

**SECOND–CYCLE  
SINGLE MASTER  
STUDY PROGRAMME  
ARCHITECTURE**

**ENOVITI MAGISTRSKI  
ŠTUDIJSKI PROGRAM  
DRUGE STOPNJE  
ARHITEKTURA**

Changed in 2022

Univerza v Ljubljani  
Fakulteta za arhitekturo



**2023–2024**

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SINGLE MASTER  
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ARCHITECTURE**

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**UNIVERSITY OF LJUBLJANA  
FACULTY OF ARCHITECTURE LJUBLJANA, 2022**

We reserve the right to change the content.

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**ENOVITI MAGISTRSKI  
ŠTUDIJSKI PROGRAM  
DRUGE STOPNJE  
ARHITEKTURA**

**UNIVERSITY OF LJUBLJANA  
FACULTY OF ARCHITECTURE**

**O fakulteti**

"Faculty of Architecture is the largest institution of higher learning in Slovenia responsible for education of architects and urban planners. Creative work of its pedagogues and scientific advisors is responsible for top-level national and international achievements in the field of architectural art and science. Ideas and knowledge from the fields of economy and culture are able to pass into the pedagogical setting directly and without delay due to straightforward pedagogical work that includes active creators with practical experience. Students are constantly connected to practical experiences, economy, and local communities. Conversely, in close cooperation with other national institutions from the fields of architecture, urban planning, and visual arts, the faculty is responsible for preservation of architectural tradition and development of contemporary spatial theories. Cooperation on all levels takes the form of promoting quality and relevant master's theses, organization of conferences and exhibitions, study practices, and cooperation in implementation of theoretical and practical research in the scope of modern architecture and urban planning."

Matej Blenkuš, dean

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Department of Architectural Technology

Department of Design and Presentations

Department of History, Theory, and Renewal

Institute of Architecture and Spatial Planning

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## SECOND-CYCLE SINGLE MASTER STUDY PROGRAMME ARCHITECTURE

Changed in 2022

Presentation of the Study Programme  
2023–2024

## ENOVITI MAGISTRSKI ŠTUDIJSKI PROGRAM DRUGE STOPNJE ARHITEKTURA

### 1 INFORMATION ABOUT THE STUDY PROGRAMME

**T**he Single-Cycle MASTER 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 Study Programme Architecture
KLASIUS–SRV	MASTER 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 Technische Universität Graz TU Graz. Fakultät für Architektur. Graz, Austria.  
[www.tugraz.at](http://www.tugraz.at)
- 2 Universitat Politècnica de Catalunya. BarcelonaTech UPC. Escola Tècnica Superior d'Arquitectura de Barcelona ETSAB. Barcelona, Spain.  
[www.etsab.upc.edu](http://www.etsab.upc.edu)
- 3 Leibniz Universität Hannover. Fakultät für Architektur und Landschaft. Hannover, Germany.  
[www.archland.uni-hannover.de](http://www.archland.uni-hannover.de)

#### 1 Tehnische Universität Graz (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 liveable environment. Due to project-oriented teaching the study programmes at the Faculty of Architecture have a generalist character and promote a holistic way of working and thinking, 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)

Founded in 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 has a worldwide reputation and receives many applications for admission from foreign students.

Degree in Architecture students acquire a solid technical and legal specialization that allows them to work in the design and management of building construction and restoration projects, as well as 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

Engineer, artist, historian or sociologist? Good architects and landscape architects are a bit of everything. But at the heart of the matter are human beings and their built environment. For this reason, the faculty focuses on urban planning and cultural landscape aspects in design and planning. Leibniz Universität Hannover is the only university in the Northern 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, and 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 regarding architectural design and planning, as well as spatial management. Architects are responsible for the significance of architectural design, building quality, their harmony with the environment, and respect for natural and urban landscapes, of public interest. Regarding the quality of physical environment, public interest is safeguarded by Slovenian and European legislation. Slovenian legislation stipulates conditions for architects – designers, reviewers of planned spatial developments, spatial planners, accountable managers of proposals of spatial documents, municipal urbanists, researchers, etc., whereas European legislation determines the minimum qualification criteria for automatic recognition of professional qualifications across all European countries. The profile of an architect is highly complex since it requires the ability of thinking about people and their spatial problems on various levels – from the regional planning scale to the architectural detail, and vice versa. It has to stem from contemporary theoretical and technological findings, supersede them and 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 recognized as works of art.

#### • General Competences

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

## 4 REQUIREMENTS FOR ENROLMENT AND SELECTION CRITERIA FOR LIMITED ENROLMENT

#### • The Long-Cycle MASTER 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 of 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% points;
  - interview with the candidate, 37.5% points.

#### • 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 of the aforementioned enrolment conditions. The entrance fee is determined according to the valid price list.

## 5 CRITERIA FOR ACKNOWLEDGMENT OF KNOWLEDGE AND SKILLS GAINED PRIOR TO ENROLMENT IN THE PROGRAMME

At the request of the candidate, the Academic Affairs Commission submits a proposal to the Senate for recognizing the knowledge and skills that the candidate gained prior to their enrolment in the programme, and can be recognized in the study programme in Architecture. For example, in the case of a completed Foreign Language course, the course is recognized as one of 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, the student is required to pass 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, the 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, the 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, the 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

The 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. The student may repeat a year of study only once during their 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 required tasks in all 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 they originally enrolled in, and continues the education in the Long-Cycle MASTER Study Programme in Architecture, where all or part of study obligations from the student's original (first) study programme are recognized 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 verification. 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 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 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 particular 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.

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 they receive is in the satisfactory (6) to excellent (10) range.

Contact hours	Lectures	Seminar	Tutorials	Other for. of study	Indep. work of student	Total hours
	30	30	30	30	90	150
	15		45	30	60	150
	30		30		90	150
	15		30	15	90	150
	30	30			90	150
	30		30		90	150
	150	30	165	45	510	900
	17	3	18	5	57	100

Year 1, 1<sup>st</sup> semester

Subj. no.	Subject	Lecturer
1.2	Basics of Statics	prof. dr. Vojko Kilar
1.3	Representation Techniques	izr. prof. Jaka Bonča doc. dr. Špela Hudnik doc. dr. Or Ettlinger
1.4	Descriptive Geometry	doc. dr. Domen Kušar
1.5	Architectural Design 1	prof. Maruša Zorec prof. mag. Tadej Glažar
1.6	Introduction to History of Architecture and Arts	doc. dr. Nika Grabar doc. dr. Miloš Kosec
1.7	Mathematics	izr. prof. dr. Jaka Smrekar
		Total
		Percentage %

Year 1, 2<sup>nd</sup> semester

Subj. no.	Subject	Lecturer	Contact hours					Total hours ects
			Llectures	Seminar	Tutorials	Other for. of study	Indep. work of student	
1.8	Basics of Build Physics and Technology	prof. dr. Martina Zbašnik Senegačnik prof. dr. Sašo Medved	30		30		90	150 5
1.9	Architectural Drawing and Model	doc. Uroš Rustja doc. Paul Robinson	15		60		75	150 5
1.10	Materials and Forms	doc. Rok Žnidaršič	30		30		90	150 5
1.11	Space and Context	doc. Mojca Gregorski	30	30			90	150 5
1.12	Study Practice 1	doc. dr. Tomaž Slak		30			30	60 2
1.1	Design Studio 1	**			60	30	150	240 8
Total			105	60	180	30	525	900 30
Percentage %			12	7	20	3	58	100

## Year 2, 1<sup>st</sup> semester

Subj. no.	Subject	Lecturer	Contact hours					Total hours ects
			Llectures	Seminar	Tutorials	Other for. of study	Indep. work of student	
2.2	Construction and Technology 1	doc. dr. Tomaž Slak	30		30		90	150 5
2.3	Freehand Drawing	doc. Leon Belušič	15		45		30	90 3
2.4	Architectural Design 2	doc. Mitja Zorc	15		30	15	90	150 5
2.5	Sociology of Space	izr. prof. dr. Marjan Hočevar	30				60	90 3
2.6	History and Theory of Architecture 1	prof. ddr. Petra Čeferin	30	30			90	150 5
2.1	Design Studio 2	**			60	60	150	270 9
Total			120	30	165	75	510	900 30
Percentage %			13	3	18	8	57	100

## Year 2, 2<sup>nd</sup> semester

Subj. no.	Subject	Lecturer	Contact hours					Total hours ects
			Llectures	Seminar	Tutorials	Other for. of study	Indep. work of student	
2.7	Loadbearing Structures 1	doc. dr. Simon Petrovčič viš. pred. dr. Srečko Vratuša	30		30		90	150 5
2.8	Introduction to Art Theory	izr. prof. Jaka Bonča	15		30	15	90	150 5
2.9	Residential Architecture	prof. mag. Anja Planišček	30	30			30	90 3
2.10	Introduction to Urbanism	prof. dr. Tadeja Zupančič doc. dr. Matevž Juvančič	30		30		90	150 5
2.11	Architectural Workshop 1	**				30	30	60 2
2.1	Design Studio 2	**			60	60	180	300 10
Total			105	30	150	105	510	900 30
Percentage %			12	3	17	12	57	100

### Year 3, 1<sup>st</sup> semester

Subj. no.	Subject	Lecturer	Contact hours					Total hours ects
			Llectures	Seminar	Tutorials	Other for. of study	Indep. work of student	
3.2	Construction and Technology 2	prof. dr. Matej Blenkuš	30		30		90	150 5
3.3	Artistic Elements of Architecture	izr. prof. dr. Tomaž Novljan	15		30		45	90 3
3.4	Architectural Design 3	prof. mag. Tomaž Krušec	15		30	15	90	150 5
3.5	Building and Planning Legislature	prof. dr. Tadeja Zupančič	30	15			45	90 3
3.6	History and Theory of Architecture 2	prof. Mihael Dešman	30	30			90	150 5
3.1	Design Studio 3	****			60	60	150	270 9
Total			120	45	150	75	510	900 30
Percentage %			13	5	17	8	57	100

### Year 3, 2<sup>nd</sup> semester

Subj. no.	Subject	Lecturer	Contact hours					Total hours ects
			Llectures	Seminar	Tutorials	Other for. of study	Indep. work of student	
3.7	Loadbearing Structures 2	prof. dr. Vojko Kilar doc. dr. David Koren	30		30		90	150 5
3.8	Interior Design	prof. Jurij Sadar	15		30	15	90	150 5
3.9	Public Architecture	prof. mag. Tadej Glažar	30	15			45	90 3
3.10	Urban Design	izr. prof. mag. Polona Filipič Gorenšek	15		30	15	90	150 5
3.11	Renovationa and Conservation in Architecture 1	izr. prof. dr. Sonja Ifko izr. prof. dr. Ljubo Lah	15	30			75	120 4
3.12	Architectural Workshop 2	**				30	30	60 2
3.1	Design Studio 3	****			60	30	90	180 6
Total			105	45	150	90	510	900 30
Percentage %			12	5	17	10	57	100

Year 4, 1 <sup>st</sup> semester			Contact hours					
Subj. no.	Subject	Lecturer	Llectures	Seminar	Tutorials	Other for. of study	Indep. work of student	Total hours ects
4.2	Detail in Architecture	prof. dr. Martina Zbašnik Senegačnik	30		30		60	120 4
4.3	Organization and Management of Construction	doc. dr. Simon Petrovčič doc. dr. David Koren doc. dr. Tomaž Slak	15	30			45	90 3
4.4	Architectural Design 4	prof. mag. Vasa Perović	15		30	15	90	150 5
4.5	Development of Urbanism	izr. prof. dr. Lucija Ažman Momirski	15		15		60	90 3
4.6	History and Theory of Architecture 3	prof. dr. Aleš Vodopivec	30	30			90	150 5
4.7	Elective Subject A	****	15		15		60	90 3
4.1	Design Studio 4	**			60	30	120	210 7
Total			120	60	150	45	525	900 30
Percentage %			13	7	17	5	58	100

Year 4, 2 <sup>nd</sup> semester			Contact hours					
Subj. no.	Subject	Lecturer	Llectures	Seminar	Tutorials	Other for. of study	Indep. work of student	Total hours ects
4.8	Installation Systems	prof. dr. Sašo Medved	30		15		45	90 3
4.9	Management and General Safety	doc. dr. Domen Kušar doc. dr. Domen Zupančič	15	30			45	90 3
4.10	Sustainable Architecture	**	30	15			45	90 3
4.11	Urban Planning	izr. prof. dr. Ilka Čerpes	15		30	15	90	150 5
4.12	Renovationa and Conservation in Architecture 2	prof. Maruša Zorec	15		30		75	120 4
4.13	Study Practice 2	doc. Rok Žnidaršič prof. mag. Anja Planišček		30			30	60 2
4.14	Architectural Workshop 3	**				30	30	60 2
4.1	Design Studio 4	**			45	45	150	240 8
Total			105	75	120	90	510	900 30
Percentage %			12	8	13	10	57	100

## Year 5, 1<sup>st</sup> semester

Subj. no.	Subject	Lecturer	Contact hours					Total hours ects
			Llectures	Seminar	Tutorials	Other for. of study	Indep. work of student	
5.2	Elective Subject A	****	15		15		60	90 <b>3</b>
5.3	Elective Subject A	****	15		15		60	90 <b>3</b>
5.4	Elective Subject B	****	15		15		60	90 <b>3</b>
5.5	Elective Subject B	****	15		15		60	90 <b>3</b>
5.6	Elective Subject B	****	15		15		60	90 <b>3</b>
5.1	Design Studio 5	**			60	105	285	<b>450 15</b>
Total			75		135	105	585	<b>900</b>
Percentage %			8		15	12	65	<b>100</b>

## Year 5, 2<sup>nd</sup> semester

Subj. no.	Subject	Lecturer	Contact hours					Total hours ects
			Llectures	Seminar	Tutorials	Other for. of study	Indep. work of student	
5.7	Master Degree	**				345	555	<b>900 30</b>
Total						345	555	<b>900 30</b>
Percentage %						38	62	<b>100</b>

ID – in line with the adopted accredited programme Long-Cycle MASTER 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 their 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 signed-up students is required to run a course.

## B Elective subjecti skupine »B«

### B1

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

## A Elective subjecti skupine »A«

### A1

1 Residential Buildings	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 20 <sup>th</sup> Century Slovene Architecture	doc. dr. Nataša Koselj
2 Architectural Theory and Critique	prof. ddr. Petra Čeperin
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	prof. ddr. Petra Čeperin
8 Heritage Interpretation	izr. prof. dr. Sonja Ifko

### A3

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

3 Structural Systems	doc. dr. Lara Slivnik
4 Structures of Industrial Buildings	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 Modelling 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:

<b>Mandatory subjects</b>	80,6 %	<b>Elective subjects</b>	19,4 %
	242 ects		58 ects
<b>Subjects with mandatory content</b>	178 ects	<b>Subjects with elective content</b>	40 ects
All subjects not specifically stated in this table		The student selects the lecturer	
		1.12 Study Practice 1	2 ects
		2.11 Architectural Workshop 1	2 ects
		3.12 Architectural Workshop 2	2 ects
		4.14 Architectural Workshop 3	2 ects
		4.13 Study Practice 2	2 ects
		Master Degree	30 ects
<b>Subjects with required content</b>	64 ects	<b>Elective subjects group A</b>	9 ects
The student selects the lecturer		The student selects subjects from any of group A modules	
2.1 Design Studio 2	19 ects		
3.1 Design Studio 3	15 ects		
4.1 Design Studio 4	15 ects		
5.1 Design Studio 5	15 ects		
		<b>Elective subjects group B</b>	9 ects
		The student selects subjects from any of group 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 – and including – the third year onwards.

11 BRIEF PRESENTATION OF COURSES

1.1 Design Studio 1

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8 ects Smaller building of given height; simple programme, methodological approach; simple wooden, brick, concrete, and stone construction; programme implementation with regard to location; construction design, choice of building constructions; description of design concept, freehand presentation, constructed perspective, technical drawing, model; public presentation.

1.2 Basics of statics

prof. dr. Vojko Kilar

5 ects Balance conditions; geometrical characteristics of cross-sections; forces and their effects (reactions, inner forces, tensions and deformations) on simple linear static models (rods, bending beams, foundations, trusses, frames and arches); basic stress states (tension, compression [buckling], shear, bending and torsion); choice of load-bearing elements dimensions; tests of construction models.

1.3 Representation Techniques

izr. prof. Jaka Bonča

doc. dr. Špela Hudnik

doc. dr. Or Ettlinger

5 ects Analogue and digital planning tools. Pencils, rulers, set squares, compasses, bit graphics, vector graphics, CAD, modellers, digital tools for building simulation. Body in orthographic projection and in 3D view. Relationship between top projection, views, and cross-sections. “Drawing” of walls, pillars, beams, etc. Body in spatial projection. Technical drawing and page layout.

1.4 Descriptive Geometry

doc. dr. Domen Kušar

5 ects Axiomatics; projection; Monge’s projection; isometric projection; axonometrics; central projection; affinity and collineation; spatial surfaces and curves; intersections, cross-sections, and plane sections; rotation and side view; lines, equidistant lines, slope lines, normals; basic positional tasks; basic metric tasks; rotational bodies; shadows.

1.5 Architectural Design 1

prof. Maruša Zorec

prof. mag. Tadej Glažar

5 ects Basics of architectural design. Architecture as idea, theory, and materialization. Properties of spaces and buildings: dimension, shape, size, position. Human beings as standard and criterion. Nature and architecture; abstraction, context, and concept. Elements of architecture, composition, light, and structure. Typologies, materials, and principles of sustainable design.

1.6 Introduction to History of Architecture and Arts

doc. dr. Nika Grabar

doc. dr. Miloš Kosec

5 ects Course provides basic information on architectural history and theory as well as links between architecture and other artistic and humanistic disciplines. Course combines chronological overview of history of architecture and art with introduction to basic methods and approaches to critical architectural research: reading, observation, writing, drawing, discussion, etc.

1.7 Mathematics

izr. prof. dr. Jaka Smrekar

5 ects Introduction to select mathematical concept and tools of importance in architectural use: vectors and analytical geometry in 3D space, systems of linear equations, concept of function as expression of dependence and overview of elementary functions, derivative and extremal problems, integral and its uses.

1.8 Basics of Build Physics and Technology

prof. dr. Martina Zbašnik Senegačnik

prof. dr. Sašo Medved

5 ects Planning of internal environment, heat transfer in built constructions, heat transmittance in building envelope blocks, mechanisms of built construction humidifying, diffusion of water vapour in building envelopes, practical verification of heat transfer and airtightness in buildings. Materials, their properties and functions in building envelopes; composition of outer walls, slanting and flat roofs, ground floors, and inter-storey constructions; glazing.

## 1.9 Architectural Drawing and Model

doc. Uroš Rustja

doc. Paul Robinson

5 ects The course introduces students to the processes of communicating an architectural idea by means of abstraction, critical thinking, and material representation using drawing and model-making. During the course the student not only becomes acquainted with the diverse language of drawing and modelling as a communicator of tectonic spatial forms and material atmosphere but also learns to understand them as tools for research and presentation of spatial concepts.

## 1.10 Materials and Forms

doc. Rok Žnidaršič

5 ects Materialization of architectural vision. Familiarization with and understanding of dependence between properties of materials, building technology, theoretical principles, and architectural design. Examination of issues through analysis of select cases of historical, vernacular, and contemporary architecture as well as practical tests of design and construction of spatial structures.

## 1.11 Space and Context

doc. Mojca Gregorski

5 ects Course examines relationship between built and open space; positioning of architecture into open space; emotional, experiential, and sensory perception of space. Historical, socio-political, cultural, ecological, and economic context of space. Open space as equivalent architectural building block. Elements and tools of (re)design, understanding, protection, and conservation of open space.

## 1.12 Study Practice 1

doc. dr. Tomaž Slak

2 ects Introduction to building of objects complements project work in other courses. Visits to building sites and documenting phases of work will help students acquire both knowledge and experience as far as architectural implementation problems are concerned. Students will be able to tangibly and closely acquaint themselves with complexity of building, materials, and coordination with other building process participants.

## 2.1 Design Studio 2

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19 ects Middle-sized building of given height on actual location; multi-storeyed programme; methodological approach; multi-storeyed object of concrete or other material; programme implementation with regard to location; scaling of basic elements; facades; installations; freehand presentation, technical drawing, colour application, model; public presentation.

## 2.2 Construction and Technology 1

doc. dr. Tomaž Slak

5 ects Examination of elements of construction including structures, claddings, and building envelopes as well as other architectural systems, in connection with appropriate materials and in a practical way regarding means of installation and engineering role in the framework of a particular building. Construction logic and tectonics of building all materials and systems with the principles of composition into a working architectural product.

## 2.3 Freehand drawing

doc. Leon Belušič

3 ects The students systematically record their thoughts. While drawing, they think, familiarize themselves with the space and its character. In contrast to the “sphere” principle, they practice on the drawing basis of the archetypal angular form – the cube. The cube motif gradually and in time evolves from simple compositions to complex structures.

## 2.4 Architectural Design 2

doc. Mitja Zorc

5 ects Examination of relationship between programmatic principles and architectural composition. Subject is divided into three parts: establishment of architectural system, programmatic principles in architecture, and typical compositional and organizational approaches. Subject discussion is based on theoretical principles and analysis of select cases of historical, vernacular, and contemporary architecture.

## 2.5 Sociology of space

izr. prof. dr. Marjan Hočevar

3 ects Introduction to integral understanding of social dimensions of physical (built) environment. Discussion is based on explanation of mutual relationship between design, planning, production, and use of physical structures (buildings, settlements, infrastructural networks) and social relationships, processes, and changes in historical perspective and on all level of socio-spatial reality.

## 2.6 History and Theory of Architecture 1

prof. ddr. Petra Čeferin

5 ects The course systematically develops theoretical thinking of architecture and charts the importance of history of architecture for architectural theory and design practice. Historical treatment is focused on the time period from the earliest architecture to the end of Roman antiquity, underlining the timeless character of architectural practice.

## 2.7 Loadbearing Structures 1

doc. dr. Simon Petrovčič

viš. pred. dr. Srečko Vratuša

5 ects Linear loadbearing structural elements made from standardized building materials (wood, steel, and reinforced concrete); basic principles of Eurocodes standards; determination of permanent and variable influences on loadbearing combinations and proofing methods of liminal states of bearing and usability. Basics of construction of wooden/steel attachments and of detailing of concrete structures.

## 2.8 Introduction to Art Theory

izr. prof. Jaka Bonča

5 ects Arts and visual arts, visual arts as form of communication; expressive elements of visual arts and mutual relations. Morphology of visual arts: art variables; relation between form and content. Art composition: measure, scale, module, ratio, proportion; organization of artistic space, system of relations, intervals, proportions and relations, standard elements, creation, and measurement system.

## 2.9 Residential architecture

prof. mag. Anja Planišček

3 ects Examination of social and spatial aspects of residential architecture. “Housing and society” segment defines residences as one of basic human and societal needs. Concepts of housing, home, and housing policy are described. “Housing and architecture” segment analyses spatial and design aspects of housing, housing typologies, and concepts and experiments crucial for their development.

## 2.10 Introduction to Urbanism

prof. dr. Tadeja Zupančič  
doc. dr. Matevž Juvančič

5 ects Urban space, development, understanding the city with emphasis on micro-level experience; pedestrian/society as user of urban space; natural conditions; cultural environment as architectural space; visual and acoustic connections; elements of urban space; coordination of elements; principles and methods for researching, planning, and designing urban space.

## 2.11 Architectural Workshop 1

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2 ects Workshop is dedicated to architecture, urban planning, and design. It combines different types of expert knowledge, experiences, and visions while developing expert personality through critical attitude towards expertise. Workshop provides opportunity for comparison of different work methodologies on applicative basis and their results with creative synthesis and specific comments of the supervisor, thus helping students develop their projects.

## 3.1 Design Studio 3

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15 ects Large building of given height on actual location in the city; programme of mixed uses; methodological approach; sophisticated construction; project task, detailed arrangement, modular order; sizing of basic elements, technical standards, fire safety; facades; installations; computer presentation, freehand sketch, model; public presentation.

## 3.2 Construction and Technology 2

prof. dr. Matej Blenkuš

5 ects Students are introduced to combination of basic structural and constructional-physical parts of building into integrated whole. Use of "integral approach" puts emphasis on more complex principles of building construction design and protection in connection with light, air movement, and sound transfer. Case studies are used to familiarize students with different construction and technological principles.

## 3.3 Artistic Elements of Architecture

izr. prof. dr. Tomaž Novljan

3 ects Continuation and concretization of chapters from art theory into architectural space with emphasis on their contextualization. Art elements and variables, and their role in genesis of architectural space. Organization in architectural space. Role of colour and light/shadow in architecture. Role of senses (sight, hearing, smell, and touch) in genesis and experience of architecture.

## 3.4 Architectural Design 3

prof. mag. Tomaž Krušec

5 ects Students discover that architectural form and composition are not random. Architectural concept must find answers to questions of location, terrain topography, orientation, purpose, natural light, climate characteristics, construction, chosen materials, etc. Three practical exercises are performed. The first one involves spatial construct, while the second and third one represent upgrading of the first one in the form of a simplified model of a building on given location.

## 3.5 Building and Planning Legislation

prof. dr. Tadeja Zupančič

3 ects Order in space, land use planning, rules for land use planning; normativity level; relation between legal and ethical norms; legislation of space planning and design in Slovenia, conditions in neighbouring and comparable states; directives and recommendations on EU level; architectural and urbanism projects through prism of legislation.

## 3.6 History and Theory of Architecture 2

prof. Mihael Dešman

5 ects Turning points in architectural history from end of classical antiquity to dawn of modern era are discussed. Historical eras, cities and buildings, architects, architectural types, ways of building are introduced, as well as theoretical works that follow and define architecture. Course analyses and interprets architectural plans in light of their genesis and develops critical understanding of architecture as art, science, and philosophy of construction.

## 3.7 Loadbearing Structures 2

prof. dr. Vojko Kilar  
doc. dr. David Koren

5 ects Main phases of engineering of building construction: design and choice of construction system, preparation of computer models, analysis and proofing of mechanical resistance and stability of reinforced concrete, steel, wooden, and brick structures. Foundation, earthquake-resistant structure design, basic principles of aseismic reinforcement of existing buildings, more sophisticated systems of construction.

## 3.8 Interior Design 2

prof. Jurij Sadar

5 ects Introduction to interior design experience which is crucial for quality of architectural work. Course intention is to go beyond fitting-out of premises and to establish interior design experience as integration of both architectural and interior design knowledge in search of creating atmosphere and different components of residential comfort as well as multidimensional meaning of space in public buildings.

## 3.9 Public Architecture

prof. mag. Tadej Glažar

3 ects Analytical work on selected social buildings helps students assimilate principles, meaning, purpose, and character of each particular building typology. Analytical apparatus is based on analysis of quality reference buildings and cases from Slovenian and international environment. Comprehensive understanding of social buildings is possible only through human beings who use them, and live and work in them.

### 3.10 Urban Design

izr. prof. mag. Polona Filipič Gorenšek

5 ects Course includes definitions, methods, techniques, and strategies for modelling both condensed and dispersed city. Current urban processes contributing to city transformation are considered. Course introduces methods and techniques of identification and interpretation of spatial data, and through critical analysis, synthesis, and project processes builds sensibility for balancing spatial scales and harmony.

### 3.11 Renovation and Conservation in Architecture 1

izr. prof. dr. Sonja Ifko

izr. prof. dr. Ljubo Lah

4 ects Introduction to conservation and renovation of cultural heritage. Importance and value of heritage for society, spatial development contexts and integration of conservation into sustainable development; genesis of profession, doctrine and terminology, practical case studies. Main focus is dedicated to methodology of conservation processes and role of architects in renovation planning processes and adaptation of heritage re-use.

### 3.12 Architectural Workshop 2

\*\*

2 ects Workshop is dedicated to architecture, urban planning, and design. It combines different types of expert knowledge, experiences, and visions while developing expert personality through critical attitude towards expertise. Workshop provides opportunity for comparison of different work methodologies on applicative basis and their results with creative synthesis and specific comments of the supervisor, thus helping students develop their tasks.

### 4.1 Design Studio 4

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15 ects Final semesters of this course are upgrades of courses in previous years. Supervisor and student construct more demanding project task based on seminar direction (emphasis on architecture, design, or urban planning). Public presentation.

### 4.2 Detail in Architecture

prof. dr. Martina Zbašnik Senagačnik

4 ects Design potentials of materials (traditional and innovative materials); technological and technical bases of structural sets for design (thermal bridge, airtightness, watertightness, fire safety, steam permeability, amortization, maintenance, etc.); fitting and jointing elements; digital tools for developing and implementing BIM, CNC, 3d printing; artistic component and symbolism.

### 4.3 Organization and Management of construction

doc. dr. Simon Petrovčič

doc. dr. David Koren

doc. dr. Tomaž Slak

3 ects Basic processes in construction from preparing project documentation to acquiring certificate of bringing into use. Legislative framework of construction and construction site regulations, organization of construction work, management of construction site and construction documentation, implementation/technology of construction. Construction product and basic demands for construction objects; basis of surveys, calculations, and schedules for construction planning.

### 4.4 Architectural Design 4

prof. mag. Vasa J. Perović

5 ects Course critically approaches both current interpretation of typological knowledge and articulation of contemporary programmatically instable architecture through typological approach. Course is concerned with history of typologies – from development of residential typologies to typologies of public objects – and influences of typological approach on contemporary articulation of architectural projects. Students participate in practical exercises in which subject matter comprehension is assessed.

### 4.5 Development of Urbanism

izr. prof. dr. Lucija Ažman Momirski

3 ects Introduction: basic terminology, genesis of spatial elements. From forms to concepts. Continuous city, return of amorphous structures, development of medieval “bastion city”, Renaissance “ideal city”, Baroque residential city, rationalist “Georgette city”, 19<sup>th</sup> and 20<sup>th</sup> century modern “tartan city” (up to and after 1945), 21<sup>st</sup> century contemporary city.

### 4.6 History and Theory of Architecture 3

prof. dr. Aleš Vodopivec

5 ects Historical overview of 20<sup>th</sup> century architectural thinking and creativity in interdependence with discoveries in social sciences, natural sciences, philosophy, arts, and technology. Discussion of artistic directions and movements as well as most prominent architects who have influenced modernistic understanding of space.

### 4.8 Installation Systems

prof. dr. Sašo Medved

3 ects Parameters of living and working environments; basics of energy conversion in buildings and properties of energy sources; technologies of energy self-sufficiency in buildings; design and planning of heating systems, domestic hot water supply, ventilation, cooling, air conditioning, transport systems, drinking water supply, and grey and black waste water treatment; electronic and smart installations; assessment of energy efficiency in installation systems and buildings.

### 4.9 Management and General Safety

doc. dr. Domen Kušar

doc. dr. Domen Zupančič

3 ects Circular economy; integral planning; management of projects and investments in building construction; contractual obligations between stakeholders; business plan; business communication. Hazards in built environment; city planning, architectural, and technical precautions against fire and other hazards; working conditions safety; protection against pollution.

### 4.10 Sustainable Architecture

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3 ects Course is dedicated to principles of sustainability in architecture from basic concepts to spatial design. Introduction to basic ecological, economic, and socio-cultural aspects of sustainability as well as problem areas connected to architecture: “resilient cities and countryside”, “flexible urban design”, “materials and technologies”, “participation in planning and design processes”, “global vs. local”, etc.

izr. prof. dr. Ilka Čerpes

4.12 Renovations and Conservation in Architecture 2 prof. Maruša Zorec

4.13 Study Practice 2 doc. Rok Žnidaršič

#### 4.14 Architectural Workshop 3 \*\*\*

### 5.1 Design Studio 5

### Elective subjects, group "A"

prof. mag. Anja Planišček

## A 1.2 Public Buildings

prof. mag.Tadej Glažar

### A 1.3 Industrial Buildings

izr. prof. dr. Sonja Ifko

### A 1.4 Recreational Buildings

doc. dr. Domen Zupančič

## A 1.5 Sacral Buildings

doc. dr. Leon Debevec

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izr. prof. mag. Aleš Prinčič

## A 2.1 20th Century Slovene Architecture

doc. dr. Nataša Koselj

## A 2.2 Architectural Theory and Critique

prof. ddr. Petra Čeferin.

### A 2.3 Architectural Anthropology

## A 2.4 Architectural Analogies

izr. prof. dr. Lucija Ažman Momirski

## A 2.5 Introduction to Research in Architecture and Urbanism

prof. dr. Tadeja Zupančič

izr. prof. dr. Liubo Lah

## A 2.6 Ecological Building Principles

prof. dr. Martina Zbašnik Senegačnik

## A 2.7 Analysis of Contemporary Architecture

prof. ddr. Petra Čeferin.

## A 2.8 Heritage Interpretation

izr. prof. dr. Sonja Ifko

### A 3.1 Theory of Physical and Regional Planning

### A 3.2 Communal and Housing Economy

doc.dr. Daniel Kozelj

### A 3.3 Land Policy and Property Evaluation

doc.dr. Daniel Kozelj

### A 3.4 Rurism and Rural Architecture

prof. dr. Alenka Fikfak

### A 3.5 Action Planning and Strategic Assessment

izr. prof. dr. Ažman Momirski

### A 3.6 Urban Brownfields

doc. dr. Primož Hočevar

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## Elective subjects, group "B"

### B 1.1 Vernacular Architecture

doc. dr. Domen Zupančič

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

### B 1.2 Design of Objects

doc. Leon Belušič

3 ects 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

izr. prof. Jaka Bonča

3 ects 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

izr. prof. dr. Tomaž Novljan

3 ects 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

prof. dr. Davorin Gazvoda

3 ects 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

doc. Aleksander Ostan

3 ects The factors that historically shaped the environment that we live in are natural and man-made features of the environment, social Organization, 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

prof. dr. Alenka Fikfak

3 ects 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

izr. prof. dr. Lucija Ažman Momirski

3 ects 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

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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

prof. Maruša Zorec

3 ects 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 Austriae); 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

doc. dr. Leon Debevec

3 ects 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

prof. dr. Matija Svetina

3 ects 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

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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

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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

izr. prof. Jaka Bonča

3 ects 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.

doc. Primož Ieza

doc. dr. Nika Grabar

## B 2.10 On the Nature of Materials: History, Theory, and Transformation

doc. Paul O. Robinson

### B 3.1 Comprehensive Preservation of Built Heritage

prof. Maruša Zorec

### B 3.2 Renewal and Adaptation

prof. Maruša Zorec

### B 3.3 Integral Renewal

izr. prof. dr. Liubo Lah

### B 3.4 Preservation of Contemporary Architectural heritage izr. prof. dr. Sonja Ifko

izr. prof. dr. Sonja Ifko

### B 3.5 Architecture and Archeology

izr. prof. dr. Lucija Ažman Momirski

## B 4.1 Graphics for Architects

izr. prof. Boštjan Botas Kenda

## B 4.2 Space and Media

doc. dr. Matevž juvančič

### B 4.3 Computer Supported Architecture

prof. dr. Žiga Turk

## B 4.4 Architecture of Virtual Space

doc. dr. Or Ettlinger

## B 4.5 Freehand Drawing

doc. Leon Belušič

## B 4.6 Approaches to Creativity

doc. dr. Or Ettlinger.

## B 4.7 Digital Modelling and Production

prof. Jurij Sadar

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#### **B 4.8 Basics of Computer Programming**

doc. dr. Simon Petrovčič

**3 ects** 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**

doc. dr. Domen Kušar

**3 ects** 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**

prof. dr. Vojko Kilar

**3 ects** 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**

doc. dr. Lara Slivnik

**3 ects** 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**

prof. dr. Matej Blenkuš

**3 ects** 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**

prof. Jurij Sadar

**3 ects** 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 Detail in the Interior**

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**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**

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**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**

prof. dr. Sašo Medved

**3 ects** 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**

prof. dr. Martina Zbašnik Senegačnik

**3 ects** 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.