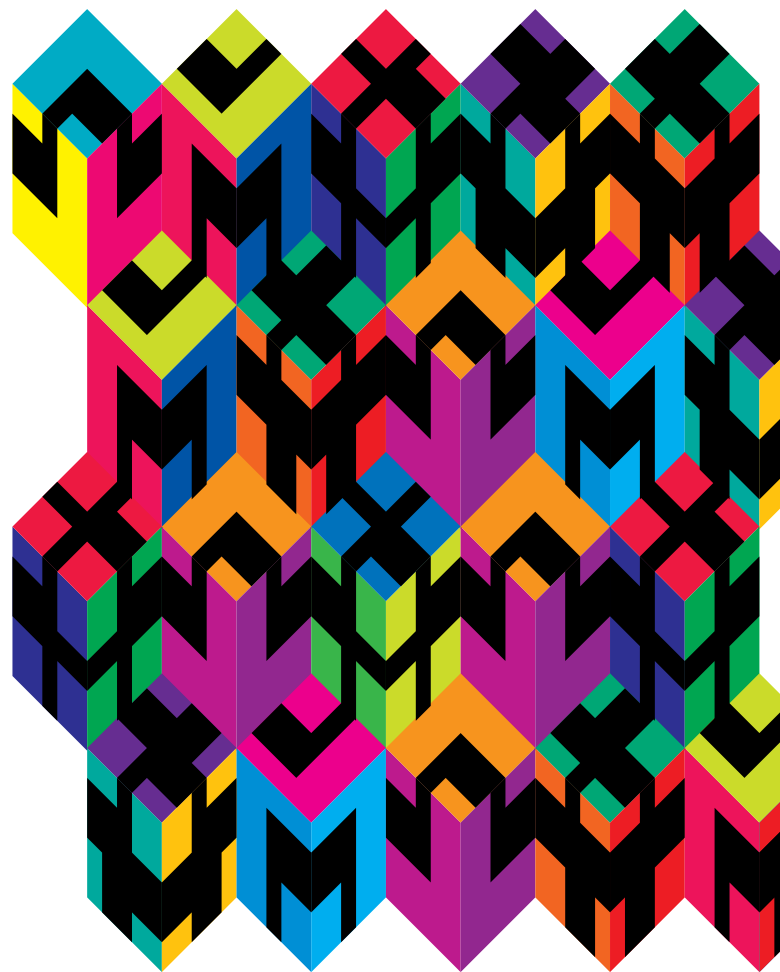


SINGLE-CYCLE MASTER'S STUDY PROGRAMME ARCHITECTURE



Univerza v Ljubljani
Fakulteta za arhitekturo



2021-2022

SINGLE-CYCLE MASTER'S

**STUDY PROGRAMME
ARCHITECTURE
UNIVERSITY OF LJUBLJANA**

FACULTY OF ARCHITECTURE LJUBLJANA, 2020

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UNIVERSITY OF LJUBLJANA FACULTY OF ARCHITECTURE

The Faculty

» The Faculty of Architecture is the largest higher education institution for educating architects and urban planners in Slovenia. It employs educators and associate professionals who, with their creative work, ensure outstanding national and international achievements in architectural arts and sciences. Through its hands-on educational approach involving active creators from practice, economic, and cultural knowledge is directly and instantly transferred to the study environment. The students are permanently in touch with practical experience, economy, and local communities. On the other hand, in close cooperation with its umbrella institution, the Museum of Architecture and Design, the faculty preserves the architectural tradition and the development of contemporary spatial theories. The cooperation takes place on several levels, i.e. promotion of high-quality and relevant MSc theses, preparation of exhibitions, collaboration in implementing fundamental theoretical and monument protection work in contemporary architecture.«
Matej Blenkuš, dean

Organisational Units

Department of Architecture
Department of Urbanism
Department of Architectural Technology
Department of Design and Presentations
Department of History, Theory, and Renewal
Institute of Architecture and Spatial Planning

University of Ljubljana, Faculty of Architecture
Zoisova cesta 12, 1000 Ljubljana
www.fa.uni-lj.si
tajnistvo@fa.uni-lj.si, dekanat@fa.uni-lj.si
01/ 200 07 49,
fax: 01/ 425 74 14

SINGLE-CYCLE MASTER'S STUDY PROGRAMME ARCHITECTURE

**Presentation of the Study Programme
2021–2022**

Dean

izr. prof. dr. Matej Blenkuš

Vice-Dean for Study Affairs

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Socrates and Erasmus coordinator – appointed

doc. dr. Matevž Juvančič

Secretary

Karmen Marolt, univ. dipl. soc.
01/ 200 07 64, karmen.marolt@fa.uni-lj.si

Head of Student Affairs Office

Mojca Rozman, dipl. org. menedž.
01/ 200 07 82, mojca.rozman@fa.uni-lj.si

Student Affairs Office

Ana Simoniti, mag. ekon. ved (info Architecture)
01/200 07 10, ana.simoniti@fa.uni-lj.si
Danijela Šinkovec, spec. manag.
01/200 07 80, danijela.sinkovec@fa.uni-lj.si
Katja Knez, univ. dipl. soc.
01/200 07 74, katja.knez@fa.uni-lj.si

Head of Library

Tina Musec, univ. dipl. bibl.
01/ 200 07 23

Library

01/ 200 07 51, knjiznica@fa.uni-lj.si

1 INFORMATION ABOUT THE STUDY PROGRAMME

The Single-Cycle Master's Study Programme Architecture takes 5 years (10 semesters) and amounts to 300 credit points.
The study programme includes elective modules A and B.

The professional title bestowed on the graduate:

- magister inženir arhitekture (master engineer in architecture) – for male holders, or
- magistrica inženirka arhitekture (master engineer in architecture) – for female holders, abbreviation: mag. inž. arh

Study programme

Single-Cycle Master's Study Programme Architecture

KLASIUS–SRV

Master's education (second Bologna cycle)/

Master (second Bologna cycle) (17003)

ISCED

Architecture, Urbanism and Civil Engineering (58)

KLASIUS–P

Architecture and Urbanism
(not specified in detail) (5810)

Frascati

Technical sciences (2)

SQF level

8

EQF level

7

EHEQF level

Second cycle

Duration in years

5

ECTS per year

60

Number of ECTS

300

2

INTERNATIONAL COMPARABILITY OF THE STUDY PROGRAMME

All compared foreign programmes are appropriately accredited or recognized in the countries where they are provided.

- 1 Tehnische Universität Graz TU Graz. Fakultät für Architektur. Graz, Austria.
http://portal.tugraz.at/portal/page/portal/TU_Graz
- 2 Universitat Politècnica de Catalunya. BarcelonaTech UPC. Escola Tècnica Superior d'Arquitectura de Barcelona ETSAB. Barcelona, Spain.
www.etsab.upc.edu
- 3 Leibniz Universität Hannover. Fakultät für Architektur und Landschaft. Hannover, Germany.
www.archland.uni-hannover.de

1 Graz University of Technology (TU Graz)

Faculty of Architecture

Architecture forms an arch between art and technology. Architectural design consists of identifying, defining and reflecting on complex problems of living space and refers to the creation, change, and preservation of a safe and aesthetically appealing environment worth living in. The study programmes at the Faculty of Architecture have a generalist character and promote a holistic way of working and thinking due to project-oriented teaching. The university teachers, some of whom come from all around the world, have a wealth of practical experience. Graduates of the Faculty of Architecture in Graz have gained a good reputation on the national and international level due to their ability to think in a critical and innovative way and their professional competence, which extends beyond the traditional fields of activity.

2 Universitat Politècnica de Catalunya (UPC)

Barcelona School of Architecture (ETSAB)

Its history dates back to 1875. The ETSAB has trained thousands of students in the areas of architectural design, urban planning and building construction. Its teaching staff includes prestigious academics and renowned professionals who have made a major contribution to Barcelona's current fame in the field of architecture. The School is respected worldwide and receives many applications for admission from foreign students.

Degree in Architecture Students acquire a solid technical and legal specialisation that allows them to work in the design and management of building construction and restoration projects and in the fields of urban and spatial planning. Other career prospects include those related to landscaping and the environment; land and property management; interior, furniture and object design; exhibition and set design; health and safety projects; and graphic design.

3 Leibniz Universität Hannover

Faculty of Architecture and Landscape Sciences

Faculty of Architecture and Landscape Sciences
Engineer, artist, historian or sociologist? Good architects and landscape architects are a bit of everything. But at the heart of it are people and their built environment. This is why one of the focuses of the faculty is on urban planning and cultural landscape aspects in design and planning. Leibniz Universität Hannover is the only university in the North of Germany offering training and research in landscape architecture and environmental planning. Study Guide Architecture: **An Architect Does More than Build Houses.**

An architect plays a role in town and landscape design, and is a historian and a trend analyst rolled into one. If you want to study architecture, you should have an inquisitive mind and plenty of staying power, enjoy designing, and have good spatial powers of imagination. Studies are based on professional practice, i.e. planning, construction and renovation of buildings, settlements and towns. Other areas of architecture such as history, creative design, or the latest computer methods are also covered.

3 BASIC PROGRAMME GOALS AND GENERAL COMPETENCE

The aim of the programme is to educate future architects – generalists. The basic goal is to train experts for responsible tasks concerning architectural design and planning, as well as spatial management. The responsibility of architects stems from the significance of architectural design, building quality, their harmony

with the environment and respect for natural and urban landscapes, which are of public interest. In terms of the physical environment quality, public interest is safeguarded by Slovene and European laws. The Slovene law stipulates conditions for architects – designers, reviewers of planned spatial developments, spatial planners, accountable managers of proposals of spatial documents, municipal urbanists, researchers etc., while the European law determines the minimum qualification criteria for automatic recognition of professional qualifications across all European countries. The profile of an architect is highly complex since the architect has to be capable of thinking about people and their spatial problems in various scales: from the regional planning scale to the architectural detail, and vice versa. It has to stem from contemporary theoretical and technological findings, supersede them, strive for a balance between functional, technical and artistic components of architectural creativity. The educational profile of architects combines technical sciences, social sciences, and humanities into the capability for managing and designing space or buildings. The results of architectural creativity can be socially recognised as works of art.

• **General Competences:**

- Capability of analysis, synthesis, solution proposal, and anticipation of impacts,
- Mastering of research methods, procedures and processes, development of critical and self-critical reflection,
- Capability of practical use of knowledge,
- Development of communication capacities and skills, especially visual communication,
- Ethical reflection and dedication to professional ethics,
- Cooperativeness, team work (and in the international environment).

4 REQUIREMENTS FOR ENROLMENT AND SELECTION CRITERIA FOR LIMITED ENROLMENT

- **The Long–Cycle Master’s Study Programme in Architecture can be entered by:**
 - a Whoever graduated and was granted a high-school diploma;
 - b Whoever completed a vocational school and was granted a diploma in any high school programme and exam within the diploma subjects mathematics and foreign language, if mathematics was part of the vocational diploma;
 - c Whoever completed any four-year high school programme before June 1st, 1995. All candidates have to undertake an entrance exam confirming their capability to study architecture.
- **When decisions about limited enrolment are taken** (if more candidates provide proof of adequate high school qualifications needed for study of architecture than there are enrolment places) candidates are selected by the following criteria:
 - general achievement in the general matura or, alternatively, in the final examination or the vocational matura, 12.5% points,
 - general achievement in years 3 and 4, 12.5% points,
 - achievement in examination of the ability to study architecture, 75% points:
 - examination of artistic and spatial talent, 37.5%,
 - interview with the candidate, 37.5%.
- **Capability Test**

The capability test for enrolment in the study programme Architecture assesses: sense for artistic perception and expression, spatial perception and expression, and architectural issues.
- **Part-time Study**

Part-time study candidates have to meet all the aforementioned enrolment conditions. The entrance fee is determined according to the valid price list.

5 CRITERIA FOR ACKNOWLEDGMENT OF KNOWLEDGE AND SKILLS GAINED BEFORE ENROLMENT IN THE PROGRAMME

At the request of the candidate, the Academic Affairs Commission submits a proposal to the Senate for recognising the knowledge and skills that the candidate gained prior to his/her enrolment in the programme, and can be recognised in the study programme in Architecture. For example, in the case of a completed Foreign Language course, the course is recognised among the elective courses of group “B” (B6).

6 CONDITIONS FOR PROGRESSING IN THE PROGRAMME

- **Conditions for Progressing from Year to Year**

To progress from Year 1 to Year 2, a student is required to pass the following courses: Design Studio 1, Architectural Design 1, Materials and Forms, and earn a minimum of 48 credits from Year 1.

To progress from Year 2 to Year 3, a student is required to pass all Year 1 examinations, courses Design Studio 2, Architectural Design 2, and earn a minimum of 48 credits from Year 2.

To progress from Year 3 to Year 4, a student is required to pass all Year 1 and Year 2 examinations, courses Design Studio 3, Architectural Design 3, and earn a minimum of 48 credits from Year 3.

To progress from Year 4 to Year 5, a student is required to pass all Year 1, Year 2, and Year 3 examinations, course Design Studio 4, and earn a minimum of 48 credits from Year 4.
- **Conditions for Repeating a Year**

A student may repeat a year only provided that the student passed at least half of the requirements in the relevant year of study and earned a minimum of 30 ECTS. A student may repeat a year of study only once during his or her studies. Approval for exceptional enrolment is granted by the Academic Affairs Committee.

7 CONDITIONS FOR STUDY COMPLETION

Study completion implies that the student has completed all the required tasks in all the enrolled subjects, prepared a final work, and defended it successfully.

8 TRANSFERRING BETWEEN STUDY PROGRAMMES

• **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 Long–Cycle Master's Study Programme in Architecture, where all or part of study obligations from the student's original (first) study programme are recognised as completed obligations (Criteria for Transferring Between Study Programmes (Official Gazette of the RS, No. 95/2010, amendments Official Gazette of the RS, No. 17/2011)). In the European higher education area, programmatic diversity is obvious, while the responsibility in dealing with space has become the common goal of all countries. In spatial management and design, architecture is the only regulated profession, hence any transferring from other programmes to architecture, rather than vice versa, is subject to strict checking. The conditions for transferring are a constituent part of such programmes.

• **Transferring between study programmes leading to a university degree**

In the academic year 2007/2008, the Long–Cycle Master's Study Programme in Architecture was introduced in line with the European directive on regulated professions. The graduates who were awarded the title “univerzitetni diplomirani inženir arhitekture” prior to the introduction of the new programme, may, under certain conditions, upgrade their studies, and are thus awarded a diploma compliant with the Directive 2005/36/EC.

• **The transfer is approved by the Academic Affairs Committee**

The conditions for transferring between the old and the new programmes are also taken into account in the case of completed studies. By passing the specified bridging exams, the university graduate engineers

in architecture obtain the professional title “magister inženir arhitekture”.

• **Transferring between study programmes**

For the purpose of transfer, the faculty can issue the necessary certificates on completed obligations. The criteria are determined by the responsible institution, to which the student wishes to transfer.

9 EVALUATION METHOD

Knowledge is evaluated through oral and written examination. Assessment of knowledge in professional subjects is predominantly through drawings – designs; the oral exam can be defence of a graphic presentation; the written exam can also be the preparation of such a presentation. The grades for most subjects, i.e. those that are conducted as lectures and Tutorials, consist of two parts: the grade for the (theoretical) exam and graded Tutorials, the latter varying from subject to subject. The subject Design Studio 1 has a single grade; the subjects Design Studio 2, 3, 4, and 5 have dual grades (individual work, tutorials). Elective subjects are graded with a single (examination) grade.

In line with University of Ljubljana's Statute, 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 – 50% and less: unsatisfactory: knowledge does not meet minimum criteria.

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

Year 1, 1st semester

Subj. no.	Subject	Lecturer	Contact hours					Total hours	ects
			lectures	Seminar	Tutorials	Other for. of study	Indep. work of student		
1.2	Architectural Design 1	prof. Maruša Zorec prof. mag. Tadej Glažar	15		30	15	90	150	5
1.3	Mathematics	izr. prof. dr. Jaka Smrekar	30		15		45	90	3
1.4	Descriptive Geometry	doc. dr. Domen Kušar	15		30		45	90	3
1.5	Technical Mechanics	prof. dr. Vojko Kilar	30		15		75	120	4
1.6	Representation Techniques 1	izr. prof. dr. Jaka Bonča doc. dr. Špela Hudnik izr. prof. dr. Tomaž Novljan			60	30	120	210	7
1.7	Representation Techniques 2	doc. Leon Belušič	15			30	45	90	3
1.9	Materials and Forms	doc. Rok Žnidaršič	30		30		90	150	5
Total			135		180	75	510	900	30
Percentage			15		20	8	57	100	

Year 1, 2nd semester

Subj. no.	Subject	Lecturer	Contact hours					Total hours	ects
			lectures	Seminar	Tutorials	Other for. of study	Indep. work of student		
1.1	Design Studio 1	**			60	45	165	270	9
1.3	Mathematics	izr. prof. dr. Jaka Smrekar	30		15		75	120	4
1.4	Descriptive Geometry	doc. dr. Domen Kušar	15		30		75	120	4
1.5	Technical Mechanics	prof. dr. Vojko Kilar	30		30		60	120	4
1.7	Representation Techniques 2	doc. Leon Belušič	15			30	75	120	4
1.8	Digital Methods and Representations	doc. dr. Or Ettlinger	30		30		90	150	5
Total			120		165	75	540	900	30
Percentage			14		18	8	60	100	

Year 2, 1st semester

Subj. no.	Subject	Lecturer	Contact hours					Total hours	ects
			lectures	Seminar	Tutorials	Other for. of study	Indep. work of student		
2.1	Design Studio 2	**			90	45	135	270	11
2.2	Architectural Design 2	doc. Mitja Zorc	15		30	15	90	150	5
2.5	Building Physics	prof. dr. Sašo Medved.	30		15		75	120	4
2.7	History and Theory of Architecture 1	izr. prof. dr. Petra Čeferin	30		30		90	150	5
2.8	Structures 1	doc. dr. Tomaž Slak	30		30		90	150	5
Total			105		195	60	480	840	30
Percentage			13		23	7	57	100	

Year 2, 2nd semester

Subj. no.	Subject	Lecturer	Contact hours					Total hours	ects
			lectures	Seminar	Tutorials	Other for. of study	Indep. work of student		
2.1	Design Studio 2	**			90	60	120	270	7
2.4	Colour in Architecture	izr. prof. dr. Tomaž Novljan	15			15	60	90	3
2.3	Structures and Dimensioning	prof. dr. Vojko Kilar	30		60		60	150	5
2.6	Introduction to Urbanism	prof. dr. Tadeja Zupančič	15		30	15	90	150	5
2.9	Introduction to Art Theory	izr. prof. dr. Jaka Bonča	30		15		75	120	4
2.10	Architectural Workshop 1	**			15	15	30	60	2
2.11	Study Practice 1	doc. dr. Tomaž Slak				45	75	120	4
Total			90		210	150	510	960	30
Percentage			9		22	16	53	100	

Year 3, 1st semester

Subj. no.	Subject	Lecturer	Contact hours					Total hours	ects
			lectures	Seminar	Tutorials	Other for. of study	Indep. work of student		
3.1	Design Studio 3	**			60	60	120	240	8
3.2	Architectural Design 3	prof. mag. Tomaž Krušec	15		30	15	90	150	5
3.4	Structures 2	izr. prof. dr. Matej Blenkuš	30		30		90	150	5
3.8	History and Theory of Architecture 2	izr. prof. Mihael Dešman	30		30		90	150	5
3.9	Utility Technologies	prof. dr. Sašo Medved	30		30		60	120	4
3.11	Elective Subject	***A	30 (15)		(15)		60	90	3
Total			135 (150)		180 (195)	75	510	900	30
Percentage			15 (17)		20 (22)	8	57	100	

Year 3, 2nd semester

Subj. no.	Subject	Lecturer	Contact hours					Total hours	ects
			lectures	Seminar	Tutorials	Other for. of study	Indep. work of student		
3.1	Design Studio 3	**			60	60	120	240	8
3.3	Building Mechanics	prof. dr. Vojko Kilar	30		30		90	150	5
3.5	Building Technology and Materials	prof. dr. Martina Zbašnik Senegačnik	30		30		90	150	5
3.6	Urban Design	doc. mag. Polona Filipič	30		30		90	150	5
3.7	Representation Techniques 3	prof. Jurij Sadar			30	30	90	150	5
3.10	Architectural Workshop 2	**			15	15	30	60	2
Total			90		195	105	510	900	30
Percentage			10		22	11	57	100	

Year 4, 1st semester

Subj. no.	Subject	Lecturer	Contact hours					Total hours	ects
			lectures	Seminar	Tutorials	Other for. of study	Indep. work of student		
4.1	Design Sstudio 4	**			60	45	75	180	6
4.2	Architectural Design 4	izr. prof. mag. Vasa J. Perović	15		30	15	90	150	5
4.3	Development of Urbanism	izr. prof. dr. Lucija Ažman Momirski	60				90	150	5
4.7	History and Theory of Architecture 3	prof. dr. Aleš Vodopivec	30		30		90	150	5
4.8	Management in Architecture	doc. dr. Domen Zupančič	30				60	90	3
4.11	Elective subject	****A	30 (15)		(15)		60	90	3
4.12	Elective subject	****B	30 (15)		(15)		60	90	3
			195 (165)		120 (150)	60	525	900	30
			22 (18)		13 (17)	7	58	100	
			Percentage						

Year 4, 2nd semester

Subj. no.	Subject	Lecturer	Contact hours					Total hours	ects
			lectures	Seminar	Tutorials	Other for. of study	Indep. work of student		
4.1	Design Studio 4	**			60	60	180	300	10
4.4	Landscape Architecture	doc. Mojca Gregorski	30		30		90	150	5
4.5	Urban Planning	izr. prof. dr. Ilka Čerpes	30		30		90	150	5
4.6	Architectural Renewal and Conservation	prof. Maruša Zorec	30		30		90	150	5
4.9	Façade Technologies	izr. prof. mag. Aleš Prinčič			30	15	45	90	3
4.10	Architectural Workshop 3	**			15	15	30	60	2
			Total	90	195	90	525	900	30
			Percentage	10	22	10	58	100	

Year 5, 1st semester

Subj. no.	Subject	Lecturer	Contact hours					Total hours	ects
			lectures	Seminar	Tutorials	Other for. of study	Indep. work of student		
5.1	Design Studio 5	**			135	75	120	330	11
5.2	Urban Sociology	izr. prof. dr. Marjan Hočevar	30				60	90	3
5.3	Building and Planing Legislature	prof. dr. Tadeja Zupančič	30				60	90	3
5.4	Greneral Safety	doc. dr. Domen Kušar	30				60	90	3
5.5	Elective Subject A	****	30 (15)		(15)		60	90	3
5.6	Elective Subject B	****	30 (15)		(15)		60	90	3
5.7	Study Practice 2	izr. prof. mag. Anja Planišček, doc. Rok Žnidaršič				45	75	120	4
			150 (120)		135 (165)	120	495	900	30
			17		15	13	55	100	
			Percentage (13)		(18)				

Year 5, 2nd semester

Subj. no.	Subject	Lecturer	Contact hours					Total hours	ects
			lectures	Seminar	Tutorials	Other for. of study	Indep. work of student		
5.8	Master Degree	*				345	555	900	30
						345	555	900	30
						38	62	100	
			Percentage						

ID – in line with the adopted accredited programme Long–Cycle Master’s Study Programme in Architecture, UL FA offers

* Independent Work to the extent provided in the tables.

In the first year students are assigned mentors by the Academic Affairs Committee. From year 2 onward, the student is free to choose his/her mentor. The list of mentors is approved by the Academic Affairs Committee. Lecturers of Design Studio 1–5, Architectural Workshop 1–3 and diploma supervisors are all architects that also teach one of the other subjects and can provide adequate

** professional references.

*** Study Practice: 1: at a construction site; 2: in an architectural (design) office.

In years 3, 4, and 5, the student selects a subject each from group “A”, in years 4 and 5 the student selects a subject each from group “B”. A minimum of 5 students signed up is required to run a course.

A Elective subjects, group »A«

A1

- 1 Residential Buildings izr. prof. mag. Anja Planišček
- 2 Public Buildings prof. mag. Tadej Glažar
- 3 Industrial Buildings izr. prof. dr. Sonja Ifko
- 4 Recreational Buildings doc. dr. Domen Zupančič
- 5 Sacral Buildings doc. dr. Leon Debevec
- 6 Interior Design izr. prof. mag. Aleš Prinčič

A2

- 1 20th Century Slovene Architecture doc. dr. Nataša Koselj
- 2 Architectural Theory and Critique izr. prof. dr. Petra Čeferin
- 3 Architectural Anthropology...
- 4 Architectural Analogies izr. prof. dr. Lucija Ažman Momirski
- 5 Introduction to Research in Architecture and Urbanism
prof. dr. Tadeja Zupančič, izr. prof. dr. Ljubo Lah
- 6 Ecological Building Principles prof. dr. Martina Zbašnik Senegačnik
- 7 Analysis of Contemporary Architecture
izr. prof. dr. Petra Čeferin.
- 8 Heritage Interpretation izr. prof. dr. Sonja Ifko

A3

- 1 Theory of Physical and Regional Planning...
- 2 Communal and Housing Economy
izr. prof. dr. Maruška Šubic Kovač
- 3 Land Policy and Property Evaluation
izr. prof. dr. Maruška Šubic Kovač
- 4 Rurism and Rural Architecture izr. prof. dr. Alenka Fikfak
- 5 Action Planning and Strategic Assessment
izr. prof. dr. Ažman Momirski
- 6 Urban Brownfields doc. dr. Primož Hočevar

B Elective subjects, group »B«

B1

- 1 Vernacular Architecture doc. dr. Domen Zupančič
- 2 Design of Objects doc. Leon Belušič
- 3 Design Concepts izr. prof. dr. Jaka Bonča
- 4 Light in Architecture izr. prof. dr. Tomaž Novljan
- 5 Design of Green Surfaces prof. dr. avorin Gazvoda
- 6 Settlement Culture doc. Aleksander S. Ostan
- 7 Space and Recreation izr. prof. dr. Alenka Fikfak
- 8 Parametric Design and GIS in Achitecture
izr. prof. dr. Lucija Ažman Momirski

B2

- 1 Art History...

- 2 Spatial Idiomatics prof. Maruša Zorec
- 3 Elements of Classical Composition doc. dr. Leon Debevec
- 4 Environmental Psychology prof. dr. Matija Svetina
- 5 Theory of Architectural Design...
- 6 Measurement Standardisation...
- 7 Artistic Expression ...
- 8 Creative Design doc. Primož Jeza
- 9 History and Theory of Architecture 4 doc. dr. Nika Grabar
- 10 On the Nature of Materials: History, Theory, and Transformation doc. Paul O. Robinson

B3

- 1 Comprehensive Preservation of Built Heritage
prof. Maruša Zorec
- 2 Renewal and Adaptation prof. Maruša Zorec
- 3 Integral Renewal izr. prof. dr. Ljubo Lah
- 4 Preservation of Contemporary Architectural Heritage
izr. prof. dr. Sonja Ifko
- 5 Architecture and Archeology izr. prof. dr. Lucija Ažman Momirski

B4

- 1 Graphics for Architects izr. prof. Boštjan Botas Kenda
- 2 Space and Media doc. dr. Matevž juvančič
- 3 Computer Supported Architecture prof. dr. Žiga Turk
- 4 Architecture of Virtual Space doc. dr. Or Ettlinger
- 5 Freehand Drawing doc. Leon Belušič
- 6 Approaches to Creativity doc. dr. Or Ettlinger
- 7 Digital Modelling and Production prof. Juruj Sadar
- 8 Basics of Computer Programming doc. dr. Simon Petrovčič

B5

- 1 Building Prefabrication doc. dr. Domen Kušar
- 2 Concepts of Structures prof. dr. Vojko Kilar
- 3 Structural Systems doc. dr. Lara Slivnik
- 4 Structures of Industrial Buildings izr. prof. dr. Matej Blenkuš
- 5 The Detail in Architectural Composition prof. Jurij Sadar
- 6 The Detail in the Interior ...
- 7 Spatial Acoustics...
- 8 Energy and Ecological Assessment of Buildings
prof. dr. Sašo Medved
- 9 Modeling of Façade Envelope prof. dr. Martina Zbašnik Senegačnik

B6

Subjects hosted by other faculties of the University of Ljubljana approved by UL FA's Academic Affairs Commission, subject to the consent of the hosting faculty.

10 SUMMARY OF ELECTIVE SUBJECTS AND MOBILITY

Relation between mandatory and elective subjects:

Mandatory subjects	80,3 %	Elective subjects	19,6 %
	241 ects		59 ects
Subjects with mandatory content	180 ects	Subjects with elective content	44 ects
All subjects not specifically stated in this table		The student selects the lecturer	
		2.10	
		Architectural Workshop 1	2 ects
		2.11	
		Study Practice 1	4 ects
		3.10	
		Architectural Workshop 2	2 ects
		4.10	
		Architectural Workshop 3	2 ects
		5.7	
		Study Practice 2	4 ects
		Master Degree	30 ects
Subjects with required content	61 ects	Elective subjects group A	9 ects
The student selects the lecturer		The student selects subjects from any of group A modules	
2.1			
Design Studio 2	18 ects		
3.1			
Design Studio 3	16 ects		
4.1			
Design Studio 4	16 ects		
5.1			
Design Studio 5	11 ects		
		Elective subjects group B	6 ects
		The student selects subjects from any of group's modules.	
		<i>If a subject from module B6 is selected, it has to be approved by the Academic Affairs Committee, subject to the consent of the hosting faculty.</i>	

Mobility: The student can apply for a half- or full-year placement abroad as part of the Erasmus+ programme from (including) the third year onwards.

11 BRIEF PRESENTATION OF COURSES

1.1 Design Studio 1 9 ects – **

A small-scale building in a given layout and dimensions; A simple programme; Methodological approach; A simple timber, brick, concrete, or stone structure; Programme site selection and placement; A simple structure, using timber, brick, concrete, or stone materials; Choice of building materials; Description of layout; Free-hand drawing; constructed perspective drawing, technical drawing, model; Public presentation.

1.2 Architectural Design 1 5 ects – prof. Maruša Zorec, prof. mag. Tadej Glažar

Basics of architectural design. Architecture as an idea, theory, and materialisation. Characteristics of spaces and objects: dimension, form, size, position. Man as the measure and criterion. Nature and architecture, abstraction, context and concept. Elements of architecture, composition, light and structure. Typologies, materials and principles of sustainable planning.

1.3 Mathematics 7 ects – izr. prof. dr. Jaka Smrekar

Mathematical tools and their use with practical examples: mathematical logic, vectors, analytic geometry, linear equation systems, real numbers, series and sequences, elementary functions, limits and linearity, differential, extremal problems, use of calculus in geometry and statics, functions of two variables, curves and surfaces in space.

1.4 Descriptive Geometry 7 ects – doc. dr. Domen Kušar

The axiomatic of projective and descriptive geometry, projection principles, types of projections, basics of projective geometry: projectivity, perspective, affinity, collineation, planimetric and stereometric constructions; intersections, cross-sections, parallel projections; elevation projection; axonometric projections, central projection; shading.

1.5 Technical Mechanics 8 ects – prof. dr. Vojko Kilar

Basics of technical mechanics: balance, tipping, reactions and balance conditions, geometrical properties of sections, materials of structures, design strength, modulus, internal forces, tension, and fundamentals of dimensioning (stretching – of rope, pressure and bending – of bars, bending and shear – supports, eccentric loads

– foundation), frames, arches, torsion, calculation of bending and shifting, statically undetermined structures.

1.6 Representation Techniques 1 7 ects – izr. prof. dr. Jaka Bonča,

doc. dr. Špela Hudnik, izr. prof. dr. Tomaž Novljan

Expressing architectural ideas: sketch, design, model. Analogue and digital tools. Pens, rulers, triangular rulers, callipers and drawing compasses, bit graphics, vector graphics, CAD, digital building information modelling tools – BIM. Technical and artistic properties of architectural objects. Elements of a plan: scale, projection. Writing. Stroke, character, surface. Relationship: plan views, views, and (cross) sections.

1.7 Representation Techniques 2 7 ects – doc. Leon Belušič

Freehand drawing in various perspective views. Drawing of simple and complex organic and orthogonal forms. Transfer of an idea, concept, and thought to the drawing board. Anatomy of a drawing. Observation and visual thinking, abstraction, and visual composition. Perception and understanding of interiors and exteriors and visual interpretation in various techniques.

1.8 Digital Methods and Representations 5 ects – doc. dr. Or Ettliger

This course provides a basic familiarity with the principles of digital technologies and their various applications in architecture. As digital technology keeps changing, the course aims to provide an understanding on a level that would remain relevant in its future development. The course builds the basis to support students in their independent learning in the field.

1.9 Materials and Forms 5 ects – doc. Rok Žnidaršič

Materialisation of architectural expression. Knowledge and grasping the interdependence of characteristics of materials, building technology, theoretical principles, and architectural design. The topics are addressed through the analysis of selected examples of historical, vernacular, and contemporary architecture and through practical attempts at designing and producing spatial structures.

2.1 Design Studio 2 19 ects – **

A medium-scale building in given dimensions at a given site; The programme stretches across several floors; Methodological approach leading to production of a concrete, or other, structure; Site selection and placement of the programme; Dimensioning of basic structural

elements; Façade envelope, fittings layout; Freehand presentation, technical drawing, colouring, model; Public presentation.

2.2 Architectural Design 2 5 ects – doc. Mitja Zorc

Architectural system design. Compositional and organisational principles of connecting spatial and material elements into architectural compositions. The topics are addressed by analysing selected cases of historical, vernacular and contemporary architecture as well as practical attempts of designing simple buildings.

2.3 Structures and Dimensioning 5 ects – prof. dr. Vojko Kilar

Fundamentals of designing load-bearing structures using the method of limiting conditions in line with common European standards (Eurocodes); determination and distribution of permanent and variable loads; structure and dimensioning of structural elements (supports, pillars, bars, frames, panels) from various materials (timber, steel, concrete); horizontal stability of objects; joints.

2.4 Colour in Architecture 3 ects – izr. prof. dr. Tomaž Novljan

The role of colour in space. Physical properties of colour. Additive and subtractive colour mixing. The effect of colour on spatial perception. Colour composition and ergonomics. History of colour in architecture. Colour in interior and exterior spaces. Colour and spatial scale. Dimensions of colour. Colour of materials. Contrast and abstraction. Light and shadow. Colour as a bearer of meaning.

2.5 Building Physics 4 ects – prof. dr. Sašo Medved.

Heat transfer, thermal transmittance, heat bridges, energy efficiency of building envelope, experimental and calculation methods, mechanisms of moisture dynamics in structures, h-x diagram, condensation in building structures; requirements and checking of natural and electrical lighting in buildings, mechanisms of sound transfer through air and impact sound, room acoustics, sound insulation; fire progression, response and requirements of fire safety in buildings.

2.6 Introduction to Urbanism 5 ects – prof. dr. Tadeja Zupančič

Space of a city, development, getting to know a city with an experiential emphasis at the micro level, pedestrian/society – users of urban spaces, natural conditions,

cultural environment—architectural spaces, traffic, visual and acoustic connections, harmonizing elements, principles, and study methods, planning and designing urban spaces.

2.7 History and Theory of Architecture 1 5 ects

izr. prof. dr. Petra Čeferin.

The course has two interrelated goals. Firstly, it aims to present the significance of history of architecture for architectural theory and practice. It particularly focuses on the period from beginnings of architecture to the end of Roman Antiquity. Secondly, the goal is to present a network of fundamental notions and methodological approaches of architectural theory, which allow us to answer two questions: What is architecture? and How does architecture work across space and time?

2.8 Structures 1 5 ects – doc. dr. Tomaž Slak

Construction elements of buildings (foundation design, vertical and horizontal load transferring systems, systems for distribution of surface load, roof structures) bridges, special structural systems and non-load-bearing building elements. Construction logics and tectonics, building configuration, development of structures across time, design production and specificities.

2.9 Introduction to Art Theory 4 ects – izr. prof. dr. Jaka Bonča

Artistic practice and art theory; what is art theory and its subject matter; form and content; standard element, machine production, standard measuring system; perceptive realisation of form; perceptive realisation of space; form–system–scale, module, scale, ratio, proportion; colour theory; colour contrasts.

2.10 Architectural Workshop 1 2 ects – **

The workshop's topic is either architecture, urban planning, or design. It combines various knowledge, experience, and views on professional issues thus, along with a distinctly critical approach to the profession, allowing the students to develop their own professional personality. It provides a comparison of various working methodologies on an applied basis and their conclusions with a creative synthesis and specific expressions of the mentors who oversee the students' work.

2.11 Study Practice 1 4 ects – doc. dr. Tomaž Slak

Insight into building construction complements the project work in other courses. By visiting the construction site and documenting the workflow, the student gains the know-how and experience about implementation problems in architecture. The student also learns, first hand, about construction complexity, materials, and coordination of everyone involved.

3.1 Design Studio 3 16 ects – **

Large-scale building in an actual urban environment with given dimensions; mixed-use programme; methodological approach; complex structure; project definition, detailed treatment, modular organisation; dimensioning of basic elements, technical regulations, fire safety; façade envelope, utilities design; computer presentation, freehand sketches, model; public presentation.

3.2 Architectural Design 3 5 ects – prof. mag. Tomaž Krušec

Relationship between a building and the spatial context; clarity and legibility of the architectural concept; studying the relationship between the composition design of a building and the site's boundary conditions; architectural composition as a reflection of the distinct structural design (in collaboration with Structures 2); poetics of the interior.

3.3 Building Mechanics 5 ects – prof. dr. Vojko Kilar

Main phases of structural design: concept and choice of a construction system, assessment of dimensions of load-bearing elements, preparation of computer models, analysis and proof of mechanical resistance and structural stability. Use of software to analyse structures, earthquake-resistant structural design, new materials, and advanced technologies.

3.4 Structures 2 5 ects – izr. prof. dr. Matej Blenkuš.

The concept of the relationship between structures and architecture. The principles of structural aesthetics. Fundamentals of selection and use of materials in structures. The principle of primary and secondary structure, prefabricated building, bridges, skeleton structures, massive structures, principles of designing tall buildings and other architectural typologies.

3.5 Building Technology and Materials 5 ects –

prof. dr. Martina Zbašnik Senegačnik

Development of materials and building technologies over time. Properties and use of materials: stone, ceramics and bricks, metals, glass, concrete, polymers, timber, thermal insulation, façade linings. Criteria for selection of materials. Issues in building finalisation, composition of envelope structures and surface treatment at the architectural design level.

3.6 Urban Design 5 ects – doc. mag. Polona Filipič

Learning about the theoretical background and operational tools for studying and interpreting various urban circumstances in the context of the contemporary city. Introduction to the methods and techniques of interpretation of spatial data in the process of searching for and spatial analysis of the idea of reforming various urban situations (concept). Implementation of the project process, with a sense for balancing standards and congruence in space.

3.7 Representation Techniques 3 ects – prof. Jurij Sadar

The architect's work method; how a project is developed using various representation techniques. A broad range of techniques is shown, e.g. a sketch, collage, still life, rendering, photography, words, allowing for the architects to communicate their work with other stakeholders. A series of as regular and guest lectures by external experts.

3.8 History and Theory of Architecture 2 ects – izr. prof. Mihael Dešman

Milestones in architectural history are addressed, from antiquity to the early modernity. We learn about periods, cities, buildings, architects, typology in architecture, construction methods, as well as theoretical works relevant or seminal to architecture. We analyse and interpret architectural designs in the light of their genesis and develop critical understanding of architecture as an art, science, and construction philosophy.

3.9 Utility Technologies 4 ects – prof. dr. Sašo Medved.

Energy conversion and environmental impacts, non-renewable and renewable energy sources, living comfort, ventilation, heating, cooling, and air-conditioning – physical basis, operation, planning, energy efficiency, good practices, technologies for converting renewable energy resources, water supply, sanitary fixtures, fire

safety installations in buildings, electrical installations, information systems.

3.10 Architectural Workshop 2 ects – **

The workshop's topic is either architecture, urban planning, or design. It combines various knowledge, experience, and views on professional issues thus, along with a distinctly critical approach to the profession, allowing the students to develop their own professional personality. It provides a comparison of various working methodologies on an applied basis and their conclusions with a creative synthesis and specific expressions of the mentors who oversee the students' work.

4.1 Design Studio 4 ects – **

The last three semesters of this course are an extension of the Design Studio course in the previous years. A demanding project task is devised by the mentor and the student, aligned to the Studio's orientation (architecture, design, or urban planning). Public presentation.

4.2 Architectural Design 4 ects – izr. prof. mag. Vasa J. Perović.

The subject explains contemporary architecture through the topics of housing, work and production, education, leisure, and infrastructure. Design examples are shown typologically (from a prototype to a typology) and with regard to the public/private relationship, in the context of the historical architectural background and simultaneous social events.

4.3 Development of Urbanism 5 ects –

izr. prof. dr. Lucija Ažman Momirski

Introduction: basic terminology, genesis of spatial elements. From forms to concepts. The continuous city, the return of amorphous structures, the feudal "bastion city", the Renaissance "ideal city", the Baroque residential city, the rationalist "Georgette city", the modern "tartan city" of the 19th and 20th century (until 1945 and after 1945), the contemporary 21st century city.

4.4 Landscape Architecture 5 ects – doc. Mojca Gregorski

Natural, cultural, and urban landscape. Relationships between architecture and the landscape. Theoretical and historical background for understanding the elements, characteristics, and processes in the landscape. Addressing landscape types in terms of design and perception;

landscape from the viewpoints of painting, philosophy, infrastructure, urbanism, technology, and ecology.

4.5 Urban Planning 5 ects – izr. prof. dr. Ilka Čerpes.

Presentation of the overall urban planning process (definition of the term, characteristics of contemporary urban space, social role of the architect, goals, values) and testing the methods of reading into space, land use distribution, organisation of activities, management of networks, and morphological patterns on a real example.

4.6 Architectural Renewal and Conservation 5 ects – prof. Maruša Zorec

Mission and challenges of the conservation profession. Overview of history and development of the doctrine. Work process, criteria of conservation, research methods, documenting. Presentation of concepts with practical examples – from archaeology to 20th-century typologies – industrial and modernist heritage. Revival of village and urban centres. Renewal processes, materials, techniques, structures.

4.7 History and Theory of Architecture 5 ects – prof. dr. Aleš Vodopivec

Historical overview of architectural thought and creativity of the 20th century in line with the developments and insights in social sciences, natural sciences, philosophy, arts, and technology. The course addresses art style and movements and the most significant architects who shaped the modernist conceptions of space.

4.8 Management in Architecture 3 ects – doc. dr. Domen Zupančič

The aim of this course is to present the interdependence between the architect's practical work and the clarification of individual phases using various tools and methods for competent decision making and implementation in planning. Architecture is a multidisciplinary activity. Architects carry out various tasks concerning spatial design. They must act in line with professional principles and in accordance with the legislative framework pertaining to construction.

4.9 Façade Technologies 3 ects – izr. prof. mag. Aleš Prinčič

The course outlines the role of the façade as an inherent part of the overall architectural design. By establishing a dialogue between internal and external events, the façade becomes an element of expression. Technical solutions are understood as a guidance for dressing up an architectural idea.

4.10 Architectural Workshop 3 2 ects – **

The workshop's topic is either architecture, urban planning, or design. It combines various knowledge, experience, and views on professional issues thus, along with a distinctly critical approach to the profession, allowing the students to develop their own professional personality. It provides a comparison of various working methodologies on an applied basis and their conclusions with a creative synthesis and specific expressions of the mentors who oversee the students' work.

5.1 Design Studio 5 11 ects – **

This course is a continuation of Design Studio 4 and preparation for the graduation work at the same time. A demanding project task is devised by the mentor and the student, aligned to the Studio's orientation (architecture, design, or urban planning). Public presentation.

5.2 Urban Sociology 3 ects – izr. prof. dr. Marjan Hočevar

The social character, significance and function of space; spatial organisation of the society. Sociological interpretation of the relationship between architectural design and urban planning: the issue of the translatability of cognition in fine arts into social sciences. Understanding urbanism in terms of balancing (regulating) the complexity of social interactions, processes, and anticipation of spatial changes.

5.3 Building and Planning Legislation 3 ects – prof. dr. Tadeja Zupančič

Spatial order, spatial management, rules in spatial management; level of normative cover; relation between legal and ethical norms; legislature in spatial planning and design in Slovenia, conditions in neighbouring and comparable countries; directives and recommendations on the EU level; architectural and urban design project through the legislation prism.

5.4 General Safety 3 ects – doc. dr. Domen Kušar

Systematic study of hazards in the built environment and possible urban planning, architectural, and technical safeguard measures; fire safety: minimum clearance between buildings, prevention of fire progression in the building, smoke and heat evacuation, conditions for safe evacuation and emergency response; safety at work, safety from contamination.

5.7 Study Practice 2 4 ects – izr. prof. mag. Anja Planišček, doc. Rok Žnidaršič

This course has three possible delivery formats: one-month practice placement in an architectural/design office, which upgrades the work in a simulated office setting in Design Studio 1–5 with real practical architectural office experience; involvement in projects using the principle ‘design–build’, which combines planning and implementation practices; practice placement within organisations concerned with heritage protection.

Elective subjects, group »A«

A 1.1 Residential Buildings 3 ects – izr. prof. mag. Anja Planišček

This course focuses on housing policy (residence, types of housing, role of the state); historical development and contemporary residential construction; development of residential construction in Slovenia; housing typologies; technological, organisation schemes, with an emphasis on spatial adaptability. The tutorials focus on designing apartment layouts in various building typologies.

A 1.2 Public Buildings 3 ects – prof. mag. Tadej Glažar

Students grasp the laws, significance, purpose, and character of individual building typologies through analysis of selected public buildings. The analytical apparatus is based on the analysis of high-quality reference buildings and cases from Slovenia and beyond. Comprehension of public buildings through people who use them, live, or work in them.

A 1.3 Industrial Buildings 3 ects – izr. prof. dr. Sonja Ifko

Cultural aspects of designing industrial buildings; development of industrial architecture – places of work across time; designing for new conditions in development – Industry 4.0, Industry 5.0, circular economy; flexibility and functionality; new work formats and workplaces in the future; revitalisation of historical structures for new conditions – the old and the new for balanced sustainable development.

A 1.4 Recreational Buildings 3 ects – doc. dr. Domen Zupančič

This course addresses leisure, sports, and play facilities. The format is interactive, some assignments are carried out as part of seminar projects. Architecture and sports are combined in various ways. The aim is to recognise the

potentials in the built and open environment for siting various recreation facilities.

A 1.5 Sacral Buildings 3 ects – doc. dr. Leon Debevec

This course offers a complex insight into architectural characteristics of space where individuals come in contact with transcendental reality. By showing the development of its most significant elements, understood as a reflection of theological, ceremonial, and iconographic particularities of individual religions, the course substantiates sacral architecture as a field of artistic creation with its own identity.

A 1.6 Interior Design 3 ects – izr. prof. mag. Aleš Prinčič

Insight into spatial identity, aesthetics, desires, and needs. Harmony of atmospheres and creating of a vision. Artistic attitude to space. In-depth understanding of elements, colours, materials, light. Design as part of a non-linear process. Use of simulators to improve concepts, sensitivity, and designers’ personalities. Collages and sequences. Tradition lays the ground for new atmospheres.

A 2.1 20th Century Slovene Architecture 3 ects – doc. dr. Nataša Koselj

The sources and concepts of modern architecture, major works, their authors; analysis of common characteristics and differences in domestic and worldwide pre-war and post-war modernism; the phenomenon and characteristics of the School of Architecture in Ljubljana in the 20th century, its guiding principles and influential areas; evaluation and guidelines for preservation and protection in connection with Docomomo International.

A 2.2 Architectural Theory and Critique 3 ects – izr. prof. dr. Petra Čeferin.

The course deals with some important orientations and conceptualisations in contemporary architectural theory and philosophy of architecture, which are relevant for understanding the contemporary architectural practice. It focuses on relevant issues in architecture and its functioning in today’s society. The course is designed as introduction to critical evaluation and writing about architecture.

A 2.3 Architectural Anthropology 3 ects – ...

Introduction to the basic principles of interaction, interdependence, and the co-evolution of man and the anthropogenic material/physical environment; the

human being as animal symbolicum, as a biophysical and symbolic creature; basic terms of semiotics and the information theory; the origin of architecture and the city; the interdisciplinary structure of architectural anthropology.

A 2.4 Architectural Analogies 3 ects – izr. prof. dr. Lucija Ažman Momirski

Reasoning by analogy is inference from specific to specific: if two objects correspond in certain characteristics known to us, they might correspond in those unknown to us. The student learns about the working method that supports critical monitoring and new and different interpretations of topical content in architecture and urbanism.

A 2.5 Introduction to Research in Architecture and Urbanism 3 ects – prof. dr. Tadeja Zupančič, izr. prof. dr. Ljubo Lah

Research approaches, methods, and techniques: between individual creativity and team creativity; gaining information and effective communication; paths to designing architectural ideas and concepts; the psychology of creativity; devising the architectural programme and project tasks; presentation and interpretation of research/project results.

A 2.6 Ecological Building Principles 3 ects — prof. dr. Martina Zbašnik Senegačnik

Analysis of materials and structures according to ecological principles (ecological, natural, local materials and structures); learning about relevant technologies for particular planning approaches (nearly zero-energy buildings, passive house; solar house, bioclimatic house, ecohouse); integrating principles of ecological building into the concept of building and settlement (solar plants, STCs, green roofs, and façades).

A 2.7 Analysis of Contemporary Architecture 3 ects – izr. prof. dr. Petra Čeferin.

The course addresses open questions of contemporary architecture, such as: the role and tasks of architecture in the society today; ways of engagement of architectural production with the economic, political, cultural, and architectural contexts of its emergence; the significance and role of the media in contemporary architecture; questions of architectural autonomy.

A 2.8 Heritage Interpretation 3 ects – izr. prof. dr. Sonja Ičko

The role of heritage in modern-day society: heritage as the indicator of cultural identity, as a spatial development and economic development potential; interpretation of heritage in the light of theory and conservation theory; description of methods and techniques for interpreting natural and cultural heritage; presentation and critical analysis of current trends worldwide concerning heritage interpretation.

A 3.1 Theory of Physical and Regional Planning 3 ects – ...

Historical overview of the development of spatial planning and regional sciences; basics of spatial planning legislation, documentation and governance; informational support in spatial planning, GISs and their use; methodological ground for planning primary uses in space, planning in the secondary and tertiary sectors; synthesis in the spatial plan, synthesis methods, and good practices.

A 3.2 Communal and Housing Economy 3 ects – izr. prof. dr. Maruška Šubic Kovač

The significance and role of municipal activities and economy, organisation and management models of undertaking municipal activities; evaluation of investment projects, the aspect of cost in implementing public-utility services. Basic terms and characteristics in the field of housing economy, methods for meeting public needs, characteristics of planning, building, and maintenance in housing economy.

A 3.3 Land Policy and Property Evaluation 3 ects – izr. prof. dr. Maruška Šubic Kovač

Land policy, building land acquisition, intervention in property rights, land development, and taxes. Property evaluation, value, costs, price, the subject of appraisal, assessed value. Property appraisal principles. Property appraisal methods. Standards of property appraisal. Mass property appraisal. Appraisal report production.

A 3.4 Rurism and Rural Architecture 3 ects – izr. prof. dr. Alenka Fikfak

Starting points and methodological bases for sustainable development of rural settlements according to their agricultural or urban function. The following fields will be addressed to promote understanding and design of contemporary rural architecture: rural culture and identity; genesis of the countryside with an emphasis on

agriculture as a forming element of the traditional rural cultural landscape, settlements, and architecture.

A 3.5 Action Planning and Strategic Assessment 3 ects –

izr. prof. dr. Ažman Momirski

Urban action planning is a form of informal/non-authoritarian planning that runs parallel to planning for real and analytical planning. The students learn about motives, solutions, and their applicability in the day-to-day practice of local urban planners and local planning services.

A 3.6 Urban Brownfields 3 ects – doc. dr. Primož Hočevar

Vacant or deserted construction land, empty and deserted buildings, suspended and deserted construction sites serve as the basic source for sustainable transformation and an asset in preventing the expansion of construction to the urban periphery. Such sites are classified as urban brownfields. The city redevelopment process should be primarily focused on the transformation of these weakest points, which can foster the process of sustainable transformation of the city.

Elective subjects, group »B«

B 1.1 Vernacular Architecture 3 ects – doc. dr. Domen Zupančič

Comprehensive issues of vernacular architecture, from theoretical background to recent solutions.

B 1.2 Design of Objects 3 ects – doc. Leon Belušič

Conceptual and design aspects of small architecture, which is not necessarily part of larger interiors or concepts. Architectural expression of the concept, model production, and integrated presentation in collaboration with external experts. Aspect of international and domestic achievements.

B 1.3 Design Concepts 3 ects – izr. prof. dr. Jaka Bonča

Design. Typography as the most organised artistic medium. Standard, modular, systemic elements. Forms composed of modular elements. Recognisability of a group and the group's elements. Terminology interpretation. Composition with many elements. Expression. A grid as the simplest system. Grid in graphic design and architecture.

B 1.4 Light in Architecture 3 ects – izr. prof. dr. Tomaž Novljan

Manifold significance of light in space. Physical and visual properties of light. Natural and artificial light. Shades, reflection, and absorption. History of lighting. Light design. Light ambiances. Light pollution. Interior and exterior lighting. Quality and quantity of lighting. Lighting technology. Light in virtual spaces.

B 1.5 Design of Green Surfaces 3 ects – prof. dr. Davorin Gazvoda

History of landscape architecture; landscape planning and design; landscape structure (emergence of landscape patterns); interpretation of the landscape; types of open space; city landscape; city parks; garden art; contemporary design; living culture – a single-family house with a garden; housing estate; Slovenian landscape architecture, water in the city; the concept of nature in landscape architecture.

B 1.6 Settlement Culture 3 ects – doc. Aleksander S. Ostan

The factors that historically shaped the environment that we live in are natural and man-made features of the environment, social organisation, historical milestones, ways of human perception of space, and the response to external environmental factors. The common denominator is called settlement culture, which can be the key element in forming contemporary housing patterns and spatial identities.

B 1.7 Space and Recreation 3 ects – izr. prof. dr. Alenka Fikfak

Significance and role of the course as a value of a high-quality life during studies and work; effects of the recreation activity and recreation space on the overall physical, mental, and social health; recreation as a preventive, corrective, and promotional activity for preservation of health; recreation as a way of life, and an essential part of a healthy lifestyle.

B 1.8 Parametric Design and GIS in Architecture 3 ects –

izr. prof. dr. Lucija Ažman Momirski

The theoretical framework of parametric design (definition, development, and analogue and digital models); parametric design in contemporary architectural practice; use of parametric software tools in architecture; design of dynamic and complex parametric models; integration of GIS with parametric design tools.

B 2.1 Art History 3 ects – ...

The concept of art in relation to natural and cultural heritage; various artistic disciplines: painting, sculpture, architecture, with a wide array of artistic practices, such as urbanism, landscape architecture, industrial and graphic design, photography, crafts, etc.; historical overview of art phenomena from prehistoric times to the present; learning about fundamental artistic terms, especially architectural elements and their composition.

B 2.2 Spatial Idiomatics 3 ects – prof. Maruša Zorec

Man and space, construction as a criterion for architectural expression (from the Renaissance to deconstructivism); bewitching the social into the spatial order; Traum and Wirklichkeit (Vienna Austria); Golden Prague (What is genius loci?); Dickens abridged: The Tale of Two Cities (London versus Paris); new tendencies; what is de-constructivism?

B 2.3 Elements of Classical Composition 3 ects – doc. dr. Leon Debevec

This course provides insight into the classical discipline that remains an irreplaceable basis of architectural creation. Through face-to-face learning about its value matrix, aesthetics, structure of its “syntax” and the most important tools of its application, it introduces the student to the knowledge of “the old”, whose achievements remain the highest measure of quality in architecture.

B 2.4 Environmental Psychology 3 ects – prof. dr. Matija Svetina

Theory and methods of environmental psychology; personal space, crowd, ownership in space, territorial behaviour; spatial orientation and cognition; perception mechanisms and structure of spatial likeability; attachment to space, home psychology; children and space; psychology of the learning and working environment; psychology of urban and public spaces.

B 2.5 Theory of Architectural Design 3 ects – ...

Design as an inter-subject, interdisciplinary, multi-phase creative process of spatial intervention; design as communication, agreement, coordination, integration of contributions; design aspects, types, and phases; the role of regulations and norms; basic design methodology and technology; basic general and particular methods and techniques and comparison of methods; systemic methods in design and issues of specialisation.

B 2.6 Measurement Standardisation 3 ects – ...

Theoretical and methodological principles of measurement standardisation in civil engineering: anthropometrics, Vitruvius' models, Renaissance partes, development of industrial standardisation

B 2.7 Artistic Expression 3 ects – izr. prof. dr. Jaka Bonča

Visual concept and design of space, substantive and conceptual aspect of space, expression using symbols. Fine arts design, artistic and spatial vocabulary, composition rules in fine arts, visual effects. Installation and architecton. Harmony, rhythm, dynamics, structure, texture, inner relationships. Material and spiritual content. Space, atmosphere, and setting.

B 2.8 Creative Design 3 ects – doc. Primož Jeza

Materialisation of architectural expression. Knowledge and grasping the interdependence of characteristics of materials, building technology, theoretical principles, and architectural design. The topics are addressed through the analysis of selected examples of historical, vernacular, and contemporary architecture and through practical attempts at designing and producing spatial structures.

B 2.9 History and Theory of Architecture 4 3 ects – doc. dr. Nika Grabar

Overview of concepts and ideas central to contemporary architectural thinking and creation. Analyses and interpretations of various works of central minds in architecture at the turn of the millennium are addressed in the light of current social, economic, artistic, and technological changes.

B 2.10 On the Nature of Materials: History, Theory, and Transformation 3 ects – doc. Paul O. Robinson

The optional subject is a critical overview of the history, theory and technical use of materials in the programming of architectural space. Teaching takes place in the form of lectures and workshops within which there is an emphasis on language, tectonics, mold making, and casting.

B 3.1 Comprehensive Preservation of Built Heritage 3 ects – prof. Maruša Zorec

Value-oriented and normative starting points; comprehensive preservation and renewal, as a method in physical planning, design of settlements and places.

B 3.2 Renewal and Adaptation 3 ects – prof. Maruša Zorec

The process of studying cultural heritage, from the whole to the detail. Recognising the existing vocabulary and developing a new vocabulary. Content and concepts of the new in the old. Discussion on the issues and scenarios of lifecycle of old buildings. Planning and checking comprehensive architecture. The study of methods and materials. Problems of the old–new contact. Examples of good practice.

B 3.3 Integral Renewal 3 ects – izr. prof. dr. Ljubo Lah

International starting points and terminology in architectural heritage protection; documenting, measurements, production of an architectural snapshot, evaluation of architectural heritage with the fundamentals of conservation plan preparation, development of programme and renewal concept, planning strategies and principles, integrated protection of architectural heritage, good and bad practices in preserving architectural heritage.

B 3.4 Preservation of Contemporary Architectural heritage 3 ects –

izr. prof. dr. Sonja Ifko

Research, preservation, and interpretation of the latest categories of the 19th and 20th century architectural heritage: modernist, industrial and engineering heritage; philosophy of conservation approaches; understanding the complexity of restorations and interdisciplinarity; critical analysis of good conservation practices; sustainable restoration as the basis of urban revitalisation processes.

B 3.5 Architecture and Archeology 3 ects – izr. prof. dr. Lucija Ažman Momirski

Learning about architecture and archaeology in theory (measurements and interpretation) and practice (transformation); quasi measurements and fantasised reconstructions; first attempts at scientific, systematic archaeology; controversies about antique architecture in the 18th and 19th centuries; the shift in the second half of the 19th century; the role of architects within the framework of archaeology in the 20th and 21st centuries.

B 4.1 Graphics for Architects 3 ects – izr. prof. Boštjan Botas Kenda

Graphic design in public space, in architecture, addressed through understanding the elements of visual communication, by considering real situations in modern urban day-to-day life. The rules of perceiving space

through letters, colours, signs, and materials, as a book, map, or diagram, set on the urban parterre, accepting the reasoning of the passer-by.

B 4.2 Space and Media 3 ects – doc. dr. Matevž juvančič

Upgrading of knowledge about various architectural representation techniques, media, and ways of communication with various users and audiences with state-of-the-art results of studies about processes of spatial cognition and interpretation, through considerations about their usefulness in the process of architectural and urban design.

B 4.3 Computer Supported Architecture 3 ects – prof. dr. Žiga Turk

The role of the computer in architecture: a medium, a tool, or an assistant? Communication revolutions: Bramante and Gehry. Technological trends: Building Information Modeling (BIM), cloud, artificial intelligence (AI), networks for connecting people and devices (Internet of Everything). New careers: from a digital modeller to the head of a digital project. Tutorials: project- and collaboration-oriented, in BIM environment.

B 4.4 Architecture of Virtual Space 3 ects – doc. dr. Or Ettliger

The course combines art history, theory of the media and film studies – and their relationship with architecture. It explores and connects the abstract idea of virtual space and experiencing space through images, regardless of their medium. It also studies the role of architectural content in the structuring of experience of the virtual space, from Antiquity to the technology of the future.

B 4.5 Freehand Drawing 3 ects – doc. Leon Belušič

Lectures and drawing in the “studio” from the model, body tectonics, body anatomy, body in motion, dressed figure, visual interpretation for creating and shaping artistic expression, emotional expression, and rational comprehension.

B 4.6 Approaches to Creativity 3 ects – doc. dr. Or Ettliger.

This course presents different approaches to creativity as seen from the perspectives of art, design, science, and the humanities. It is meant as a support to students in their studies and professional lives. It encourages students to discover, expand, and master their own creative abilities and understand how to flexibly select the most suitable for any given task.

B 4.7 Digital Modelling and Production 3 ects – prof. Jurij Sadar

A theoretical introduction to the application of digital technologies in the context of prototype production in the creative process of architectural planning. Students are introduced to the basics of digital model production and the use of digitally-guided tools (laser cutting, 3D-printing, robotic arm, etc.). Digital production of models and prototypes. A critical reflection on products from the aspect of their significance for public space and the society.

B 4.8 Basics of Computer Programming 3 ects – doc. dr. Simon Petrovčič

The course introduces students to basic techniques of programming in scripting languages (e.g. Python). The students will produce their own software tools using the modelling environment Rhinoceros/Grasshopper, used as part of creative processes of algorithm-supported design in architecture. In collaboration with the Faculty of Computer and Information Science of the University of Ljubljana.

B 5.1 Building Prefabrication 3 ects – doc. dr. Domen Kušar

The system of closed prefabricated building; the system of open prefabricated building; module and modularity and its significance in architecture; anthropometric and other measurement systems; standardisation of prefabricated components; structural systems; properties of prefabricated components; joints and joiners in prefabricated elements; the action radius; permanence of the construction season.

B 5.2 Concepts of Structures 3 ects – prof. dr. Vojko Kilar

Selected chapters in the fields of structures and civil engineering: the concept and design of structures in architecture, legislative frameworks of design and construction, designing earthquake-resistant buildings, state-of-the-art technologies, new construction details and materials, good practices in design, distance studies and design in collaboration with the Faculty of Civil and Geodetic Engineering of the University of Ljubljana (optional).

B 5.3 Structural Systems 3 ects – doc. dr. Lara Slivnik

Historical overview of various types structural systems: arch, lattice, frame, thin-shell, suspended, and inflatable structures. The use of innovative structural systems on the examples of buildings for world exhibitions and

Serpentine Gallery's pavilions. Three-hinged structures and mushroom structures will be highlighted as cases of special structural systems.

B 5.4 Structures of Industrial Buildings 3 ects – izr. prof. dr. Matej Blenkuš

Review of specific issues in factory building; heavy foundations, structural systems, components and typical details; general study of construction materials and methods; review of the building procedure.

B 5.5 The Detail in Architectural Composition 3 ects – prof. Jurij Sadar

The detail in architectural composition is the basic element of a building, determining both its functioning and its appearance. Through lectures and tutorials we show how the detail functions in the sense of technical, technological, and sustainable requirements; how details from previous periods could be elaborated with the technological capabilities available today, and how this would affect the building's appearance.

B 5.6 The Detail in the Interior 3 ects – ...

Detailed design of interior elements. Engineering/technical and comprehensive design aspects of the detail. Living quality, applicability, strength, safety, durability, economy, and harmony. Lighting and electric symbols, colour and texture. Whole, detail, and technical implementation. Worldview and craftsmanship. Stairs, requirements, and implementation. Kitchen technology. Materials and joints.

B 5.7 Spatial Acoustics 3 ects – ...

Theoretical foundations of sound (and noise); superposition of sound waves in space; propagation of sound waves through air, structures and manifestations; the effects on propagation of sound waves through air and structures, sound protection.

B 5.8 Energy and Ecological Assessment of Buildings 3 ects –

prof. dr. Sašo Medved

Micro climate conditions in cities and mitigation measures against heat islands, modelling of micro climate conditions and the spread of pollutants in the urban environment, EU legislation in the field of energy efficiency of buildings, design and modelling of nearly zero-energy buildings, renewable energies, assessment methods and the criteria of energy efficiency of buildings, LCA methods of environmental assessment,

environmental indicators and EPD, environmental certification of buildings.

B 5.9 Modeling of Façade Envelope 3 ects – prof. dr. Martina Zbašnik Senegačnik

Technological innovations in the façade envelope. The key parameters in its design. Digital design: ornamental, media, interactive, intelligent façades, biomimetics in architecture. Surface treatment of the façade. Modelling of particular components and production using robots. Active, passive, plus energy façade envelopes. BIM technology. CAD–CAM technology.