Framework of the Institution (2007-2010). The Introduction of Progressive Technologies for Increased Security in the Architecture of Modern Housing Buildings (2007-2010), Education on Built Environment for Sustainable Development of Slovenia (2008-2009), To Efficient Transmission of Eco-Architectural Values to General Public (2004-2006) and many others. Within the framework of UL FA the following laboratories of knowledge operate: Passive House Consortium, FA Lights Laboratory, Industrial Architecture Heritage of the 20th Century (more on <http://sicris.izum.si/>)

Faculty of Architecture cooperates in a number of research programmes; national, European etc. (Fifth and sixth framework programme, Interreg. Scheme Tempus/Phare... Selection of projects includes mainly those results, which represent direct professional grounds for reform of high education study programme.

Faculty of architecture in 2013, participates in the following international projects:

(more on page <http://www.fa.uni-lj.si/default.asp?id=2422>)

–ADAPTr – Architecture, Design and Art Practice Training – Research, (7th FP) (2013-2016).

–RESEARCH – Restructuring of Study Programme in Architecture to Long-cycle Integrated Master in Line with EU Standards, Tempus (2012-2015).

–WaRe – Waterfront regeneration, program LLP - Grundtvig(2011-2013).

–ATRIUM – Architecture of Totalitarian Regimes of the XXth Century in Urban Management, program: SEE (JVE) (2011-2013).

–STRAIGHTSOL – Strategies and measures for smarter urban freight solutions, program 7FP(2011-2014).

–KC-TIGR –Competence Centre sustainable and innovative construction, ERDF(2010-2013).

1.1.1 International students mobility

(more on page <http://www.fa.uni-lj.si/default.asp?id=2320>)

The mobility of all kinds of students (promotion and performance) at our faculty is in the capable hands of the Erasmus coordinator. The mobility is possible from the second year onwards, and takes place mainly through Erasmus LLP programmes; exchanges and practical training. The number of exchanges through Mundus programmes is also increasing, in the past, some exchanges were made through the EAA and Norwegian financial mechanism; some exchanges were financed by participants themselves.

Senior students are the most mobile, because they have already completed the majority of their obligations (less pressure to collect credits for advancing to the next year), they have more knowledge; they feel more at home in their field and find it easier to become part of foreign systems. The most numerous are requests to recognize the main subject, project engineering, and elective subjects, and compulsory subjects are more specific, where some lecturers do not recognize the subject as complete, but only recognize course obligations as partially completed.

2. Information about the study programme

The duration of the First cycle university study programme Urbanism is 3 years (6 semesters) and encompasses 180 credit points all together. The professional title received by the graduate is Bachelor of Architecture Urbanism (UN); abbreviation B Arch. Urb, (UN).

3. International comparison of the study programme

All compared foreign programmes are suitably accredited or recognised in the country in which they are provided.

1. Urban Design Master Program, Technische Universität Berlin, Germany ; <http://www.tu-berlin.de>
2. The Master's Programme in Architecture, Urbanism and Building Sciences, MSc track in Urbanism, University of Technology, Delft, The Netherlands; <http://www.tudelft.nl>
3. The MSc in Spatial Development and Infrastructure Systems, Eidgenössische Technische Hochschule (ETH) Zürich, Switzerland; http://www.ethz.ch/index_EN

In Slovenia, the need for a profile of architect-urbanist arises from the importance of urbanist design, quality of urbanist arrangements and their harmonisation with the environment, respect towards the natural and urban landscape, which is in the public interest. The profile of architect-urbanists will be in accordance with the new, legally defined tasks of the new professional jurisdiction. Through this the professional's personal professional responsibility for forming and monitoring spatial policies of the municipalities as basic territorial units will be honed.

The study programme of urbanism at TU Delft offers a wide array of opportunities for education of perspective urbanists, planners and spatial designers, and through this it achieves finding **new solutions**

for efficient and aesthetic spatial organization, taking into account the welfare, social and other processes which influence the design of urban space.

The study programme at TU Berlin educates students for work at universities and research institutions, and in local and state institution and private enterprises which deal with spatial development, urban renovation and urban planning, on different scales of measurements (neighbourhood, settlement, city, region, etc.).

ETH Zurich is an organization which is a part of Swiss Confederation and is aimed at education and research. At ETH the autonomy and identity is maintained through awareness and implementation of social, cultural and economic movement within the country.

4. Programme objectives and subject-specific competencies of graduates

4.1 Programme objectives

The programme educates an architect-urbanist. The programme's basic objective is to qualify professionals for less demanding tasks from the field of urbanistic planning and design, and spatial management. An architect-urbanist's responsibility comes from the meaning of urbanistic design, quality of urbanistic lay-outs, their harmony with the environment with respect to the natural and urban landscape, which is in public interest. Public interest regarding the quality of physical space is protected by the Slovene as well as the European legislation. The Slovene legislation determines conditions for an architect project engineer-urbanist, a supervisor, a reviser of planned spatial development, a spatial planner, a manager of spatial plan preparation, a municipal urbanist, a researcher, etc.

The profile of an architect urbanist is extremely complex, because architect-urbanists have to be capable of thinking about people and their spatial problems in most different criteria: from regional development criteria to architecture and vice versa.

They have to derive from modern theoretical and technological knowledge, upgrade it, and endeavour to find the balance between the functionally-technical and the artistic component of the urban creation. The educational profile of an architect urbanist combines knowledge from the technical, social science and humanistic fields, with additional components of capability to design and create space or build urbane structures.

Compliance with reference lines for sustainable balance of spatial development of Slovenia:
A quality designed space is a condition for the economic competency and European recognition of Slovenia. The role of the university education in the field of spatial planning (managing and designing) is of key importance for improving the quality of space of our urban landscape. The University arena (with its programmes) presents an innovative-experimental environment, which deals with the very essence of sustainably balanced spatial development. The programme of educating architect-urbanist takes into account the European Directive as well as Slovene construction and urbanistic legislation.

4.2 General competencies obtained from the programme

By studying at the First cycle university study programme Urbanism the student obtains general competencies, such as:

- basic knowledge from the field of urbanism and architecture,
- the ability to use the knowledge in practice,
- the development of communication abilities and skills, especially communication in the international environment,
- the consideration of sustainable safety, functional, economic, environmental and ecologic aspects when working,
- the ability to analyse, synthesize and anticipate solution and consequences,
- autonomy in professional work,

- ethic reflection and dedication to professional ethics,
- the ability to independently perform less demanding project tasks.

4.3 Subject-specific competencies, which are obtained by the programme, are based on the long standing tradition of the Ljubljana school of Architecture, which was founded as a department of the Construction Technical Engineering in 1920 and which guarantees its graduates to obtain:

- The skills and knowledge to create less demanding urbanistic projects which fulfil the functional, technical and aesthetic demands of the profession and modern sustainability oriented society.
- Suitable knowledge from the field of history of urbanism, and urbanistic and architectural theory, and theory of related arts, social science and technique.
- Broader knowledge of fine arts and their effect on the urban design.
- Suitable knowledge from the field of urban planning and project engineering, and knowledge which is necessary in the planning process.
- An understanding of the relationship between objects and their environment, and the relationship between people and built environment.
- An understanding of the profession and social function of architect-urbanist, especially when preparing project outlines, which have to take into account the broadest social factors.
- The knowledge of project approach for creating project outlines.
- The knowledge of spatial and construction plans and construction and technical problems, connected to planning space and objects and appliances in space.
- The needed knowledge from the field of urbanistic planning which guarantees compliance with users' demands within the framework of cost limitations and environmental, spatial and construction regulations.
- The knowledge of regulations and procedures from spatial and construction legislation.

5. Conditions for enrolment and selection criteria in the case of limited enrolment

The conditions for applying to the First cycle university study programme Urbanism are as follows:

- a) the candidate has to have passed the matura exam; or
- b) the candidate has to have passed the professional matura exam in any secondary school programme and has passed the mathematics matura exam, or foreign language exam if mathematics was part of their professional matura exam; or
- c) the candidate had completed any four year secondary school programme prior to June 1, 1995.

The number of enrolment places is 30 for full-time study and additional 15 for part-time study of the proposed First cycle university study programme Urbanism at UL FA.

All candidates must undergo a test for specific talent or psychophysical capabilities to study at the First cycle university study programme Urbanism. All candidates must pass the test of capabilities for studying at the First cycle university study programme Urbanism. Should the number of candidates exceed the number of enrolment places, the conditions for enrolment into the First cycle university study programme Urbanism are as follows:

- results of capability test (80% of points),
- general matura, professional matura or final exam results (10% of points),
- general outcome in 3rd and 4th year of secondary school (10% points).

5.1 Test of Capabilities

The specific talent or psychophysical capabilities test at the First cycle university study programme Urbanism tests the following: the ability to make logical conclusions, the ability of spatial perception, and expressing and understanding the problems of modern living.

5.2 Part-time study

The candidates for part-time study have to comply with all the listed enrolment conditions. Tuition is set in accordance with the valid pricelist.

6. Criteria for recognising knowledge and skills obtained prior to enrolment into the study programme

Knowledge, competence or abilities obtained before enrolment: certain knowledge which corresponds in terms of contents to subject-specifics of the programme Urbanism can be recognised. The recognition of knowledge and abilities obtained prior to enrolment is resolved by the UL FA Study Affairs Committee, based on the existing regulations, and the student's written request with enclosed report cards and other documents which prove the obtained knowledge and the contents of the obtained knowledge. The knowledge is recognised in accordance with the Regulations on Procedures and Criteria for Recognising Informally Obtained Knowledge and Abilities, passed on 15th session of the UL Senate on 29th May 2007.

7. Conditions for progression through the programme

7.1. Conditions for progression from year to year

The conditions for progression are in accordance with Article 151 of the UL Statute. In accordance with Article 153 of the UL Statute, students can exceptionally progress to higher year even if they haven't fulfilled all the obligations required by the study programme for progressing, when the reasons are justifiable. The UL FA Study Affairs Committee decides on progression.

Students can progress if they completed all obligations regulated by syllabus by the end of academic year, and obtained the following number of ECTS points:

- to progress to 2nd year, student must pass Urban Project Engineering 1 and obtain the minimum of 48 credit points from 1st year.
- to progress to 3rd year student must have passed all 1st year exams and Urban Project Engineering 2 and obtain the minimum of 48 credit points from 2nd year.

The UL FA Study Affairs Committee can exceptionally allow progression for a student with justifiable reasons, as defined by Article 153 of the UL Statute (maternity leave, prolonged illness, exceptional family or social circumstance, status of person with special needs, active participation in top professional, cultural and sports events, active participation in the University bodies).

A student whose learning outcomes are above average can be allowed to progress faster. This is resolved by the UL FA Senate, based on the candidate's request and the UL FA Study Affairs Committee's substantiated opinion.

6.2 Conditions for repeating the year

Any student, who has not completed all the obligations for progression, as regulated by the study programme, may, in the course of their studies, repeat a year once, providing they obtained a minimum of 30 ECTS credits.

8. Conditions for completion of the course

The student completes the course when he/she completes all the required obligations in the extent of 180 ECTS credit points, including practical training and the 1st cycle diploma work.

The professional title the graduate obtains is Bachelor of Architecture Urbanism (UN), abbreviation B. Arch. Urb, (UN).

9. Conditions for transferring between programmes

The term transferring means that the student ceases to study in the study programme he/she originally enrolled in, and continues the education in the new First cycle university study programme Urbanism, where all or part of study obligations from the student's original study programme are recognised as completed obligations of the First cycle university study programme Urbanism (Standards for transferring between study programmes (the Official Gazette of the Republic of Slovenia, Ur.l. RS, no. 95/2010, changes Ur.l. RS, no. 17/2011)).

If the change of the study programme or course is the consequence of incomplete obligations from the previous programme or course, this is not considered a transfer.

The following criteria are taken into account for transfers between programmes:

- meeting the requirements for enrolment into the new study programme;
- the number of available spaces;
- years or semesters in the previous study programme, in which the student completed all study obligation, which can be recognised as a whole;
- the minimal number of years or semesters the student has to complete to graduate from the new programme.

In the First cycle university study programme Urbanism (UN) programme transfers from the following study programmes are envisioned:

- from the new First cycle study programmes (UN) from the field of related technical and social sciences;
- from the university study programmes accepted after 1994, from the field of technical and social sciences;
- from the unified master's programmes from the field of related technical and social sciences;
- from the new first cycle study programmes (UN) from the field of technical and social sciences.

In accordance with the UL FA Rules for testing and assessing knowledge, the UL FA Study Affairs Committee can impose additional obligations on the student and set a date by which those obligations have to be met. The UL FA Study Affairs Committee can also recognise part of the exams such student passed on the original study programme, but are not envisioned in the new First cycle study programme Urbanism (UN) as substitutes for elective subjects outside UL FA.

When the student submits appropriate proofs, the UL FA Study Affairs Committee can recognise the student's practical training.

A student may transfer into 2nd or 3rd year of the First cycle university study programme Urbanism if:

- the student meets the requirements to enrol in this study programme,
- there are open enrolment places,
- the student completed all the study obligations of a lower year in the original programme (at least the amount and the credit points required for progress to a higher year, see Criteria for transferring between study programmes, Article 9).

10. Grading methods

The students' knowledge is verified and graded in individual subjects, so that the study process of every subject ends with a test of knowledge or acquired

skills. The testing methods (oral or written exam, colloquium, seminary papers, log books, practical tasks, projects, portfolio, and peer evaluation) are defined in subjects' syllabuses. General rules for student evaluation is regulated by the Rules for evaluating and testing the knowledge at UL FA which is verified by FA Senate. Details are defined by study rules.

There is one final grade, which consists of student's completed obligations in a subject. Every obligation has to be marked with a positive grade. The knowledge from lectures which is verified by oral and written examination, seminars, home projects and similar accumulates to maximum 30% of the grade. The knowledge from seminars, seminar exercises, laboratory practice, field work and others which is verified by oral or written exams, seminars, home projects, and home work and similar accumulates to at least 70% of the grade.

In accordance with the University of Ljubljana statute for grading, the following grading scale and grades are used:

10 – (91-100%: excellent: outstanding performance with minor errors),
9 – (81-90%: very good: above average knowledge, but with some errors),
8 – (71-80%: good: solid results),
7 – (61-70%: satisfactory: fair knowledge but with significant shortcomings),
6 – (51-60%: sufficient: knowledge meets minimum criteria),
5 to 1 – (50% and less: unsatisfactory: knowledge does not meet minimal criteria).

The candidate successfully passes the exam if the grade he receives is in the satisfactory (6) to excellent (10) range.

11. Study programme curriculum

The student work load is 60 ECTS per year, which corresponds to 1800 hours a year; the hours include contact tutorials and individual work.

Table 1: List of teaching units and the lecturers of first cycle university programme Urbanism

Course #/0	Lecturer
SUBJECT WITH MANDATORY CONTENTS	
Urban Design Studio 1	In the first year, the UL FA study committee assigns the students to the mentors. List of mentors see note 1.
Mathematics	Asst. Prof. Miha Lejnar, Ph.D.
Descriptive Geometry	Asst. Prof. Domen Kušar, Ph.D.
Structures	Prof. Blaž Vogarnek, Ph.D.
Representation Techniques 1	Prof. Mirjo Perosa, Ph.D., Asst. Prof. Otomir Mihaj, Assoc. Prof. Jaka Bonča, Ph.D.
History And Theory In Architecture	Prof. Janez Koželj Asst. Prof. Mihael Dešman
Environmental Aspects Of Sustainable Development	Prof. Lucija Kralj Bogač, Ph.D.
Introduction to Urbanism	Prof. Peter Gabrijelčič, M.Sc. Assoc. Prof. Tadeja Zupančič, Ph.D.
Digital Methods and Introduction to Urbanism Presentations	Assoc. Prof. Igor Kraljčič, Ph.D.
Basics of Information Technology and GIS	Asst. Prof. Blaž Repe, Ph.D.
Basics Of Geodesy And Cartography	Asst. Prof. Dušan Petrovič, Ph.D.
Urban Ecology	Prof. Dušan Polj, Ph.D. Prof. Janez Koželj Asst. Prof. Ilka Čerpes, Ph.D.
History and Theory of Urbanism	Assoc. Prof. Katarina Dimirovska Andriaws, Ph.D.
Project Management and Control in Urbanism	Assoc. Prof. Marjan Ročevar, Ph.D.
Urban Sociology	Assoc. Prof. Senko Pločnik, Ph.D.
Legal Foundations of Spatial Planning	Assoc. Prof. Albin Fajfar, Ph.D.
Municipal Infrastructure	Assoc. Prof. Mariška Šubič Kovač, Ph.D.
Landscape Architecture	Prof. Peter Gabrijelčič, M.Sc.
Traffic Planning and Infrastructure Systems	Asst. Prof. Marjetka Zira, Ph.D.
Economics of the Housing Market	Assoc. Prof. Andreja Grnar, Ph.D.
Spatial Economics and Management	Prof. Bogomir Kovač, Ph.D.
Urban and Architectural Renovation	Asst. Prof. Sonja Ilko, Ph.D.
Urban Design	Prof. Janez Koželj
Representation Techniques 2	Prof. Janez Koželj
Urban Planning	Asst. Prof. Ilka Čerpes, Ph.D.
Rural Planning	Asst. Prof. Alenka Fikfak, Ph.D.
Regional Planning	Asst. Prof. Alma Zavodnik-Lamovšak, Ph.D.

SUBJECTS WITH MANDATORY CONTENTS. THE STUDENT SELECTS THE LECTURERS	
Urban Design Studio 2	In the second year the students themselves select the mentor. List of lecturers, See note 1.
Urban Design Studio 3	In the third year the students themselves select the mentor. List of lecturers, See note 1.
Practice Study	At the municipal department for spatial development. See note 2.
Diploma Thesis	Note 1.

ELECTIVE SUBJECTS GROUP A	
A1 - Architectural Design	Assoc. Prof. Tadej Glazar, M.Sc. Assoc. Prof. Maruša Zorec
A1 - Materials and Forms	Prof. Borut Juvanec, Ph.D.
A1 - Architectural Theory and Critique	Prof. Feđa Košir, Ph.D.
A1 - General Safety	Asst. Prof. Domen Kušar, Ph.D.
A2 - Urban Geography	Assoc. Prof. Dejan Rebernik, Ph.D.
A2 - Urban Anthropology	Asst. Prof. Igor Toš, Ph.D.

Note 1: Lecturers: Urban Design Studio 1-3 and Diploma Thesis; all the lecturers of other subjects of the study programme and have adequate professional references from the field of architecture and urbanism. The list of lecturers of Urban Design Studio 1, 2 and 3: Assoc. Prof. Lucija Ažman Momirski, Ph.D.; Assist. Prof. Ilka Čerpes, Ph.D.; Assist. Prof. Alenka Fikfak, Ph.D.; Prof. Miloš Florjančič, Prof. Peter Gabrijelčič, M.Sc.; Assoc. Prof. Tadej Glazar, M.Sc.; Assist. Prof. Sonja Ilko, Ph.D.; Prof. Janez Koželj; Assoc. Prof. Maruša Zorec; Assist. Prof. Tomaž Krušec, M.Sc. The list of mentors is changed and suggested to the UL FA Senate by the Study Committee.

Note 2: Coordination with the municipal department for spatial management is organised by the University of Ljubljana, Faculty of Architecture. The two-week study practice at the municipal department for space and the environment or similar institutions registered for performing urbanistic activities. The mentors are Assist. Prof. Ilka Čerpes, Ph.D. and Assist. Prof. Alenka Fikfak, Ph.D.

Elective subjects		Lecturer	Contact hours						SIW	Hours total	ECTS
No.	Subject		L	S	T	CT	OF				
A1.1	Architectural Design	Assist. Prof. Tadej Glazar, M.Sc. Assist. Prof. Mariša Zorec	15	30	30		15	120	180	6	
A1.2	Materials and Forms	Prof. Borut Juvanec, Ph.D.	30	30	30			120	180	6	
A1.3	Architectural Theory and Critique	Prof. Fedja Košir, Ph.D.	15	15	15			60	90	3	
A1.4	General Safety	Assist. Prof. Domen Kušar, Ph.D.	15	15	15			60	90	3	
A2.1	Urbana geography	Assoc. Prof. Džijan Rebernik, Ph.D.	30	15	15			90	150	5	
A2.2	Urbana anthropology	Assist. Prof. Igor Toš, Ph.D.	30	15			15	90	150	5	
UL	Elective subjects of other faculties of the University of Ljubljana		30		30			90	150	5	
UL	Elective subjects of other faculties of the University of Ljubljana		30		30			90	150	5	
TOTAL			195	30	165		30	735	1140	38	
SHARE			17 %	2 %	14 %		2 %	65 %	100 %		

L – lectures, S – seminar, T- Tutorials CT – Clinical Tutorials, OF – other forms of studying, SIW – students independent work, ECTS

12. Information on possible subject selection and mobility

Elective subjects are envisaged: in 4th, 5th and 6th semester.

The student can transfer 30 credit points of the programme (semester of studies, regardless of mandatory of elective units) from any programme from the field of architecture - urbanism, if UL FA has a suitable agreement signed with the institution.

13. Presentation of individual subjects

1.1, 1.8 Mathematics (3 ECTS + 4 ECTS)

Mathematic tools and their use: mathematic logic, vectors, linear equation systems, real numbers, infinity, sequences and series, elemental functions, limit and continuity, differentiation, integers, curves and plains in space.

1.2 Descriptive Geometry (3 ECTS)

Axiomatic of projective and descriptive geometry, projecting principles, types of projection, perspectives, affinity, co-lineation, plani-metric and stereo-metric structures etc; parallel projections; axonometric projections; central projection.

1.3 Structures (3 ECTS)

Knowledge about plans and representations of structural (load-bearing) materials in architecture and civil engineering; layouts and manufacturing of structural elements of buildings and engineering structures; mechanical properties of materials for bearing static and dynamic loads; behaviour of various materials and their properties, foundations, vertical load-bearing elements, horizontal load-bearing elements, timber roofs, bracing, basics of reinforced concrete, steel and timber structures, drawing and marking structures in plans and specifics of drawing in the ACAD environment.

1.4 Representation Techniques 1 (7 ECTS)

Expression of architectural idea through drawing and model. Sketch, drawing, scale models. Drawing tools. Technical and art properties of architectural structure. Elements of a plan: scale, projections. Drawing of line geometric shapes.

1.5 History and Theory of Architecture (5 ECTS)

The history and theory of architecture as a part of cultural history in the post antiquity era: the Middle Ages, the Renaissance, the Baroque, the Age of Enlightenment, etc; general development characteristics of architecture – settlements – building – landscape in differing global, European and Slovene conditions; development of architectural space in the European and Slovene environment; development of typological architectural groups: settlement, fortress, church architecture, public building, housing, and their connections to characteristics of stylistic periods in European, Slovene and comparative non-European space.

1.6 Environmental Aspects of Sustainable Development (5 ECTS)

Understanding causes and consequences global changes have on urbanism through practical use of established models. Areas of sustainable development. Values and trends of environmental indicators in the past decades, in Slovenia and in its regions. Sustainable urbanism in the modern world. Concepts and interdisciplinary approach. Ecological problems and their possible solutions in urban environments. Urbanism and climate changes.

1.7 Basics of Geodesy and Cartography (4 ECTS)

Learning about the methods of obtaining, keeping, processing and giving information about space. Learning about mathematical basics, forms of data presentation and technology. Learning about the available forms of spatial data in Slovenia and international space and with the methods of obtaining and using them.

1.9 Introduction to Urbanism (5 ECTS)

The understanding of the relationships of urban-settlement space and the procedures of a project in current ecological conditions ('urban design'); co-dependence of material culture of the environment with nature and society in space in time, with empirical stress at a micro-level, when verifying with abstract and deductive patterns; methodology of the objective and subjective verification of status, communication in the space, structures and forms, protection of life in a settlement, concrete measures and criteria.

1.10 Digital Methods and Presentations (5 ECTS)

Logical and effective use of digital multimedia capabilities - hardware and software needed for successful work while using technologies of digital multimedia; web multimedia technologies, multimedia databases in the field of architecture.

1.11 Basics of Information Technology and GIS (5 ECTS)

Knowledge of basic terminology from the field of geographic information systems. Use of basic methods from the fields of geographic information systems using at least one of the common GIS tools (ArcGIS). Knowledge and use of basic spatial databases. Solving basic spatial problems through GIS. Cartography and GIS visualisation. Knowledge and use of GPS technology.

1.12 Urban Ecology (4 ECTS)

The goal of the subject is to teach the students with the basic characteristics of anthropogenely significantly changed urban eco system and key sustainably designed trends and measures necessary for the demanded adaptation of urban material activities to the specific urban environmental limitations. The students will be capable of evaluating the severity of urban environmental problems, simulate the expected environmental consequences of implementing city development projects and recognise the importance of sustainably designed urban development.

1.13 Urban Design Studio 1 (7 ECTS)

Faced with a concrete problem, the student deals with urban treatment, analytical data processing and presentation on a designated urban model. The subject is adapted to the challenges from practical work and includes forms of urban space, which is the consequence of actual dynamics of the society. While working on the project, the student learns to recognise and implement the essential operative instruments in the process of development strategy of the designated urban model. The treatment is introduced on the scale of the selected building island.

2.1 History and Theory of Urbanism (5 ECTS)

History as dialectics of cyclic traversing from progressive to cultural to naturalist models of urbanism (according to Françoise Choay), in the context of development and co-effects of social, economic and technological conditions, and parallel, an overview of technological, sociological and biological city system, and parallel, a development of theories and planning methods, and parallel, an overview of the forms of physical structures of cities: strip, net, star.

2.2 Project Management and Control in Urbanism (4 ECTS)

Defining project management as a process. Learning the basics of individual phases: defining the project, organisation of the project, performing and completing the project and monitoring (wholesome control of changes). An overview of important tools for control and urban design quality stimulation (quantitative and qualitative standards and criteria) and their use in project engineering practice. A display of examples of good practice: wholesome approach to city arrangement (planning processes of successful European cities, formal and informal planning documentation); managing processes of urban regeneration (selection of successful examples from Central and Western Europe); managing preparations and realisation of spatial documentation: innovative approach (selection of examples from Slovenia and abroad).

2.3 Urban Sociology (3 ECTS)

Social character, spatial significance and functions. The roots and reasons for the emergence of spatial sociology; location and accessibility in space; public opinion concerning spatial phenomena; development of information and communication technologies and their effects on space; urban culture; sociological approach to urban planning.

2.4 Legal Foundations of Spatial Planning (4 ECTS)

Students learn about the foundations of government system, law and spatial management legislation. Introduction: the foundations of the state legislation of the Republic of Slovenia; structure of law and legal resources; the foundations of material and process administrative law. Space arrangement legislation: space and the environment; basic legal framework of spatial management; spatial planning; spatial measures; spatial development (building the structure).

2.5, 2.11 Urban Design Studio 2 (10 ECTS + 7 ECTS)

Faced with a concrete problem, the student deals with urban treatment, analytical data processing and presentation on a designated urban model. The subject is adapted to the challenges from practical work and includes forms of urban space, which is the consequence of actual dynamics of the society. While working on the project, the student learns to recognise and implement the essential operative instruments in the process of development strategy of the designated urban model. The treatment on the scale of selected town area is implemented. In the framework of the project the student participates at urbanistic workshop: one week intensive field-work connected to a concrete task or urban topic on the level of town area. In small groups, the students complete a project under the mentor's supervision (usually in co-operation with the local community). The workshop is a modern method for teaching students, it is based on teamwork, it introduces the current development in the profession, and international exchange of students and mentors.

2.6 Municipal infrastructure (4 ECTS)

The importance and role of infrastructure systems for guaranteeing material goods and connecting individual spatial units into unified city organism. Technical – technological characteristics of infrastructure networks, buildings and instruments. Infrastructure systems in strategic and implementing spatial acts. Dimensioning and location conditions. Equipping land for building; technical, spatial and financial aspect.

2.7 Landscape Architecture (4 ECTS)

Natural, cultural or urban landscape; typological and morphological analysis of the cultural landscape; analysis of culturally landscape factors; development of contents and methods of spatial documents; sustainable and balanced spatial planning.

2.8 Planning Traffic and Infrastructure Systems (3 ECTS)

Students learn about different ways of implementing sustainable mobility with the assistance of integrates traffic systems and they form their opinion about different methods of planning traffic network and traffic routes. Through learning about the basic elements of sustainable traffic policy, they set up the basic elements necessary for proper planning of traffic networks, traffic routes and traffic.

2.9 Economics of the Housing Market (3 ECTS)

introducing the student to the market forces of the real-estate market and with the housing market specifics, real estate services for buildings, housing and land, and to qualify them for performing interdisciplinary tasks in the real-estate market.

2.10 Spatial Economics and Marketing (3 ECTS)

The student learns about the theory of spatial economics, with strategic management of cities and local communities. The focus is on the selection of practical topics and the solutions which are useful for solving spatial and economic-development problems in Slovenia. The subject is intended for analysis of economic institutions, management models and strategic practices, through which we can manage

and guide various economic influences on space.

2.13 Practice Study (4 ECTS)

A two-week study practice at the municipal department of environment and space or similar institutions registered for performing urbanist services is an addition to the project work which is part of Project Design Studio 1 and Project Design Studio 2, the student learns about the tasks, jurisdiction and organization of municipal urbanist services.

3.1 Urban and Architectural Renovation (4 ECTS)

The principles of heritage protection, protection approaches and methods in the scope of landscape, urban and architectural planning. Learning about the work in the field of preserving spatial identity as the fundamental quality of living. The objective of the subject is to understand heritage through all the layers of its incidence – as culturally preserving, spatial, developmental, economic and social category of space and include it appropriately into spatial development.

3.2 Urban Design (5 ECTS)

Learning the theoretical backgrounds and operative tools for research and interpretation of various urban situations in the context of modern city (models of condensed and dispersed city).

3.3 Representation Techniques 2 (4 ECTS)

Various types of information are available in digital form - how to use the computer for more advanced functions, such as creating and verifying spatial forms with the help of parametric objects and procedural methods. The more advanced method of working with computer introduces work with parametrically defined objects and use of script expansion. The spatial elements, with which we operate, are recorded as physical elements with intra-element influence - actual identities in the database with set parameters which make it possible to perform numerous operation and spatial analysis faster and easier.

3.4 Urban Planning (5 ECTS)

The planning processes of a concrete example with various analytical and operational methods and techniques of distributing use, organization of activities, managing networks and patterns of physical structures in the city.

3.5 Urban Design Studio 3 (7 ECTS)

Faced with a concrete problem, the student deals with urban treatment, analytical data processing and presentation on a designated urban model. The subject is adapted to the challenges from practical work and includes forms of urban space, which is the consequence of actual dynamics of the society. While working on the project, the student learns to recognise and implement the essential operative instruments in the process of development strategy of the designated urban model. Treatment within the scale of the selected community/city is introduced. Within the subject the student participates in an Urban Workshop: a week of intensive fieldwork, connected to concrete or urbanistic task or topic, level of community/ city. The students in smaller groups create a project under the mentor's leadership (mostly in cooperation with the local community). The workshop is a modern method for teaching students, it is based on teamwork, it introduces the current development in the profession, and international exchange of students and mentors.

3.7 Rural Planning (5 ECTS)

Theoretic and historic starting points for comprehension of the transformation processes in the rural area. The foundations and methodological basics for sustainable management and development of rural areas and settlements regarding their agrar or urban function. When planning and managing settlement patterns (settlements and other built structures) in rural area, their participation in the landscape and the relationship to the agrar space is important. Rural culture and identity; the genesis of the rural area with a focus on the development of agriculture as a forming element of traditional rural cultural landscape; spatial composition of the rural area; agrarian operations as

an instrument of managing agricultural space and settlement; renovation and development of rural settlements; modern forms of spatial development of the rural area; traditional rural architecture and the forms of its renovation.

3.8 Regional Planning (5 ECTS)

The subject objective is learning various approaches to the discussion of region and learning different regionalisation methods. For this purpose, the subject will deal with all the basic contents necessary for understanding methodological approaches and manners of spatial planning on regional level by taking into account the various degrees of accuracy of processing individual regional problem, regarding the size of the area and scale of processing. Regarding the interdisciplinary nature of the subject, the basic goal is to qualify the students to understand and use an integral approach of regional planning and individual work in projects of regional spatial planning (selection, obtaining, managing and use of the necessary data, cooperation in concrete problems from practice; ability to make independent decisions on placing spatial development of regional importance in space., etc.

3.11 Diploma Thesis 1st Cycle (9 ECTS)

A graduation thesis is written under the mentorship of a chosen teacher. At the end of the studies, the work is publicly presented. It has to include an introduction with starting points and a definition of the problem, a method, a description of the work process, results, a description of the problem, work method, expected results; analysis of the space, a project assignment and the technical-graphic part. As a rule less demanding tasks of spatial planning, and give solutions reached by knowledge obtained during the studies.

Group “A” Elective subjects: 2.16, 3.6, and 3.7

A1.1 Architectural Design (6 ECTS)

The basics of architectural design: architecture as an idea, theory and materialisation. Properties of space and structures: dimension, shape, size, position. Humans as a standard and criteria.

A1.2 Materials and forms (6 ECTS)

The goals are to gain an understanding between theory, vernacular architecture, architectural styles and practises with new technologies. The student will learn about materials and forms (structures) in historical periods – from pre-historic times till present day.

A1.3 Architectural Theory and Criticism (3 ECTS)

Basic terms; codes and styles; Vitruvius's edition of ancient heritage; deconstruction of Vitruvius's biography; Alberti's reinterpretation of Vitruvius; from tractates to manifestos; 19th century: die Stilfrage; 20th century: functionalism; development of architectural theory in Slovenia; critical analysis.

A1.4 General Safety (3 ECTS)

Systematic research of hazards in the built environment and possible construction measures to protect from these dangers: fire safety, occupational safety, pollution protection.

A2.1 Urban Geography (5 ECTS)

The student is acquainted with the subject of study and the content of urban geography. The student acquires knowledge of theoretical starting points and the methodology of geographical study into the space of a city. The student is trained to use the knowledge for the purposes of research and application. The student acquires knowledge to partake in urban and spatial planning, city administration, and the making of spatial analyses.

A2.2 Urban anthropology (5 ECTS)

Introduction into the basic laws of interaction, co-dependence and co-evolution of man and anthropogenic materially-spatial environment on the level of human settlements, from the primitive settlements to modern mega-urban agglomerates. The city is approached as a biophysical–symbolic complex system. The relationship of characteristics of social structures, urban structures and its development is analysed from economically-ecological, technological, communication-symbolic and axiological aspect. The college also introduces into the basics of system methodology which enables analysis of the complexity of urban phenomena. As alternative contents (students' choice), the focus is on performing field research.

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