

DOKTORSKI

ŠTUDIJSKI PROGRAM ARHITEKTURA

DOCTORAL

PROGRAMME IN ARCHITECTURE



FA

UNIVERZA V LJUBLJANI
Fakulteta za arhitekturo

2026-2027



FA

UNIVERZA V LJUBLJANI
Fakulteta za arhitekturo

2026-2027

Univerza v Ljubljani, Fakulteta za arhitekturo

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1. PODATKI O ŠTUDIJSKEM PROGRAMU

Doktorski študijski program Arhitektura traja 4 leta (8 semestrov) in obsega skupaj **240 0** **ects**—kreditnih točk. Študijski program vključuje **60 0** **ects**—kreditnih točk organiziranih oblik študija in **180 0** **ects** individualnega raziskovalnega dela (temeljne ali aplikativne raziskave). Organizirane oblike vključujejo splošni, arhitekturni in interdisciplinarni izbirni modul ter vsakoletne predstavitve raziskave (od predstavitve načrta študija do zagovora disertacije).

Znanstveni naslov, ki ga pridobi doktorand s področja arhitekture, je: doktor znanosti oziroma, doktorica znanosti.

Okrajšana oblika zapisa naslova pred imenom je: **dr.**

1. DATA ON STUDY PROGRAMME

The doctoral study programme in Architecture lasts 4 years (8 semesters) and is comprised of a total of **240 0** **ects**—credits.

The study programme includes **60 0** **ects**—credits in organized study form, and **180 0** **ects**—credits of individual research work (basic or applied research). The organized forms are comprised of a general, architectural module and interdisciplinary optional modules, as well as of an annual research presentation (ranging from the presentation of the study plan to the defence of the dissertation). The scientific title acquired by the doctoral student in the field of architecture is:

Doctor of Science The abbreviated form of the title placed in front of the name is: **Dr.**

2. TEMELJNI CILJI PROGRAMA IN SPLOŠNE KOMPETENCE

Temeljni cilj:

Program izobražuje samostojnega znanstvenega raziskovalca za najširše problemsko področje arhitekture, ki izkazuje tako odgovornost do kulturnega prostora kot tudi medkulturno primerljivo odličnost. Odgovornost za arhitekturo kot znanstvenoraziskovalno področje in za arhitekturo kot kulturni prostor izhaja iz pomena arhitekturnega oblikovanja, kakovosti zgradb, njihove usklajenosti z okoljem, spoštovanja naravne in mestne krajine, ki je v javnem interesu. Javni interes je glede kakovosti fizičnega prostora zaščiten s slovensko in evropsko zakonodajo.

Splošne kompetence:

- poglobljeno razumevanje teoretskih in metodoloških konceptov, ki izhajajo iz bistva arhitekture kot znanosti in umetnosti, ter se z arhitekturo neposredno in posredno povezujejo;
- usposobljenost za samostojno razvijanje novega znanja na področju arhitekture kot generalističnega področja in/ali na ozko problemsko opredeljenih tematik, ki so pomembne za arhitekturo in njeno povezanost z drugimi področji;
- usposobljenost za reševanje najzahtevnejši problemov s preizkušanjem in izboljševanjem znanih ter odkrivanjem novih rešitev za doseganje kakovosti arhitekture;
- sposobnost za vodenje najzahtevnejših delovnih sistemov ter znanstvenoraziskovalnih projektov s širokega strokovnega oz. znanstvenega področja urejanja in oblikovanja prostora s poudarkom na kakovosti arhitekturnega prostora;
- sposobnost razvijanja kritične refleksije – družbenega, skupnostnega in osebnega raziskovanja in/ali snovanja;
- sposobnost prenašanja in »komuniciranja« raziskovalnih rezultatov in sicer v dveh pomenih:
 - objavljanja znanstvenih, strokovnih, pa tudi poljudnih člankov in drugih objav s področja arhitekture;
 - sposobnost prenašanja raziskovalnih dosežkov v prakso arhitekturne dejavnosti.

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2. BASIC GOALS OF THE PROGRAMME AND GENERAL COMPETENCES

Basic goals:

The programme trains the independent scientific researcher in the widest problem area of architectural issues, demonstrating responsibility towards the cultural region and excellence at an international level. Responsibility for architecture as both a field of scientific research and a cultural region derives from the significance of architectural design, the quality of buildings harmonizing with the environment, respect for natural and urban landscapes, which is in the public interest. The quality of physical space is protected in the public interest by Slovenian and European legislation.

General competences:

- in-depth understanding of theoretical and methodological concepts deriving from the essence of architecture as science and art, and directly or indirectly related to architecture;
- qualification to independently develop new knowledge in the area of architecture as a generic field and/or in narrowly specified topics that are of significance in architecture and its connectedness with other areas;
- qualification to solve the most demanding problems by testing and improving established and discovering new solutions in achieving quality in architecture;
- qualification to manage the most demanding work systems and scientific research projects in a wide professional or scientific scope of spatial planning and design, emphasizing the quality of architectural space;
- qualification to develop critical reflection – social, group and personal research and/or creation;
- Qualification to convey and communicate research results in the following cases:
 - qualification of publishing scientific, professional and popular (for non-expert public) papers and other publications in the field of architecture;
 - qualification for transfer of scientific achievements and knowledge into architectural practice.

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3. PODATKI O MEDNARODNEM SODELOVANJU VISOKOŠOLSKEGA ZAVODA

Erasmus+

<https://www.fa.uni-lj.si/studij/izmenjave/>

CA2RE Community for Artistic and Architectural Research

<https://ca2re.eu/>

ARENA (Architectural Research Network)

<http://www.arena-architecture.eu/>

EAAE European Association for Architectural Education

<https://www.eaae.be/>

3. INTERNATIONAL COOPERATION

Erasmus+

<https://www.fa.uni-lj.si/studij/izmenjave/>

CA2RE Community for Artistic and Architectural Research

<https://ca2re.eu/>

ARENA (Architectural Research Network)

<http://www.arena-architecture.eu/>

EAAE European Association for Architectural Education

<https://www.eaae.be/>

4. PODATKI O RAZISKOVALNIH PROGRAMIH, PROJEKTIH, SPORAZUMIH

<https://www.fa.uni-lj.si/raziskovanje/>

4. RESEARCH PROGRAMMES, PROJECTS, AGREEMENTS

<https://www.fa.uni-lj.si/raziskovanje/>

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5. PREDMETNIK ŠTUDIJSKEGA
PROGRAMA, IZBIRNOST IN MOBILNOST

	zimsko polletje	predavanja	zimsko polletje	drugo	poletno polletje	predavanja	poletno polletje	drugo	Σ ur	Σ eds
1. letnik										
1.1 Splošni modul	15	235	—	—	250	10				
1.2 Arhitekturni modul	—	—	15	235	250	10				
1.3 Interdisciplinarni modul	—	—	7	118	125	5				
1.4 Predstavitev načrta doktorskega študija	—	125	—	—	125	5				
1.5 Individualno raziskovalno delo 1	—	375	—	375	750	30				
Skupno	15	735	22	728	1500	60				
2. letnik										
2.1 Interdisciplinarni modul	21	354	7	118	500	20				
2.2 Predstavitev dispozicije doktorske disertacije	—	125	—	—	125	5				
2.3 Individualno raziskovalno delo 2	—	250	—	625	875	35				
Skupno	21	729	7	743	1500	60				
3. letnik										
3.1 Individualno raziskovalno delo 3	—	750	—	750	1500	60				
Skupno	—	750	—	750	1500	60				
4 letnik										
4.1 Predstavitev pred zagovorom in zagovor dr. disertacije	—	—	—	125	125	5				
4.2 Individualno raziskovalno delo 4	—	750	—	625	1375	55				
Skupno	—	750	—	750	1500	60				
Celotni študij										
Organizirane oblike študija					60					
Individualne oblike študija					180					
Skupno	3000		3000	6000	240					

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5. SCHEDULE OF SUBJECTS OF STUDY
PROGRAMME, OPTIONAL SUBJECTS,
MOBILITY

	Winter semester lectures	Winter semester other	Winter semester lectures	Summer semester other	Σ Hours	Σ eds
1 st Year						
1.1 General module	15	235	—	—	250	10
1.2 Architectural module	—	—	15	235	250	10
1.3 Interdisciplinary module	—	—	7	118	125	5
1.4 Presentation of doctoral study plan	—	125	—	—	125	5
1.5 Individual research work 1	—	375	—	375	750	30
Skupno	15	735	22	728	1500	60
2 nd Year						
2.1 Interdisciplinary module	21	354	7	118	500	20
2.2 Presentation of proposal of doctoral dissertation	—	125	—	—	125	5
2.3 Individual research work 2	—	250	—	625	875	35
Total	21	729	7	743	1500	60
3 rd Year						
3.1 Individualno raziskovalno delo 3	—	750	—	750	1500	60
Total	—	750	—	750	1500	60
4 th Year						
4.1 Presentation prior and defence of doctoral dissertation	—	—	—	125	125	5
4.2 Individual research work 4	—	750	—	625	1375	55
Total	—	750	—	750	1500	60
Total studies						
Organized study forms						60
Individual study forms						180
Total	3000		3000	6000	240	

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1.1 10 erts

Splošni modul generična znanja

Lah UL, FA

Uvod v znanstvenoraziskovalno delo

— nosilci generičnih predmetov/modulov

Znanstveno–raziskovalni predmeti/moduli drugih programov

1.2 10 erts

Arhitekturni modul področni temelji

Čeferin UL, FA

Arhitekturna teorija in kritika

Ostan UL, FA

Korpus slovenske arhitekture

Vodopivec UL, FA (upokojen)

Strategije arhitekturnega načrtovanja

Vuga Sadar+Vuga

Arhitekturna praksa kot raziskovalni laboratorij

Koželj UL, FA (upokojen)

Sodobni pristopi k urbanizmu

— nosilci arhitekturnih predmetov/modulov

Znanstveno–raziskovalni predmeti/moduli drugih programov

2.1 25 erts

Interdisciplinarni modul poglobitev in/ali povezava

Tematski sklopi/poudarki – povezave (izhodiščna legenda rdečih pik – naslovi, razporeditev in sestava sklopov se (pre–)oblikujejo skladno z raziskovalno politiko FA):

- arhitekturna teorija in kritika, korpus slovenske arhitekture
 - povezava s humanizmom;
- likovno–digitalna teorija in metodologija
 - povezava s humanizmom in tehniko;
- urbanistična teorija in metodologija
 - povezava z družboslovjem in biotehniko;
- teorija projektiranja in tehnične aplikacije v arhitekturi
 - povezava s tehniko;
- tematski sklopi/poudarki – povezave iz kakovostno primerljive ponudbe gostujočih nosilcev in drugih programov.

1.1 10 erts

General Module generic knowledge

Lah UL, Faculty of Architecture

Introduction to Scientific Research

— teachers of generic subjects/modules

Scientific Research Subjects/Modules of Other Programmes

1.2 10 erts

Architectural Module field–specific fundamentals

Čeferin UL, Faculty of Architecture

Architectural Theory and Critique

Ostan UL, Faculty of Architecture

Corpus of the Slovene Architecture

Vodopivec UL, Faculty of Architecture (retired)

Strategies of Architectural Design

Vuga Sadar + Vuga

Architectural Research by Design

Koželj UL, Faculty of Architecture (retired)

Contemporary Approaches to Urbanism

— teachers of architectural subjects/modules

Scientific Research Subjects/Modules of Other Programmes

2.1 25 erts

Interdisciplinary Module deepening and/or crosslinking

Thematic modules/emphasis – relations (legend of red dots – titles, disposition and structure of components is (pre) defined in accordance with the research policy of FA):

- Architectural Theory and Critique, Corpus of the Slovene Architecture
 - relation to humanism;
- Fine–Arts and Digital Theory and Methodology
 - relation to humanism and technology;
- Theory and Methodology of Urbanism
 - relation to social sciences and biotechnology;
- Theory of Planning and Technological Application in Architecture
 - relation to technology;
- Thematical Modules/Emphaseses – related to quality assured, comparable offer from visiting lecturers and other programmes.

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● **5** **ects**

- **Čeferin** UL, FA

Analiza in kritika sodobne arhitekture

- **Koselj** zasebna raziskovalka

Izvori moderne

- **Zorec** UL, FA

Interpretacija spomina v arhitekturi

- **Glažar** UL, FA

Sporočilnost v arhitekturi

- **Rustja** UL, FA

Arhitekturne analogije

- **Ostan** UL, FA

Korpus slovenske arhitekture – izbrane teme

- **Deu** UL, FA (upokojena)

Identiteta slovenske arhitekture

- **Ifko** UL, FA

Varstvo in prenova arhitekturne dediščine

- **Lah** UL, FA

Integralnost prenov

- **Ifko** UL, FA

Interpretacija dediščine

- **Debevec** UL, FA

Arhitekturni arhetipi sakralnega

- **Juvanec** UL, FA (upokojen)

Teorija izvora vernakularne arhitekture

- **Toš** Sistemprojekt, Zagreb (upokojen)

Antropologija človekovega okolja

- **Svetina** UL, FF

Arhitekturna psihologija

- **Riha** ZRC, SAZU

Filozofija arhitekture

- **Krečič** Arhitekturni muzej Ljubljana (upokojen)

Umetnostna zgodovina

● **5** **ects**

- **Čeferin** UL, Faculty of Architecture

Analysis and Criticism of Contemporary Architecture

- **Koselj** private researcher

The Origins of Modernity

- **Zorec** UL, Faculty of Architecture

Interpretation of Memory in Architecture

- **Glažar** UL, Faculty of Architecture

Meaning in Architecture

- **Rustja** UL, Faculty of Architecture

Architectural Analogies

- **Ostan** UL, Faculty of Architecture

Corpus of the Slovene Architecture – Selected Themes

- **Deu** UL, Faculty of Architecture (retired)

Identity of Slovene Architecture

- **Ifko** UL, Faculty of Architecture

Protection and Rehabilitation of Architectural Heritage

- **Lah** UL, Faculty of Architecture

Integral Renewal

- **Ifko** UL, Faculty of Architecture

Heritage Interpretation

- **Debevec** UL, Faculty of Architecture

Architectural Archetypes of the Sacred

- **Juvanec** UL, Faculty of Architecture (retired)

Theory of Vernacular Architectural Origins

- **Toš** Sistemprojekt, Zagreb (retired)

Human Environment Anthropology

- **Svetina** UL, Faculty of Arts

Architectural Psychology

- **Riha** ZRC, SAZU

Philosophy of Architecture

- **Krečič** Ljubljana Architecture Museum (retired)

Art History

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●● 5 ects

●● **Bonča** *UL, FA*

Sistemi likovnega urejanja

●● **Bonča** *UL, FA*

Arhitekturno–likovne razprave

●● **Marolt** *UL, FA*

Likovno–prostorska morfologija

●● **Novljan** *UL, FA*

Barve in prostor

●● **Novljan** *UL, FA*

Svetloba in osvetlitev v arhitekturi in urbanizmu

●● **Novljan** *UL, FA*

Orodja abstraktnih transformacij v prostoru

●● **Jeza** *UL, ALUO*

Oblikovanje notranjosti in opreme

●● **Pedersen** *Šola za arhitekturo v Aarhusu*

Kakovost doktorskega raziskovanja in osnove raziskovanja skozi oblikovanje

●● **Ettlinger** *UL, FA*

Digitalne metode in predstavitve v arhitekturi

●● **Petrovčič** *UL, FA*

Programiranje arhitekturnih oblik

●● **Zupančič** *UL, FA*

Digitalna orodja za arhitekturno izobraževanje in sodelovanje

●● **Zupančič** *UL, FA*

Arhitekturno publiciranje

●● **Hudnik** *UL, FA*

Raziskovalne metode in interdisciplinarni pristopi v arhitekturi

●● **Robinson** *UL, FA*

Natura Animare: Transformacije materije pri ustvarjanju prostora

●● 5 ects

●● **Bonča** *UL, Faculty of Architecture*

Systems of Plastic Arrangements

●● **Bonča** *UL, Faculty of Architecture*

Architectural Versus Fine Art Relations

●● **Marolt** *UL, Faculty of Architecture*

Fine Arts Morphology

●● **Novljan** *UL, Faculty of Architecture*

Colours and Space

●● **Novljan** *UL, Faculty of Architecture*

Lighting in Architecture and Urban Environments

●● **Novljan** *UL, Faculty of Architecture*

Abstract Spatial Transformations Tools

●● **Jeza** *UL, Academy of Fine Arts and Design*

Interior and Furniture Design

●● **Pedersen** *Aarhus School of Architecture*

Quality of Doctoral Research and Fundamentals of Research by Design

●● **Ettlinger** *UL, Faculty of Architecture*

Digital Methods and Presentations in Architecture

●● **Petrovčič** *UL, Faculty of Architecture*

Programming of Architectural Forms

●● **Zupančič** *UL, Faculty of Architecture*

Interfaces for Architectural Learning and Collaboration

●● **Zupančič** *UL, Faculty of Architecture*

Architectural Publishing

●● **Hudnik** *UL, Faculty of Architecture*

Research Methods and Interdisciplinary Approaches in Architecture

●● **Robinson** *UL, Faculty of Architecture*

Natura Animare: Transforming the Matter in the Creation of Space

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0

●●● 5 ects

●●● Šenk UM, FGPA

Razvoj urbanizma

●●● Čerpes UL, FA

Urbanistično načrtovanje

●●● Pogačnik UL, FGG (upokojen)

Arhitektura in trajnostni prostorski razvoj

●●● Čerpes UL, FA

Trajnosten razvoj mesta

●●● Dimitrovska Andrews UI RS (upokojena)

Orodja za nadzor urbanih oblik

●●● Černe UL, FF

Regionalno planiranje

●●● Fikfak UL, FA

Okoljsko upravljanje za podeželski turizem in rekreacijo

●●● Voigt TU Dunaj, Fakulteta za arhitekturo in prostorsko planiranje

Lokalno planiranje in sodelovanje javnosti

●●● Cirman UL, EF

Urbana ekonomika

●●● Šubic Kovač UL, FGG

Ekonomika nepremičnin – izbrane teme

●●● Hočevar UL, FDV

Sociološki koncepti sodobnega urbanizma

●●● Juvančič UL, FA

Mestna pokrajina in interaktivna mesta

●●● Fikfak UL, FA

Naselbinska krajina kulturne raznovrstnosti

●●● Deu UL, FA (upokojena)

Varstvo arhitekturnih krajin

●●● Gregorski UL, FA

Metode ambientalnega oblikovanja

●●● Zupančič UL, FA

Občutljivi prostori mesta

●●● Gazvoda UL, BF

Oblikovanje odprtega prostora

●●● Čok UL, FGG

Deležniki v procesu arhitekturnega in urbanističnega oblikovanja

●●● Čok UL, FGG

Prostorsko načrtovanje industrijskih, poslovnih in podjetniških con

1

●●● 5 ects

●●● Šenk UM, Faculty of Civil Engineering, Transportation Engineering and Architecture

History of Urbanism

●●● Čerpes UL, Faculty of Architecture

Urban Planning

●●● Pogačnik UL, Faculty of Civil Engineering and Geodesy (retired)

Architecture and Sustainable Spatial Development

●●● Čerpes UL, Faculty of Architecture

Sustainable City Development

●●● Dimitrovska Andrews Urban Planning Institute of the RS (retired)

Tools for Control of Urban Forms

●●● Černe UL, Faculty of Arts

Regional Planning

●●● Fikfak UL, Faculty of Architecture

Environmental Management for Rural Tourism and Recreation

●●● Voigt Vienna University of Technology, Faculty of Architecture and Regional Planning

Local Planning & Public Participation

●●● Cirman UL, Faculty of Economics

Urban Economics

●●● Šubic Kovač UL, Faculty of Civil Engineering and Geodesy

Real Estate Economics – Selected Themes

●●● Hočevar UL, Faculty of Social Sciences

Sociological Concepts of Modern Urbanism

●●● Juvančič UL, Faculty of Architecture

Townscapes and Interactive Cities

●●● Fikfak UL, Faculty of Architecture

Landscape Settlements of Cultural Diversity

●●● Deu UL, Faculty of Architecture (retired)

Protection of Architectural Landscapes

●●● Gregorski UL, Faculty of Architecture

Methods of Ambient Design

●●● Zupančič UL, Faculty of Architecture

Sensitive Urban Place

●●● Gazvoda UL, Biotechnical Faculty

Design of Open Space

●●● Čok UL, Faculty of Civil Engineering and Geodesy

Stakeholders in the Architectural and Urban Design Process

●●● Čok UL, Faculty of Civil Engineering and Geodesy

Spatial Design of Industrial, Business and Entrepreneurial Zones

1

●●●● 5 ects

●●●● **Toš** Sistemprojekt, Zagreb (upokojen)

Teorija arhitekturnega projektiranja

●●●● **Isaković** UL, FGG

Integrirana praksa in modeliranje stavb

●●●● **Miščević** Univerza v Zagrebu, Fakulteta za arhitekturo

Visoko-tehnološka arhitektura

●●●● **Zbašnik–Senegačnik** UL, FA

Sodobna arhitekturna tehnologija

●●●● **Kušar** UL, FA

Požarna varnost grajenega okolja

●●●● **Roset** Katalonska politehnika v Barceloni, Visoka tehniška šola za

arhitekturo

Okoljska fizika za arhitekto

●●●● **Medved** UL, FS

Energijski in okoljski vidiki načrtovanja stavb

●●●● **Medved** UL, FS

Mikroklimatske razmere v mestih in stavbah

●●●● **Zbašnik–Senegačnik** UL, FA

Pasivna hiša

●●●● **Slivnik** UL, FA

Izbrani primeri iz zgodovine arhitekture in konstrukcij

●●●● **Kilar** UL, FA

Konstrukcije v arhitekturi

●●●● **Isaković** UL, FGG

Snovanje premostitvenih objektov

●●●● **Kilar** UL, FA

Potresna arhitektura

●●●● 5 ects

●●●● **Toš** Sistemprojekt, Zagreb (retired)

Architectural Design Theory

●●●● **Isaković** UL, Faculty of Civil Engineering and Geodesy

Integrated Practices and Building Modelling

●●●● **Miščević** University of Zagreb, Faculty of Architecture

High-Tech Architecture

●●●● **Zbašnik–Senegačnik** UL, Faculty of Architecture

Contemporary Architectural Technology

●●●● **Kušar** UL, Faculty of Architecture

Fire Safety of Built Environment

●●●● **Roset** Catalan Polytechnic University, Superior Technical School of

Architecture of Barcelona

Environmental Physics for Architects

●●●● **Medved** UL, Faculty of Mechanical Engineering

Energy and Environment Assessment of Buildings

●●●● **Medved** UL, Faculty of Mechanical Engineering

Microclimate of Urban Areas and Buildings

●●●● **Zbašnik–Senegačnik** UL, Faculty of Architecture

Renewable Sources of Energy in Buildings

●●●● **Slivnik** UL, Faculty of Architecture

Selected Topics in Building and Construction History

●●●● **Kilar** UL, Faculty of Architecture

Structures in Architecture

●●●● **Isaković** UL, Faculty of Civil Engineering and Geodesy

Basics of Bridge Design

●●●● **Kilar** UL, Faculty of Architecture

Earthquake Architecture

●●●●● 5 ects

●●●●● *gostujoči predavatelj*

Znanstveno–raziskovalni predmeti/moduli drugih programov

●●●●● *nosilci predmetov drugih programov*

Razmerje med obveznimi in izbirnimi predmeti

Moduli/predmeti z obvezno strukturo vsebine

90% – 215 ects

1.1 Splošni modul

1.3 Predstavitev načrta doktorskega študija

2. Predstavitev teme doktorske disertacije

4.1 Predstavitev pred zagovorom in zagovor doktorske disertacije

Moduli/predmeti z izbirno vsebino in njeno strukturo

10% – 25 ects

1.2 Arhitekturni modul

2.1 Interdisciplinarni modul

1.4 Individualno raziskovalno delo 1

2.3 Individualno raziskovalno delo 2

3. Individualno raziskovalno delo 3

4. Individualno raziskovalno delo 4

●●●●● 5 ects

●●●●● *visiting lecturer*

Scientific Research Subjects/Modules of Other Programmes

●●●●● *teachers of subjects from other programmes*

Ratio Between Compulsory and Optional Subjects

Modules/Subjects with Compulsory Content

90% – 215 ects

1.1 General module

1.3 Presentation of doctoral study plan

2.2 Presentation of topics of doctoral dissertation

4.1 Presentation before defence and defence of doctoral dissertation

Modules/Subjects with Optional Content

and its Structure 10% – 25 ects

1.2 Architectural module

2.1 Interdisciplinary module

1.4 Individual research work 1

2.3 Individual research work 2

3.1 Individual research work 3 2

4. Individual research work 4

1

3

Izbor predmetov v modulu:

- glede na temo disertacije;
- kandidat lahko izbere največ en predmet arhitekturnega ali interdisciplinarnega modula, katerega nosilec je bodisi mentor bodisi somentor njegovega individualnega raziskovalnega dela oz. teme doktorske disertacije;
- v primeru arhitekturne predizobrazbe kandidatov: praviloma najmanj **10 erts** iz programske ponudbe nosilcev drugih strok;
- v primeru drugih profilov predizobrazbe kandidatov: praviloma najmanj **10 erts** iz programske ponudbe nosilcev – arhitektov;
- praviloma največ **60 erts** iz drugih kakovostno primerljivih programov, npr. na drugih fakultetah UL ali na drugih univerzah;
- predmeti gostujočih predavateljev se oblikujejo vsako leto posebej – gostujoči predavatelji morajo izpolnjevati pogoje za nosilce predmetov, program pa odobren po veljavnih postopkih.

Mobilnost:

Študent lahko izkoristi možnost pol– ali enoletnega študija v tujini v okviru programa Erasmus+ ali na podlagi drugih pogodb Fakultete za arhitekturo od (vključno) drugega letnika naprej.

Selection of Subjects in Modules:

- according to the theme of dissertation;
- the candidate could maximally choose one subject from architectural or interdisciplinary module given by the course coordinator which is also the mentor or co–mentor of his individual research work or his doctoral dissertation;
- in the case the candidate acquired professional qualification in architecture: a minimum of **10 erts** from the programme offer of other disciplines has to be selected;
- in the case of other professional qualifications: a minimum of **10 erts** from the programme offered by lecturers – architects has to be selected;
- a maximum of **60 erts** from other comparable programmes, i.e. of other UL faculties or other universities can be approved;
- the subjects of visiting lecturers are shaped on the yearly basis – the visiting lecturers have to fulfil preset requirements for course coordinators; the syllabus has to be approved by regular validation procedures.

Mobility:

Within the Erasmus programme or on the basis of other bilateral agreements of which the signatory is the Faculty of Architecture, the student can make use of the opportunity to study one or two semesters abroad in (and inclusive of) the second year of studies.

6. POGOJI ZA VPIS IN MERILA ZA IZBIRO OB OMEJITVI VPISA

V doktorski študijski program Arhitektura se lahko vpiše, kdor je končal:

- študijski program druge stopnje (bolonjski magisterij),
- enoviti magistrski študijski program, ki obsega **300 ects** (bolonjski magisterij),
- dosedANJI študijski program za pridobitev univerzitetne izobrazbe,
- dosedANJI študijski program specializacije po zaključenem visokošolskem strokovnem programu, če je opravil študijske obveznosti v obsegu **30 ects**, in sicer predmete enovitega magistrskega študijskega programa Arhitektura:
 - *Arhitekturna teorija in kritika,*
 - *Osnove raziskovanja v arhitekturi in urbanizmu,*
 - *Teorija prostorskega in urbanističnega načrtovanja,*
 - *Akcijsko planiranje in strateško presojanje,*
 - *Oblikovne zasnove,*
 - *Naselbinska kultura podeželja,*
 - *Umetnostna zgodovina,*
 - *Celovito varstvo stavbne dediščine,*
 - *Računalniško podprta arhitektura in*
 - *Zasnova konstrukcij.*

6. ENROLMENT CONDITIONS AND SELECTION CRITERIA IN CASE OF ENROLMENT LIMITATION

To Enrol in the Doctoral Study Programme in Architecture, Candidates Must Fulfil the Following Criteria:

- completion of the study programme of the second cycle (Bologna master degree);
- completion of uniform study programme comprised of **30 ects**–credits (Bologna master degree);
- of existing study programme for the acquisition of university education;
- completion of existing specialist study programme upon conclusion of professional study programme at an institution of higher education, providing that the candidate has gained at least **30 ects** in the uniform masters study programme Architecture from the following courses:
 - *Architectural Theory and Critique,*
 - *Introduction to Research in Architecture and Urbanism,*
 - *Theory of Physical and Regional Planning,*
 - *Action Planning and Strategic Assessment,*
 - *Design Concepts,*
 - *Countryside Settlement Culture,*
 - *Art History,*
 - *Comprehensive Preservation of Built Heritage,*
 - *Computer Supported Architecture and*
 - *Concepts of Structures.*

Skladno z merili za prehode se lahko v doktorski študijski program Arhitektura vpiše, kdor je končal:

- magisterij znanosti po zaključenem študijskem programu za pridobitev univerzitetne izobrazbe; ob vpisu se kandidatu v skladu z zakonom prizna najmanj **60 erts**,
- dosednji študijski program specializacije po zaključenem študijskem programu za pridobitev univerzitetne izobrazbe; ob vpisu se kandidatom skladno z zakonom prizna najmanj **60 erts**.

Kadar je sprejet sklep o omejitvi vpisa (kadar se prijavi več kandidatov, ki izpolnjujejo vpisne pogoje, kot je vpisnih mest), so kandidati izbrani glede na:

- **uspeh na študijskem programu (skupaj 20% teže celotne ocene):**
 - druge stopnje oz.
 - na enovitem magistrskem študijskem programu, ki obsega **300 erts** oz.
 - na dosedanjem študijskem programu za pridobitev univerzitetne izobrazbe oz.
 - na dosedanjem študijskem programu specializacije po zaključenem visokošolskem strokovnem programu in pri dodatnih izpitih, ki so določeni v četrti alineji pogojev za vpis; upoštevata se:
 - povprečna ocena študija (15% teže) in
 - ocena diplomske oz. magistrske naloge 5% teže celotne ocene);

In Accordance with the Enrolment Criteria, Candidates can Enrol in the Doctoral Study Programme in Architecture if:

- they have acquired a master's in science upon completion of the study programme for the acquisition of university education; at enrolment, the candidate shall be awarded at least **60 erts**—credits in accordance with the law;
- they have completed the existing specialist study programme upon completion of the study programme for the acquisition of university education; at enrolment, the candidate shall be awarded at least **60 erts**—credits in accordance with the law.

Should a resolution on enrolment limitation be adopted (in case the number of applying candidates who fulfil the enrolment criteria is in excess of enrolment places), the candidates shall be selected

- **according to performance in prior studies (20% weighting):**
 - study programme of the second cycle (Bologna master degree) or
 - uniform masters study programme comprised of **300 erts**—credits (Bologna master degree) or
 - existing study programme for the acquisition of university education or
 - existing specialist study programme upon conclusion of professional studies at an institution of higher education
- and the additional study obligations from the first paragraph of the enrollment conditions; criteria are:
 - study grade average (15% weighting) and
 - grade of university diploma or masters thesis (5% weighting);

— **in glede na uspeh pri izbirnem izpitu (skupaj 80 % teže celotne ocene).**

Izbirni izpit je sestavljen iz pisnega in ustnega dela.

Ocenjujejo se:

- pisna in ustna predstavitev Osnutka načrta doktorskega študija, v skladu s Pravili o postopku za pridobitev naslova doktorja znanosti na Fakulteti za arhitekturo60 (60% teže)
- priporočila uglednih raziskovalcev (10% teže),
- dokazila o raziskovalnem delu pred vpisom v program (10% teže).

Šolnina, redni/izredni študij

Šolnina je določena skladno z veljavnim cenikom.

Študij poteka redno in izredno; v okviru modulov je mogoče izbrati tudi predmete, ki se izvajajo na daljavo oz. kombinirano. Predavanja za izredni študij so organizirana v popoldanskih urah oz. ob koncu tedna (sreda, četrtek in petek popoldne, sobota dopoldne), 20% predavanj se nadomesti v obliki konzultacij. Kandidati za izredni študij morajo izpolnjevati vse navedene pogoje za vpis.

— **according to succes at the selection exam (80% weighting).**

The exam is comprised by written and oral parts. The following elements are assessed:

- written and oral presentation of a Draft plan of doctoral studies (also referred to as: outline of the doctoral study plan) prepared in accordance with the Regulations on the procedure for the acquisition of the title of Dr. – doctor of science at the Faculty of Architecture (60% weighting),
- recommendations of distinguished scientists (10% weighting);
- research work prior to programme enrolment (10% weighting).

Study Fee, Regular/Part-Time Studies

The study fee is determined according to the applicable price list.

The study is executed in a regular or part-time form; within the modules subjects may be chosen that are performed at distance, or combined. The lectures for part-time study are organized in the afternoon or at weekends (Wednesday, Thursday and Friday afternoons, and Saturday morning), 20% of lectures are replaced in the form of consultations. Candidates for part-time studies shall fulfil all afore-mentioned enrolment conditions.

7. MERILA ZA PRIZNAVANJE ZNANJ IN SPRETNOSTI, PRIDOBLENIH PRED VPISOM V PROGRAM

Študentu se lahko priznajo znanja, ki po vsebini in stopnji odličnosti ustrezajo vpisanemu študijskemu programu. Na prošnjo kandidata komisija za doktorski študij preveri možnosti priznavanja znanj in spretnosti, ki jih je kandidat pridobil pred vpisom v program, in se lahko uveljavijo v doktorskem študijskem programu arhitekture. Pri preverjanju se upošteva predvsem:

- vsebinska skladnost z Osnutkom načrta doktorskega študija oz. z Načrtom doktorskega študija (natančneje: z opisom predloga teme raziskave v dokumentu, predloženem skladno s Pravili o postopku za pridobitev naslova doktorja znanosti na Fakulteti za arhitekturo) ter
- ustreznost ravni kakovosti rezultatov (spričevala, listine, recenzije raziskovalnih objav...), ki pričajo o znanju in spretnostih, ki jih kandidat želi uveljaviti v programu.

7. PROVISIONS ON THE RECOGNITION OF KNOWLEDGE AND SKILLS ACQUIRED PRIOR TO PROGRAMME ENROLMENT

Students' knowledge that, both in content and level of excellence, complies with the study programme they enrolled in can be recognised.

Upon the candidate's request, the doctoral studies committee shall examine the possibility of recognition of the knowledge and skills that the candidate acquired prior to programme enrolment and that can be asserted for the doctoral study programme in architecture. This examination shall consider, in particular, the following:

- content conformity with the Draft plan of doctoral studies or the Plan of doctoral studies (specifically with the proposed research topic as described in the document submitted in accordance with the Regulations on the procedure for the acquisition of the title of Dr. – doctor of science at the Faculty of Architecture), and
- compliance of quality level of performance (certificates, documents, reviews of research publications...) as evidence of knowledge and skills which the candidate wishes to assert in the programme.

8. NAČINI OCENJEVANJA

V skladu z zakonom načinov ocenjevanja ni potrebno posebej opredeliti. Ker pa je kakovost študija na doktorski stopnji zelo pomembna, je omenjen sistem preverjanja kakovosti.

Med organiziranimi oblikami študija je v okviru predmetov splošnega, arhitekturnega in interdisciplinarnega modula predvidena ocenjevalna lestvica od 1 do 10 (1–5: nezadostno; 6–10: zadostno, dobro, prav dobro in odlično).

Kot posebna oblika organiziranega študija je izpostavljeno vsakoletno preverjanje kakovosti individualnega raziskovalnega dela, ki pomaga mentorju oz. mentorski skupini v skrbi za kakovost: v prvem letniku gre za predstavitev načrta študija, v drugem za predstavitev teme, v tretjem pa za predstavitev rezultatov pred zagovorom in za zagovor disertacije. Obveznost pri teh preverjanjih ter pri individualnem raziskovalnem delu je bodisi opravljena ali pa ne – ocenjevalna lestvica ni predvidena. Kakovost opravljene obveznosti se preverja opisno, skladno s Pravili o postopku za pridobitev doktorata znanosti s področja arhitekture. Za kakovost študija skrbijo: mentorji oz. mentorske skupine, komisija za doktorski študij Fakultete za arhitekturo z recenzentskim sistemom, senat Fakultete za arhitekturo, strokovne komisije za oceno teme, disertacije in za zagovor, ki jih na predlog komisije za doktorski študij imenuje senat Fakultete za arhitekturo, komisija za doktorski študij in senat Univerze v Ljubljani.

8. ASSESSMENT TYPES

In accordance with the law, the assessment types do not need to be specifically defined. However, because the quality of studies at the doctoral level is very important, the quality control system is mentioned here.

Within the framework of the subjects of the general architectural and interdisciplinary module, an assessment scale from 1 to 10 is planned (1–5: insufficient; 6–10: sufficient, good, very good and excellent).

As a special form of organized studies, emphasis is laid on the annual quality control of the individual research work, which helps the mentor or the group of mentors ensure quality: in the first year, this regards the presentation of the study plan, in the second year the presentation of the topic, and in the third year the presentation of results prior to the defence as well as the defence of the dissertation. Upon control, this obligation is either fulfilled or not – and no assessment scale is foreseen for the individual research work either. The quality of the fulfilled obligation shall be evaluated descriptively, in accordance with the Regulations on the procedure for the acquisition of the title of Dr. – doctor of science) in the field of architecture. The following parties are in charge of the quality of studies: mentors or groups of mentors, the doctoral studies committee of the Faculty of Architecture with a review system, the Senate of the Faculty of Architecture, the professional committee for the assessment of the topic, the dissertation and the defence, appointed by the Senate of the Faculty of Architecture, the doctoral studies committee and the Senate of the University of Ljubljana, at the proposal of the doctoral studies committee.

9. POGOJI ZA NAPREDOVANJE PO PROGRAMU

Pogoji za napredovanje iz letnika v letnik

Za prehod iz prvega v drugi letnik mora študent:

- opraviti splošni modul,
- opraviti pisno in ustno predstavitev načrta doktorskega študija; predstavitev je pozitivna, ko načrt študija odobrita komisija za doktorski študij in senat Fakultete za arhitekturo,
- zbrati najmanj **45 ects** iz prvega letnika.

Za prehod iz drugega v tretji letnik mora študent:

- opraviti arhitekturni in interdisciplinarni modul,
- opraviti pisno in ustno predstavitev dispozicije doktorske disertacije; predstavitev je pozitivna, ko dispozicijo odobrijo komisija za doktorski študij, komisija za spremljanje doktorskega študenta ter senat Fakultete za arhitekturo,
- zbrati najmanj **60 ects** kumulativno.

Za prehod iz tretjega v četrti letnik mora študent:

- opraviti predstavitev vmesnih rezultatov raziskovalnega dela na doktorskem seminarju/konferenci,
- imeti odobreno dispozicijo doktorske disertacije na Univerzi v Ljubljani,
- zbrati najmanj **120 ects** kumulativno.

9. CONDITIONS FOR PROMOTION ACCORDING TO PROGRAMME

Conditions for Promotion from the first to the second year, the student shall

- complete the general module;
- perform a written and oral presentation of his/her doctoral study plan; the presentation is positive if approved by the doctoral studies committee and the Senate of the Faculty of Architecture;
- be awarded a minimum of **45 ects**—credits in the first year of study.

To be Promoted from the Second to the Third Year, the Student Shall:

- complete the architectural and interdisciplinary modules;
- perform a written and oral presentation of his/her doctoral dissertation proposal; the presentation is positive if the doctoral dissertation proposal is approved by the doctoral studies committee and the Senate of the Faculty of Architecture;
- have been awarded a minimum of **60 ects**—credits cumulatively.

To be Promoted from the Third to the Fourth Year, the Student Shall:

- give a presentation on the interim results of his/her research work at a doctoral seminar/conference,
- have an approved doctoral dissertation proposal at the University of Ljubljana;
- been awarded a minimum of **120 ects**—credits cumulatively.

Pogoji za mirovanje statusa študenta

Študent lahko zaprosi za mirovanje statusa, v kolikor zaradi opravičljivih razlogov ni bil zmožen opravljati študijskih obveznosti. Upoštevajo se: invalidnost, bolezen (potrdilo osebnega zdravnika, ki izkazuje vsaj polletno nezmožnost študija v zadnjem študijskem letu), materinstvo v zadnjih treh študijskih letih, družinske in socialne okoliščine v zadnjem študijskem letu (mnenje Centra za socialno delo glede nezmožnosti za študij), status vrhunskega športnika ali vrhunskega umetnika v zadnjem študijskem letu. O izjemnem vpisu odloča komisija za doktorski študij Fakultete za arhitekturo.

Conditions for Temporary Suspension of Student Status

A student may request temporary suspension of student status should he/she, for justified reasons, not be able to fulfil his/her student obligations. As such shall be considered: invalidity, illness (certificate of personal physician confirming an incapability of at least six months over the last year of study), maternity within the last three years of study, family and social circumstances in the last year of study (opinion of the Social Work Centre on his/her unfitness for study), top athlete or top artist status in the last year of study.

The doctoral studies committee of the Faculty of Architecture decides on temporary suspension of student status issues.

10. PREHODI MED ŠTUDIJSKIMI PROGRAMI

Prehod iz drugega doktorskega programa na Doktorski program Arhitektura Fakultete za arhitekturo Univerze v Ljubljani je mogoč, če študenti izpolnjuje pogoje za vpis v ta program. Isto velja za prehode iz dosedanjih magistrskih/doktorskih oz. specialističnih programov. Pri prehodu mora kandidat predložiti overjeno potrdilo o opravljenih študijskih obveznostih na študijskem zavodu, kjer je bil vpisan, in uradni izpis iz veljavnih študijskih programov, v okviru katerih so bile navedene obveznosti opravljene. Prošnjo za prehod odobrita komisija za doktorski študij in senat Fakultete za arhitekturo; in sicer s priznavanjem izpitov v postopku priprave načrta doktorskega študija. Pri preverjanju se upošteva vsebinska skladnost s programom, v katerega kandidat prehaja, še posebej skladnost z Osnutkom načrta doktorskega študija oz. z Načrtom doktorskega študija (natančneje: idejne zasnove raziskovalnega dela v dokumentu, predloženem skladno s Pravili o postopku za pridobitev naslova doktorja znanosti na Fakulteti za arhitekturo).

11. NAČIN IZVAJANJA ŠTUDIJA

Študij poteka izredno.

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10. TRANSITION BETWEEN PROGRAMMES

Transition from a different doctoral programme to the doctoral programme in architecture at the Faculty of Architecture of the University of Ljubljana is possible if the student fulfils the conditions of enrolment in this programme. The same applies to the transition from hitherto existing master's/doctoral or specialist study programmes. At transition the candidate shall submit a certified confirmation on fulfilled study obligations from the study institution where he/she was enrolled, as well as an official extract from the applicable study programmes within the framework of which the afore-mentioned obligations were fulfilled. The request for transition shall be approved by the doctoral study committee and the senate of the Faculty of Architecture – namely through recognition of the examinations, in the preparation process of the doctoral study plan. Upon verification, the content compliance with the programme to which the candidate wishes to transit, and in particular, the research concept in the document submitted pursuant to the Regulations on the procedure for the acquisition of the title of Dr. of science at the Faculty of Architecture).

11. TYPE OF IMPLEMENTATION OF STUDIES

The study is implemented in a part-time form.

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12. POGOJI ZA DOKONČANJE ŠTUDIJA

Za dokončanje študija mora študent opraviti obveznosti pri vseh predmetih, ki jih je vpisal, zaključiti individualno raziskovalno delo, pripraviti doktorsko disertacijo, predstaviti rezultate komisiji za spremljanje doktorskega študenta, mentorju (in somentorju) še pred zagovorom, kot prvi avtor objaviti izvirni znanstveni članek v mednarodno pomembni reviji ali znanstveno poglavje v monografiji (upoštevajo se habilitacijski kriteriji UL in FA) ter disertacijo uspešno zagovarjati. Uspešnost disertacije preverja komisija za spremljanje doktorskega študenta v skladu s pravili Univerze v Ljubljani in Fakultete za arhitekturo.

MENTORJI

Seznam potencialnih mentorjev

<https://www.fa.uni-lj.si/studiji/doktorski-studij-arhitekture/>

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12. CONDITIONS FOR COMPLETION OF STUDIES

To conclude his/her studies, the student shall fulfil all obligations in all subjects that he/she has enrolled in, complete his/her individual research work, prepare a doctoral dissertation, present the results to the Doctoral Study Committee and supervisor (and co-supervisor) prior to its defence, as lead author publish an original scientific article in an internationally-renowned journal or a scientific chapter in a monograph (UL and UL FA habilitation criteria shall be taken into account), and also successfully defend the dissertation. The successful completion of the dissertation shall be examined by the Committee for Dissertation Evaluation and Defence in accordance with the Regulations on the Procedure for the Acquisition of the Title of Doctor of Science at the Faculty of Architecture of the University of Ljubljana.

MENTORS

List of Potential Mentors

<https://www.fa.uni-lj.si/en/studiji/doctoral-programme-in-architecture-drsa/>

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13. KRATKA PREDSTAVITEV POSAMEZNIH PREDMETOV

1.1 Predmet splošnega modula

1.1 Uvod v znanstvenoraziskovalno delo

Ljubo Lah

Značilnosti znanstvenega in strokovnega dela, še posebej na področju arhitekture in urbanističnega načrtovanja; znanstvenoraziskovalni pristopi, metode in tehnike; znanost v razmerju do filozofije, logike, etike in psihologije ustvarjalnosti; napake v znanstvenoraziskovalnem delu; izbor relevantnega raziskovalnega problema, sodobni načini iskanja strokovnoznanstvenih informacij v arhitekturi in urbanizmu; metode: anketa in intervju, kvantitativne metode in vzorčenje; značilnosti kritičnega branja, veščine upravljanja s časom; obdelava in prikaz rezultatov, zahteve za oblikovanje t.i. primarnega dokumenta.

1.2 Predmeti arhitekturnega modula

1.2 Arhitekturna teorija in kritika

Petra Čeferin

Antični in renesančni koncept arhitekture; od renesanse do funkcionalizma; funkcionalizem in postfunkcionalizem; slovenska scena: a) cerkvena versus civilna estetika; b) socrealizem: funkcionalizem: postmoderna; c) v minimalizmu preobčena postmoderna; kritika na Slovenskem.

1.2 Korpus slovenske arhitekture

Aleksander Ostan

Nove metode raziskav arhitekture v slovenskem prostoru z neposredno navezavo v evropskih raziskovalnih projektih in s spoznavanjem celovitega korpusa slovenske arhitekture; vzpostavitev novih oblik interdisciplinarnega izobraževanja s povezavami v slovenskem in mednarodnem okolju ter neposredno sodelovanje v evropskih raziskovalnih projektih.

13. THE SHORT INTRODUCTION OF SUBJECTS

1.1 Subject of the General Module

1.1 Introduction to Scientific Research

Ljubo Lah

The characteristics of scientific research work, in particular in the fields of architecture and urban design; assortment of methodological topics, scientific research methods and techniques; science in relation to philosophy, logics, ethics and psychology of creativity; errors in the scientific research work; definition of a relevant research problem, finding and selection and critical application of scientific information in the field of architecture and urbanism; methods: processing and presentation of results, survey and interview, quantitative methods and sampling, characteristics of critical reading, time management skills; processing and presentation of results, preparation of the so-called primary documents.

1.2 Subjects of the Architectural Module

1.2 Architectural Theory and Critique

Petra Čeferin

Architectural concept of Antiquity and Renaissance; from Renaissance to functionalism; functionalism and post-functionalism; Slovene atmosphere: a) sacral versus profane aesthetics; b) socrealism: functionalism: post-modernism; c) minimalistic mask of post-modernism; architectural critique in Slovenia.

1.2 Corpus of the Slovene Architecture

Aleksander Ostan

New research methods of architectural research in Slovenia with direct connection to the European research projects and integral knowledge of the corpus of Slovene architecture; reestablishment of new forms of interdisciplinary education with connections in Slovene and international environment and direct cooperation in European research projects.

1.2 Arhitekturna praksa kot raziskovalni laboratorij

Boštjan Vuga

Pojmovanje arhitekturnega oblikovanja oz. arhitekturne prakse kot znanstvenoraziskovalnega laboratorija; povezovanje tradicionalnega, pragmatičnega in svobodnega znanstveno–raziskovalnega pristopa za razvoj metodologije arhitekturnega projektiranja; konceptualizacije arhitekturno–oblikovalskih preizkusov raziskovalnih hipotez na podlagi konstruktivne kritike primerljivih rešitev; možnosti metodološkega razvoja na podlagi izvedbe preizkusov raziskovalnih hipotez.

1.2 Strategije arhitekturnega načrtovanja

Aleš Vodopivec

Modernistične in sodobne strategije arhitekturnega načrtovanja: forma/funkcija; volumen/teža; simetrija/pravičnost; kubizem/četrta dimenzija prostora; dekoracija; prosti tloris/prostorski načrt; konstrukcija/tektonika; novi materiali/narativnost gradiva; stavbni ovoj/presojnost/scenografija ...

1.2 Sodobni pristopi k urbanizmu

Janez Koželj

Narava globalizacije, dejavnikov neo–liberalnega mesta, značilnosti post–urbanega prostora in naraščanja pravice do mesta; neučinkovitost tradicionalnih metod in tehnik načrtovanja in urejanja mest (planiranja končnih stanj) – pogoji/potrebe post–industrijske družbe, možnosti informacijsko komunikacijskih tehnologij; diferencirane oblike prožnega urbanizma: odsotnosti enotne teorije; različnost operativnih metod in taktik dejavnega in dinamičnega uravnavanja razvojnih procesov v smeri dolgoročnih učinkov; lahki, regulacijski, operativni, projektni, dogovorni, dogmatski, navidezni in ohlapni urbanizem; vloga strateškega povezovanja, oblike pravične kompenzacije in ustvarjalni načini upravljanja mest.

1.2 Architectural Research by Design

Boštjan Vuga

Comprehension of architectural design and architectural practice as a research laboratory; integration of traditional, pragmatic and liberal approaches in the development of architectural methodology; conceptualization of architectural experimental research design based on critical reflections of comparable solutions; possibilities of methodological developments based on architectural experimental design.

1.2 Strategies of Architectural Design

Aleš Vodopivec

Modernistic and contemporary strategies of architectural design: form/function; volume/weight; symmetry/regularity; cubism/fourth dimension of space/decoration; free plan layout/space plan; load bearing structure/tectonics; new materials/narrativity of material; building envelope (façade)/transparency/scenography...

1.2 Contemporary Approaches to Urbanism

Janez Koželj

Introduction: an outlook into globalization processes, neo–liberal conditions, specifics of post–urban space and emerging rights to the city; inefficiency and critical analysis of traditional methods and techniques of urban planning and urban development – the reasons why current urbanism is not able to reflect the needs of post–industrial society; possibilities of computing and informational communication technology; new emerging modes of flexible urbanism: absence of unified theory; operative methods and techniques of processual and pro–active urban planning: light, regulative, operative, consensual, new, loose urbanism and pseudo urbanism; the role of the city governance in response to a changing environment, instruments of equity linkage and innovative modes of urban management.

2.1 Predmeti interdisciplinarnega modula

Tematski sklopi/poudarki – povezave (izhodiščna legenda rdečih pik – naslovi, razporeditev in sestava sklopov se (pre-)oblikujejo skladno z raziskovalno politiko FA):

- *Arhitekturna teorija in kritika, korpus slovenske arhitekture*
 - *povezava s humanizmom*
- *Likovno–digitalna teorija in metodologija*
 - *povezava s humanizmom in tehniko*
- *Urbanistična teorija in metodologija*
 - *povezava z družboslovjem in biotehniko*
- *Teorija projektiranja in tehnične aplikacije v arhitekturi*
 - *povezava s tehniko*

2.1 Subjects of the Interdisciplinary Module

Thematic modules/emphasis – relations (legend of red dots – titles, disposition and structure of components is (pre)defined in accordance with the research policy of FA):

- *Architectural Theory and Critique, Corpus of the Slovene Architecture*
 - *relation to humanism*
- *Fine–Arts and Digital Theory and Methodology*
 - *relation to humanism and technology*
- *Theory and Methodology of Urbanism*
 - *relation to social sciences and biotechnology*
- *Theory of Planning and Technological Application in Architecture*
 - *relation to technology*

- **Likovno arhitekturna teorija in kritika, korpus slovenske arhitekture**
— **povezava s humanizmom**

- **Analiza in kritika sodobne arhitekture**
Petra Čeferin

Uvodni pregled sodobne arhitekturne produkcije: populizem, racionalizem, strukturalizem, produktivizem, post-modernizem, neoavantgarda, kritični regionalizem, reflektivne prakse, ekoarhitektura. Pomen in vloga medijev v sodobni arhitekturi: prepletenost arhitekturne produkcije kot projektiranja in gradnje, in »manj materialne« produkcije arhitekture v medijih. Pogoji nastajanja sodobne arhitekture: upetost arhitekturne produkcije v ekonomsko, politično in kulturno situacijo delovanja, arhitektura kot integralni del družbene realnosti vs. arhitektura kot transformacija arhitekturne in družbene realnosti; možnost, pogoji, struktura in področja učinkovanja arhitekturne invencije v sodobni arhitekturni produkciji.

- **Izvori moderne**
Nataša Koselj

Dialektika razvoja, izvori in koncepti Moderne: primerjalna analiza teoretskih člankov, posameznih del in njihovih avtorjev ter vplivov prostora in časa, v katerem so nastala; opredelitev Moderne, obdobja, razlogov za pojav; uporaba besede moderen; prostor, čas in bistvo modernega ustvarjalnega procesa.

- **Interpretacije spomina v arhitekturi**
Maruša Zorec

Pregled metod proučevanja zgodovine arhitekture in pristopov ter načinov interpretacije spomina v arhitekturi; arhitektura, ki združuje staro in novo, pregled zgodovine, raziskovanje konceptov; razvijanje novih konceptov interpretacij spomina v arhitekturi; razvijanje novih konceptov v odnosu staro – novo v arhitekturi.

- **Architectural Theory and Critique, Corpus of the Slovene Architecture**
— **relation to humanism**

- **Analysis and Criticism of Contemporary Architecture**
Petra Čeferin

Introductory overview of the contemporary architectural production: populism, rationalism, structuralism, productivism, post-modernism, Neo-Avantgarde, critical regionalism, reflective practices, sustainable architecture. The significance and role of the media in contemporary architecture. The significance of the intertwining of architectural production as building and design, and the »less material« production of architecture in the media. Conditions of the emergence of contemporary architecture. The ways of engagement of architectural production/architecture with the economic, political and cultural contexts in which it works/is made: architecture as an integral part of social reality vs. architecture as a transformation of architectural and social reality; the possibilities, conditions, structure of architectural invention in the contemporary production of architecture and the realms of its operation.

- **The Origins of Modernity**
Nataša Koselj

The dialectic of the development, the origins and concepts of the Modernity through comparative analysis of the theory, individual works of art, their authors and the influences of the space and time of their origin; definition of Modernity, period, origins; the use of the term Modern; space, time and the essence of the creative process.

- **Interpretation of Memory in Architecture**
Maruša Zorec

Review of the methods of studying architectural history, overview of the approaches and ways of interpretation of memory in architecture; architecture that joins old and new, overview of the historical examples, research of the concepts; development of the new concepts of interpretation of the memory in architecture; development of the new concepts in the relationship of old and new in architecture.

- **Sporočilnost v arhitekturi**

Tadej Glažar

Izvori in nameni sporočilnosti arhitekturnega prostora; pomeni arhitekturnega prostora; moč sporočilnosti; zgodovinski razvoj in vloga arhitekturnega izraza skozi razvojno arhitekturno prakso (uprašanja monumentalnosti...); potenciali arhitekturnega izraza v sodobni praksi.

- **Arhitekturne analogije**

Uroš Rustja

Osnovna terminologija; primerjave arhitekture in urbanizma z drugimi disciplinami; uporabnost metod pri preučevanju predmeta oz. področja; razlage pri spoznavanju vsebine; hkratno ali izmenično preučevanje dveh ali več vsebin, da bi ugotovili njihove skupne lastnosti ali razlike.

- **Korpus slovenske arhitekture—izbrane teme**

Aleksander Ostan

Izbor tem iz sledečih sklopov: nove metode raziskav arhitekture v slovenskem prostoru z neposredno navezavo v evropskih raziskovalnih projektih in spoznavanjem celovitega korpusa slovenske arhitekture; vzpostavitev novih oblik interdisciplinarnega izobraževanja s povezavami v slovenskem in mednarodnem okolju ter neposredno sodelovanje v evropskih raziskovalnih projektih.

- **Identiteta slovenske arhitekture**

Živa Deu

Metode prepoznavanja entitet slovenske arhitekture, ki jo opredeljujejo in definirajo kot absolutno slovensko; analiza in dokazovanje navedene absolutnosti; absolutna in relativna identiteta arhitekturnih objektov; različnost v rešitvah; razlogi za posebnosti slovenske arhitekture.

- **Meaning in Architecture**

Tadej Glažar

Origins and purpose of meaning in architectural environment; significance of architectural environment; power of meaning, messages; historical development and the role of architectural expression through developing architectural practice (questions on monumentality ...); potentials of architectural expression in modern practice.

- **Architectural Analogies**

Uroš Rustja

Basic terminology; comparisons of architecture and town planning with other disciplines; applicability of methods in studying the subject; interpretations during familiarization with content; simultaneous or alternate studying of two or more contents in order to identify common characteristics or differences.

- **Corpus of the Slovene Architecture—Selected Themes**

Aleksander Ostan

Selected themes include chapters from: new research—methods of architecture in Slovenia with direct connection to the European research—projects and integral knowledge of the corpus of Slovene architecture; formation of new forms of interdisciplinary education with the connections within Slovenian and international environment as well as direct cooperation in European research projects.

- **Identity of Slovene Architecture**

Živa Deu

Methods and ways of recognizing entities of Slovenian architecture that define and determine the unique Slovenian architecture; analysis and proving of uniqueness; absolute and relative identity of architectural objects; difference in solutions with comparisons and analysis of architectural elements; origins of difference of Slovene architecture to other world architectures.

- **Varstvo in prenova arhitekturne dediščine**

Sonja Ifko

Tematika predmeta je vezana na aktualne spremembe in izkušnje specifične arhitekturne metode in teorije s prednostnim pogledom na slovenski prostor in slovensko problematiko ter na strokovno in znanstveno povezavo z najnovejšimi svetovnimi usmeritvami obravnavane specifikke.

- **Integralnost prenov**

Ljubo Lah

Razumevanje temeljnih pojmov s področja integralnega varstva arhitekturne dediščine, interpretacij mednarodnih izhodišč, ki oblikujejo doktrino integralnega varstva kot sestavni del trajnostnega razvoja; teoretska, metodološka, pravna in vrednostna izhodišča. Izbrane tematike: kreativnost in prenova, prenova mesta/mestnega predela/podeželja/naselij, prenova posameznih stavb, menedžment in arhitekturna dediščina, študije izvedljivosti, instrumenti in mehanizmi urejanja prostora, načrtovanje prilagojene in adaptirane uporabe prostorskih struktur, ohranjanje avtentičnosti, konservatorski posegi, metode in koncepti za načrtovanje prenovitvenih posegov, interdisciplinarnost in timskost dela.

- **Interpretacija dediščine**

Sonja Ifko

Vloga dediščine v sodobni družbi: kot označevalec kulturne identitete, kot prostorskorazvojni potencial in kot ekonomskorazvojni parameter; opis razvojnih značilnosti varovanja naravne in kulturne dediščine in zgodovina predstavitev metod ter tehnik; teorija in filozofija varstva; predstavitev različnih kategorij naravne in kulturne dediščine, osnove muzeološke teorije in varstvenoprezentacijskih pristopov; oblike in načini predstavljanja dediščine ter predstavitev aktualnih trendov svetovne prakse na področju muzeologije in interpretacije dediščine; vključevanje varstva dediščine v razvojne programe.

- **Protection and Rehabilitation of Architectural Heritage**

Sonja Ifko

The education about protection and rehabilitation of cultural heritage is connected to the actual changes and experiences of special architectural method and theory with accentuation on Slovene-specific problems and on professionally and scientifically latest achievements and methods of tackling such problems.

- **Integral Renewal**

Ljubo Lah

The understanding of fundamental concepts in the field of integral preservation of architectural heritage, familiarization with the interpretations of international data-bases and documents forming the doctrine of integral preservation in the context of sustainable development; theoretical, methodological, legal and value based point of view; selected topics: creativity and renovation, renovation of a town/town section/rural area/settlement, renovation/rehabilitation of buildings, management and cultural heritage, feasibility studies, instruments and mechanisms of spatial planning, planning of adjusted and adapted use of structures in space, preservation of authenticity, conservation interventions, methods and concepts in planning renovation interventions, interdisciplinary and team nature of work.

- **Heritage Interpretation**

Sonja Ifko

The role of heritage in modern society: identification of cultural identity, space development potential and economic developer; description of characteristic development of heritage protection and the history of presentation methods and techniques; theory and philosophy of protection of natural and cultural heritage: presentation of different categories of architectural heritage, basics of museumological theory and different protection approaches; presentation of heritage and actual trends; inclusion of heritage protection in development programs.

- **Arhitekturni arhetipi sakralnega**

Leon Debevec

Značilnosti razmerja prostor – kult; ravni oblikovanja arhetipov sakralnega; metoda ovojev; kultni kompleksi pred–antičnih in antičnih religij, Egipt, Grčija, Rim; krščanski kultni kompleks, zgodnje krščanstvo, srednji vek, barok, drugi vatikanski koncil; vzporedni razvoj kultnih kompleksov drugih religij.

- **Teorija izvora vernakularne arhitekture**

Borut Juvanec

Med tehniko, tehnologijo, uporabo, antropologijo, ergonomijo in estetiko v arhitekturi: izvor prvih arhitektur, razmerje med teorijo arhitekture in teorijo izvora, opredelitev izvorov; razvojna načela; prvinska arhitektura, znanstvene metode za opredelitev bistva vernakularne arhitekture in njegovo sodobno konceptno interpretacijo.

- **Antropologija človekovega okolja**

Igor Toš

Interakcija, sovisnosti in koevolucija človeka in antropogenega materialno–prostorskega okolja. Človek kot »animal symbolicum«, kot biofizično–simbolno bitje. Človekovo okolje kot biofizično–simbolni milieu. Osnovni pojmi semiotike in informacijske teorije. Poreklo arhitekture in poreklo mesta. Vprašanja sodobnosti. Interdisciplinarna struktura arhitekturne antropologije. Metodologija interdisciplinarnega raziskovalnega dela, osnove sistemske metodologije.

- **Arhitekturna psihologija**

Matija Svetina

Opredelitev in področja arhitekturne psihologije; narava odnosov med človekom in okoljem; metode arhitekturne psihologije; urednotenje po uporabi; čutne kakovosti in njihovi vplivi; družbeni procesi in okolje; spoznavanje okolja; okoljski problemi v naseljih; nesreče; psihologija in načrtovanje (naročniki in načrtovalci; procesi usklajevanja; pogajanje o skupni sliki okolja; stiki z javnostjo); značilnosti vedenja in doživljanja v nekaterih posebnih okoljih; okolje za use.

- **Architectural Archetypes of the Sacred**

Leon Debevec

Characteristics of the relationship between place and cult; forming layers on the archetypes of the sacred; »wrapping« method; sanctuaries of ancient religions (Egypt, Ancient Greece, Roman Empire); Christian sanctuaries (The Early Christian age, The Middle–age, Baroque, Second Vatican council); parallel spatial developments of other religions.

- **Theory of Vernacular Architectural Origins**

Borut Juvanec

Between techniques, technology, usability, anthropology, ergonomics and aesthetics in architecture: origins of primeval architecture, interrelation of architectural theory and theory of origins, definition of origins; development principles; primeval architecture, scientific research methods for definition of the essence of vernacular architecture and its contemporary conceptual interpretation.

- **Human Environment Anthropology**

Igor Toš

Interaction, interdependence and co–evolution of human being and the anthropogenous material and spatial environment. Human being as an »animal symbolism«, a biophysical and symbolical being. Human environment as a biophysical and symbolical milieu. Main concepts in semiotic and information theory. Origins of architecture and origins of city/anthropogenic landscape. Notions of contemporaneity. Interdisciplinary structure of architectural anthropology. Methodology of interdisciplinary research, foundations of systems methodology.

- **Architectural Psychology**

Matija Svetina

Introduction: definition of the domain of architectural psychology; sensual effects; social processes and environment; recognition of the environment; environment problems in settlements; accidents; psychology and planning; specifics of behaviour and experiencing in some special environments; environment for everyone.

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● Filozofija arhitekture

Rado Riha

Predmet razvija sistematično in poglobljeno refleksijo o prostoru/času, njuno analitično in fenomenološko obravnavo ter povezavo tako z metafiziko na eni strani kakor tudi z usakdanjim izkustvom prostora/časa na drugi. Teme: prostor in čas v zgodovini filozofij; prostor in čas v sodobni znanosti in filozofiji; realni, fenomenalni in virtualni prostor & čas.

● Umetnostna zgodovina

Peter Krečič

Umetnostna zgodovina in zgodovina kulturnih formacij s posebnim pogledom na arhitekturo in njeno teorijo; Izbrane umetnostno–zgodovinske teme iz različnih časovnih razdobij; teorija umetnosti, arhitekturne teorije; teorije avantgarde in modernizma.

●● Likovno–digitalna teorija in metodologija

— povezava s humanizmom in tehniko

●● Sistemi likovnega urejanja

Jaka Bonča

Snovanje kompozicij in sistemov na mreži in na podobni obliki ponavljanja. Sistemi kot matematične izometrične preslikave: zrcaljenje, vrtež, ponavljanje ...mere, moduli, merila, razmerja in sorazmerja; število elementov v nizu, število elementov v useh nizih, število nizov, velikost dela.

●● Arhitekturno–likovne razprave

Peter Marolt

Zakovitosti arhitekturnega prostora in prostorskih form v različnih nivojih umetnosti in arhitekture; sporazumevanje in uživanje v prostor skozi dialog s prostorom; povezava med različnimi mediji in vrstmi likovne umetnosti; okvir za nove, drugačne oblike bivanja (obstoja); soočanje z odnosi: čista forma/socialni produkt, znanje/védenje, red/nered, preobrat/razvoj, arhitektura/skulptura.

● Philosophy of Architecture

Rado Riha

This course develops systematical and enhanced philosophical reflection of space/time by analytic and phenomenological methods, and connection between metaphysical and “live-by” concepts and experiences of space and time. Themes: space and time in the history of philosophy; space and time in contemporary science and philosophy; real, phenomenal and virtual space & time.

● Art History

Peter Krečič

Art history and history of cultural formations through the prism of architecture and its theory; selected art history topics from different historical periods; theory of art, architectural theories; theories of avant–garde and modernism.

●● Fine–arts and Digital Theory and Methodology

— relation to humanism and technology

●● Systems of Plastic Arrangements

Jaka Bonča

Designing composition or a system that is based on the grid or on other forms of repetition. Systems as mathematical isometric projections: mirroring, vortex, repetition etc; the meaning of dimensions, modules, scales, ratios and proportions.

●● Architectural Versus Fine Art Relations

Peter Marolt

Designing architectural space and spatial forms regarding different levels that art and architecture depend on; communication and communication with spatial entity through spatial dialogue; combination of different media and different kinds of visual arts; the framework for new forms of residence (being, existence); confrontation with the relation between form and the product of the society: knowledge/understanding, order/chaos, revolution/evolution, architecture/sculpture, etc.

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●● Likovno–prostorska morfologija

Peter Marolt

Spoznavanje z oblikotvornimi elementi, ki se tičejo pristopov k ubranosti celote na različnih področjih umetnosti, na osnovi katerih lahko razumemo likovni smisel in načine urejevanja likovno–prostorskih form.

Zgledovanje po osnovnih vzorcih v kompozicijah drugih umetniških disciplin, iskanje združevalnih elementov, ki bi jih bilo mogoče posredno aplicirati tudi na polje oblikovanja prostora.

●● Barve in prostor

Tomaž Novljan

Pregled pristopov in metod oblikovanja barve v prostoru; oblikovanje barvnega sveta v arhitekturi skozi razumevanje obravnavanih metod; izhodiščni izobrazbeni profil kot izhodišče možnih prispevkov k razvoju obravnavane metodologije; predlog prispevkov k razvoju metode.

●● Svetloba in osvetlitev v arhitekturi in urbanizmu

Tomaž Novljan

Fizikalne lastnosti svetlobe; naravna svetloba; senca, odboj in absorpcija; osvetljevanje z električnimi viri; razlike med zunanjo in notranjo osvetlitvijo; primerljivost projektirane in izmerjene svetlobe; kvaliteta in kvantiteta osvetlitve; svetlobe in zaznavanje prostora; svetloba kot nosilec informacije; dinamična osvetlitev kot simulacija naravne osvetlitve; svetlobno smotrna zasnova objekta, svetlobno onesnaževanje okolja; svetloba in osvetlitev v virtualnem in realnem prostoru; oblikovanje svetlobe v gradbenem procesu.

●● Orodja abstraktnih transformacij v prostoru

Tomaž Novljan

Zaznavanje prostora; pojmi: prostor, abstrakcija, transformacija; njihova uporabnost v kreativnem procesu; kaos in samopodobnost; fraktalna teorija in fraktalna geometrija; njihova uporabnost v oblikovanju prostora; prenos in prilagoditev vtisov naravnega okolja v zaprt prostor; barva, vzorec, svetloba.

●● Fine Arts Morphology

Peter Marolt

Getting to know the forming elements concerning the approaches to the harmony of the whole in different fields of art, which can help us understand the artistic sense and the ways of editing spatial forms pertaining to the fine arts. Following the basic patterns in compositions of other artistic disciplines, the search for unifying elements that could be indirectly applied to the field of spatial design.

●● Colours and Space

Tomaž Novljan

Detailed overview of approaches and methods for colour design; colour design as a reflection of other professions from the perspective of the methods dealt with; professional profile as a starting point of possible methodological contributions; proposal of methodological developments.

●● Lighting in Architecture and Urban Environments

Tomaž Novljan

Physical properties of the light; the natural light; shade, shadow, refraction, absorption; the lighting with electrical powered sources; essential differences between indoor and outdoor lighting; the comparison between the designed/simulated and measured/achieved photometric quantities; quality and quantity of light; light and the perception of the space; light as the bearer of information; dynamic lighting as a substitution for natural lighting; sustainable lighting design; light pollution; lighting in virtual space; the role of a lighting designer in a building process.

●● Abstract Spatial Transformations Tools

Tomaž Novljan

Spatial perception; notions: space, abstraction, transformation; their application in the creative process; the chaos theory and self-similarity; basic conception of fractal theory and fractal geometry; application in the design process; ambient design in aggressive environments, habitats without direct connection to aboveground space; adaptation of principles and shaping the perception of natural-like effects into the confined spaces; colour, pattern, light.

●● Oblikovanje notranjosti in opreme

Primož Jeza

Pregled pristopov in metod kompozicije in oblikovanja mobilne in fiksne opreme, kompozicije interiera in oblikovanje ter umeščanje ulične opreme v urbano tkivo; oblikovanje notranjosti oziroma opreme kot refleksija druge izhodiščne izobrazbe z vidika razumevanja obravnavanih metod; izhodiščni izobrazbeni profil kot izhodišče možnih prispevkov k razvoju obravnavane metodologije; predlog prispevkov k razvoju metode.

●● Kakovost doktorskega raziskovanja in osnove raziskovanja skozi oblikovanje

Claus Peder Pedersen

Sodelujoči bodo pri tem predmetu spoznali kriterije doktorskega raziskovanja in pristop raziskovanja skozi oblikovanje. Omenjeni pristop postavlja v ospredje oblikovanje kot bistveno sestavino procesa raziskovanja, kot generator novega znanja in razumevanja. Razvoj orodja vrednotenja v procesu oblikovanje je pri tem ključnega pomena. Raziskovalni rezultati tako nastajajo skozi izkušnjo oblikovalske prakse. Pri tem predmetu bodo kandidati spoznali tako teoretsko ozadje kot tudi metodologijo raziskovanja skozi oblikovanje.

●● Digitalne metode in predstavitve v arhitekturi

Or Ettlinger

Logična in učinkovita uporaba digitalnih multimedijev od zasnove do realizacije arhitekturne ideje; metoda, programska in strojna oprema, potrebna za uspešno delo; spletne tehnologije, multimedijske podatkovne baze na področju arhitekture in orodja, ki omogočajo uspešno integracijo in komunikacijo dela prek svetovnega spleta.

●● Interior and Furniture Design

Primož Jeza

Detailed overview of composition and design methods of mobile and fixed interior equipment, interior composition and design and placing of street equipment in the urban environment; interior/furniture design and understanding of used methods through a reflection of other field of professions; professional profile as a starting point of possible methodological contributions; proposal of methodological developments.

●● Quality of Doctoral Research and Fundamentals of Research by Design

Claus Peder Pedersen

This course will introduce the participants into the criteria of doctoral research and into the basics of research by design. Any kind of inquiry in which design is a substantial constituent of the research process is referred to as research by design ... In research by design, the architectural design process forms a pathway through which new insights, knowledge, practices or products come into being. It generates critical inquiry through design work. Therefore research results are obtained by, and consistent with experience in practice. The course will give background theories and provide some examples and helpful methods.

●● Digital Methods and Presentations in Architecture

Or Ettlinger

Logical and effective use of digital multimedia through the whole planning/building process; methods, software and hardware needed for efficient work; web based technologies, multimedia databases in the field of architecture and tools that enable successful integration of work and communication across world wide web.

●● Programiranje arhitekturnih oblik

Simon Petrovčič

Predmet predstavlja teoretične in praktične temelje za raziskovanje računskih vidikov arhitekturnega znanja in oblik. Teoretični del obravnava osnovne paradigme za razvijanje generativnih sistemov, temeljne programske konstrukte in najnovejše trende na področju parametričnega oblikovanja ter uporabe umetne inteligence v arhitekturnem načrtovanju. Praktični del obsega osnove uporabljenega skriptnega jezika in potrebno podporo študentom za razvoj vaj/projektov, delo s programskimi orodji ter implementacijo naprednih programskih tehnik za reševanje arhitekturnih in inženirskih problemov.

●● Digitalna orodja za arhitekturno izobraževanje in sodelovanje

Tadeja Zupančič

Stopnje arhitekturne osveščenosti različnih javnosti; problemi vizualne komunikacije med strokovno in splošno javnostjo; kombinirano strokovno in vseživljenjsko arhitekturno učenje orodja za splošno in strokovno arhitekturno izobraževanje, za sodelovanje različnih strok, uporabnikov in/ali javnosti v arhitekturno–urbanističnem načrtovanju in oblikovanju.

●● Arhitekturno publiciranje

Tadeja Zupančič

Uvod v (digitalne) vire; tipi znanstvenih publikacij; postopek priprave, pregleda in posredovanja; podrobno preverjanje znanstvenih monografij; podrobno preverjanje ustreznosti referenc; analiza vplivov publiciranja; ontologija.

●● Raziskovalne metode in interdisciplinarni pristopi v arhitekturi

Špela Hudnik

Raziskovalne metodologije skozi diskusijo in kritično refleksijo. Široko področje znanj in različni interdisciplinarni raziskovalni pristopi za opredelitev problemov in raziskovalnih vprašanj skozi: diskusijo, komparacijo, refleksijo, fokus, individualno/ skupinsko kritiko, raziskovanje skozi teorijo in prakso.

●● Programming of Architectural Forms

Simon Petrovčič

The course introduces the theoretical and practical foundations for exploring computational aspects of architectural knowledge and forms. The theoretical part covers: basic paradigms for developing generative systems, fundamental programming constructs, the latest trends in parametric design and the use of artificial intelligence in architectural design. The practical part includes: basics of the scripting language used and necessary support for students to develop exercises/projects, work with software tools, advanced programming techniques for solving architectural and engineering problems.

●● Interfaces for Architectural Learning and Collaboration

Tadeja Zupančič

Levels of architectural awareness among different publics; problems of visual communication between professional and general public; blended professional and life–long architectural learning; tools for general and professional architectural learning, for interdisciplinary architectural and urban design collaboration and public participation.

●● Architectural Publishing

Tadeja Zupančič

Introduction to (digital) library resources; types of scientific publications; submission, review and dissemination; detailed review of scientific book publications; detailed review of relevant references; impact analysis; ontology.

●● Research Methods and Interdisciplinary Approaches in Architecture

Špela Hudnik

Research methodologies through discussion and critical reflection. Broad field of knowledge and various interdisciplinary research approaches for defining problems and research questions through discussion, comparison, reflection, focus, individual/group critique, research through theory and practice.

●● **Natura Animare: Transformacije materije pri ustvarjanju prostora**

Paul O. Robinson

Predmet želi raziskovalca na področju arhitekture opremiti s teoretskimi in praktičnimi orodji, ki so potrebna za razvoj kritičnega pristopa k raziskovanju transformacije materialov pri ustvarjanju arhitekturne forme in prostora. Študenta izzove k razmišljanju o vlogi materije in materialnosti na podlagi teoretskih besedil o umetnosti, arhitekturi in kulturni semiotiki ter razvoja sodobnih tehnologij, ki preoblikujejo tradicionalno simbolično in politično vlogo materialov pri ustvarjanju grajenega okolja.

●●● **Urbanistična teorija in metodologija**
— povezava z družboslovjem in biotehniko

●●● **Razvoj urbanizma**
Peter Šenk

Temeljni pojmi in geneza elementov (prostorskih prvin). Vezano mesto: Orient in Amerika; klasična antika. Postantično (feudalno) razvezano (reducirano) mesto. Feudalne bastidske strukture. Renesansno idealno mesto. Racionalistično »žoržetsko« mesto. Moderno »tartansko« mesto, 19. in 20. stol. Feudalno mesto na Slovenskem. Od feudalnega do funkcionalističnega tkiva. Sodobne slovenske urbane strukture.

●●● **Urbanistično načrtovanje**
Ilka Čerpes

Pregled sodobnih teorij s področja urbanističnega načrtovanja, cilji trajnostnega razvoja v prostoru, zaznavanje in vrednotenje razvojnih problemov v prostoru, postopki usklajevanja različnih interesov v prostoru, procesiranje informacij za potrebe urbanističnega načrtovanja, operativno določanje in razporejanje rab v prostoru, organizacija infrastrukturnih omrežij ter omrežij grajenega in negrajenega tkiva, strategije generiranja grajenih oblik.

●● **Natura Animare: Transforming the Matter in the Creation of Space**

Paul O. Robinson

This course is designed to equip the researcher in architecture with the tools needed to develop critical modes of research regarding the transformation of materials in the production of architectural form and space. The student will be challenged to engage the role of materials as situated in theoretical writings on art, architecture and cultural semiotics, and in the development of contemporary technologies that reshape the traditional, symbolic and political role of materials in the creation of the built environment.

●●● **Theory and Methodology of Urbanism**
— relation to social sciences and biotechnology

●●● **History of Urbanism**
Peter Šenk

Basic notions and the genesis of (spatial) elements. Consistent city: Orient and America; classical antiquity. Post-antiquity (feudal): return of organic structures. Renaissance: ideal city. The rational »Georgette« city. The modern »tartan city«, 19th and 20th century. Feudal cities in Slovenia. From feudal to the functionalistic city. Contemporary Slovene urban structures.

●●● **Urban Planning**
Ilka Čerpes

Overview of contemporary urban planning theories, sustainable development of the cities, detection and evaluation of the urban development problems, balancing of different development interests, processing of information for the purpose of planning, land use setting and organization, infrastructural network, network of built and un-built space patterns, strategies for generation of built forms.

●●● Arhitektura in trajnostni prostorski razvoj

Andrej Pogačnik

Arhitektura kot sestavina trajnostnega razvoja mest, podeželja in krajine. Raziskave privlačnosti, okoljske nosilnosti in ranljivosti prostora. Lokacijske teorije analize dostopnosti, ekonomske upravičenosti in družbene sprejemljivosti. Modeli razvoja zemljišč, urbani in regionalni scenariji, simulacije in igre; obnašajske, javno-mnenjske, situacijske in druge raziskave. Vizualno – oblikovalske raziskave pri umeščanju objektov. Arhitektura in sistemi: prometni, energetsko-komunalni sistemi, sistemi kmetijskih oz. gozdnih zemljišč, sistemi zelenih varovanih prostorov. Arhitektura kot sestavina rabe tal na ravni občine, regije in države. Regionalno in državno pomembni objekti, DLN. Arhitektura in načela trajnostnega razvoja (ESDP, CEMAT, HABITAT, Leipziška listina).

●●● Trajnosten razvoj mesta

Ilka Čerpes

Definicija pojma trajnostnega razvoja mesta (opredelitve različnih avtorjev), parametri in indikatorji trajnostnega razvoja mesta, primerjava različnih modelov razvoja mesta glede na trajnostne parametre, urbani vzorci, model decentralizirane zgostitve poselitve na različnih nivojih (regija, mesto, četrt, soseska), primeri uspešnih trajnostnih usmeritev mest, četrti, sosesk.

●●● Orodja za nadzor urbanih oblik

Kaliopa Dimitrovska Andrews

Oblikovaje mesta v sodobnih planerskih sistemov. Estetski vidiki razvoja mest. Metode ocenjevanja in vzpodbujanja kvalitete urbanističnega oblikovanja in ekonomske učinkovitosti projektov mestnega razvoja. Oblikovalska merila pri urejanju mest in drugih naselij: klasifikacija in njihov vpliv na razvoj fizičnih struktur.

●●● Architecture and Sustainable Spatial Development

Andrej Pogačnik

Architecture as a component of sustainable development of cities, rural areas and landscapes. Research of attractions, environmental carrying capacity and vulnerability of space. Theories of local accessibility analysis, economic justification and social acceptability. Models of plot development, urban and regional scenarios, simulations and games; behavioural, public-opinion, situational and other research. Visual – morphological research of building placement. Architecture and systems: transport, energy-communal systems, agricultural/forest systems, »green belt« systems. Architecture as a component of land use on municipality, regional and state level. Regionally and state wide important buildings (DLN). Architecture and aspects of sustainable development (ESDP, CEMAT, HABITAT etc). Discussion.

●●● Sustainable City Development

Ilka Čerpes

The definition of sustainable city development (by different authors), parameters and indicators of sustainable city development, comparison of different city models and urban patterns, the decentralized concentration model of settlement in different levels (region, city, quarter, community), good practices of sustainable cities, quarters, communities.

●●● Tools for Control of Urban Forms

Kaliopa Dimitrovska Andrews

Town planning in modern planning systems. Aesthetic issues in town development. Methods for evaluation and stimulation of quality of urban design and economical sustainability of projects related to town development. Design measures for planning of town and other settlements: classification and their influence on the development of physical structures.

●●● Regionalno planiranje

Andrej Černe

Regionalni vidiki razvoja; regionalni problemi; stanje, razvojne težnje in razvojne možnosti; opredeljevanje regionalnih razvojnih potencialov; struktura, funkcije in razvoj regij; razlike med regijami in razlike znotraj regij; kazalci in merila kot element za sprejemanje regionalnih razvojnih odločitev, koncept regije; prostorske členitve ozemlja; tipi regij.

●●● Okoljsko upravljanje za podeželski turizem in rekreacijo

Alenka Fikfak

Okoljska etika, psihološki in sociološki vidik okolja, ekonomika okolja: glede na ponudbo in povpraševanje, glede na stroške in koristi; kritika znanstveno-tehnološkega razvoja; vpliv izvajalcev del na kakovosti življenja uporabnikov prostora (gradbena dela, geodetske dejavnosti, vodarsko komunalni posegi, itd); celovito telesno, duševno in socialno zdravje; teorije aktivnega počitka.

●●● Lokalno planiranje in sodelovanje javnosti

Andreas Voigt

Načrtovanje na lokalni ravni in sodelovanje javnosti. Temelji systemske teorije, teorije simulacij in teorije komuniciranja. Planski proces – delo z javnostmi: z različnimi javnimi in zasebnimi akterji; obdelava problemov, kompleksnost in ravni obravnave. Prednosti različnih pristopov k planiranju. Načrtovanje »od spodaj navzgor« in metode vključevanja javnosti, primeri dobre prakse.

●●● Urbana ekonomika

Andreja Cirman

Uvod v nepremičninske trge. Mikroekonomska analiza nepremičninskih trgov; makroekonomska analiza nepremičninskih trgov; gospodarska rast in metropolitanski trgi nepremičnin; Vpliv lokalnih oblasti na nepremičninske trge: lokalna oblast, nepremičninski davki in nepremičninski trgi; javne dobrine, eksternalije in razvojna regulacija.

●●● Regional Planning

Andrej Černe

Regional aspects of development; regional problems; development trends and development opportunities; determination of regional development potentials; structure, functions and development of regions; inter- and intra-regional disparities; indicators and criteria as an instrument in regional planning and decision making, the concept of region; spatial division of areas; types of regions.

●●● Environmental Management for Rural Tourism and Recreation

Alenka Fikfak

Environmental ethics; psychological and sociological aspects of the environment; environmental economics: considering the supply and demand, considering the costs and benefits; the role of contractors and management of supporting civil/ infrastructure services on the user's quality of life; the quality of ambience related to physical, mental and social health; the theory of active rest.

●●● Local Planning and Public Participation

Andreas Voigt

»Local planning« and »public participation«. Fundamentals of system theory, simulation theory and communication theory related to planning theory. Planning processes – dealing with public issues various public and private actors; dealing with problems, complexity and various levels of detail. Advantages of various planning approaches. Bottom-up procedures in planning and methods of public participation, »best practice« examples.

●●● Urban Economics

Andreja Cirman

Introduction to real estate markets. Microeconomic analysis of property markets; Macroeconomic analysis of property markets; economic growth and metropolitan real estate markets; The impact of local governments on real estate markets: local government, property taxes, and real estate markets; public goods, externalities, and development regulation.

●●● Ekonomika nepremičnin–izbrane teme

Maruška Šubic Kovač

Definicija ekonomike nepremičnin, nepremičninski cikel, razvoj nepremičnin. Prostorsko planiranje in odločanje o rabi zemljišč: lokacijski faktorji, vpliv institucionalnih faktorjev na rabo zemljišč, ekonomski donos do rabe zemljišča, odločanje. Proces razvoja nepremičnin: razpoložljivost zemljišč, zemljiška politika, pridobivanje zemljišč, tehtanje javnih in zasebnih interesov, razvoj zemljišč in dajatve na ravni lokalne skupnosti, gradnja in stroški gradnje. Vrednotenje nepremičnin. Analiza nepremičnin za odločanje na področju nepremičnin.

●●● Sociološki koncepti sodobnega urbanizma

Marjan Hočevar

Transformacija mest zaradi prežemanja procesov globalizacije in lokalizacije (glocalizacije). Mesta kot refleksiivna izbira. Zmanjševanje instrumentalnega pomena prostorskih in hkratna krepitev refleksiivnih praks, povezanih z različnimi življenjskimi slogi. Prepletanje prizoriščnih in spektakelskih funkcij, kar redefinira postulate klasičnega urbanizma.

●●● Mestna pokrajina in interaktivna mesta

Matevž Juvančič

Proučevanje urbanih prostorov kot življenjskih, spreminjajočih se, interaktivnih tvorb, ki jih sestavljajo različni urbani elementi in uporabniki ter njihove medsebojne povezave in interakcije; raziskovanje urbanih in mestnih pokrajin skozi porajajoče se (vizualno) urbano besedišče, sistemsko in podatkovno modeliranje v podporo pri sporočanju, načrtovanju ter sprejemanju odločitev; prenos in zasnova inovativnih, trajnostnih, nizko- in visoko- tehnoloških rešitev in pristopov po vzoru sodobnih (t.i. pametnih) mest; uporaba sodobnih medijev (družbenih omrežij, spleta, aplikacij, itd.) in raziskovanje različnih načinov sporočanja problematike raznovrstnim deležnikom.

●●● Real Estate Economics–Selected Themes

Maruška Šubic Kovač

Definition of real estate economics, real estate life cycle, real estate development. Spatial planning and land use decision: location factors, impact of institutional factors on land use, economic returns to land use, decisions. Real estate development process: land availability, land policy, land acquisition, public and private interests weighting, land development and community infrastructure levy, construction and construction costs. Real estate valuation. Real estate analyses for real estate decision-making.

●●● Sociological Concepts of Modern Urbanism

Marjan Hočevar

Transformation of the cities at intertwining processes of globalization and localization (»glocalization«). The cities as reflective choice for an increasing number of actors. The instrumental significance of spatial practices and the increase role of the reflective practices linked to lifestyles. Intertwining of non-residential spatial practices and spectacle functions in redefinition of postulates of classical urbanism.

●●● Townscapes and Interactive Cities

Matevž Juvančič

The notion of urban spaces as lively, ever changing, interactive and complex places, full of urban elements and users consisting of connections and interactions among them; research of urban landscapes, cityscapes and townscapes through the emerging (visual) urban vocabulary, system and data modelling for the purpose of communication, design and decision-making support; transfer and design of innovative, sustainable, low- and high-tech solutions and approaches based on contemporary (smart) cities; examining various means of communication and media (social-, web-based-, apps, etc.) for conveying urban issues at hand to experts and non-experts alike.

●●● Naselbinska krajina kulturne raznovrstnosti

Alenka Fikfak

Teoretična in zgodovinska izhodišča za razumevanje izoblikovanega prostora. Opredelitev temeljnih pojmov (zaznavni, izkustveni in doživljajski prostor); naselbinska krajina, bivalna kultura, opredelitev človekovih potreb, sodobne globalne družbeno ekonomske spremembe. Oblikovanje naselbinskih enot, vloga osebnega prostora pri oblikovanju bivalnih enot (svetloba, komunikacija in funkcija). Elementi objekta v smislu dožemanja prostora; nove oblike, eksperimentalni vzorci, itd.

●●● Varstvo arhitekturnih krajin

Živa Deu

Mednarodnih dokumenti na temo varstva grajenih struktur. Arhitekturna politika za trajnostno Evropo raznolikih regij. Pomen grajenih struktur za prepoznavnosti kulturnih krajin. Arhitekturne krajine in regije Slovenije. Predstavitev metod za vrednotenje grajenih struktur kot osnova za kakovostno prenovu in načrtovanj novega. Vzorčni primeri. Razprava o uporabljenih metodah (arhitekturnih, umetnostno zgodovinskih, etnoloških, socialnih).

●●● Metode ambientalnega oblikovanja

Mojca Gregorski

Mehanizmi prostorskega doživljanja in čutnega oblikovanja. Različni percepcijski mediji. Pojem ambient (materialno in fizično, emocionalno in intelektualno, simbolno). Vrednostni sistemi različnih zgodovinskih obdobj in različnih strokovnih doktrin. Zaznava mikroambientov. Zaznava na makro ravni. Tradicionalne teorija zaznave: ambient kot stvarna geometrija, ambient kot psihološki izziv, ambient kot spoznavna oblika, ambient kot kulturni fenomen. Sodobna teorija zaznave (generično mesto). Nova estetika prostora (individualnost in raznolikost). Povezanost estetike z družbenim kontekstom in vrednostnimi načeli.

●●● Landscape Settlements of Cultural Diversity

Alenka Fikfak

Theoretical and historical basis for understanding forms and spaces. Basic notions (perceptual, experimental and living space); living culture, defining people needs; contemporary global social and economic changes. Designing living units, meaning of individual space as a basis of living units forming (light, communication and function). Elements of buildings in the meaning of sensing/experiencing, imagination of space; examples of contemporary organized building in country side; new forms, experimental models, etc.

●●● Protection of Architectural Landscapes

Živa Deu

International documents about the protection of built environment. Architectural policy for sustainable Europe of diverse regions. The role of significance of the built environment, as an element which contributes to regional diversity. Architectural landscapes and regions of Slovenia. Methods which help to identify quality values and measures of the built environment in an architectural landscape as the prerequisite for quality refurbishment and new designs. Examples of good practice. Discussion on the methods used (architectural, art–historical, ethnological, social).

●●● Methods of Ambient Design

Mojca Gregorski

Mechanisms of spatial perception and sensual formation of human living environment through several perception levels and different perception media. The concept of ambient (material and physical and emotional, intellectual, symbol). Systems of values generated in different historical periods and profession doctrines. Perception of micro–ambients. Perception on the macro–ambiental level. The multi–level experience of traditional town: ambient as realistic geometry, ambient as psychological challenge, ambient as recognizable form and ambient as cultural phenomena. Contemporary theory of perception (the generic city). New aesthetics of space based on individuality and diversity. Interdependence of aesthetics with particular social context and its system of values.

●●● Občutljivi prostori mesta

Tadeja Zupančič

Podrobnejši pregled pristopov in metod proučevanja in načrtovanja mikrourbane okolja oz. arhitekturnega prostora mesta. Arhitektura kot refleksija druge izhodiščne izobrazbe z vidika razumevanja obravnavanih metod. Izhodiščni izobrazbeni profil kot izhodišče možnih prispevkov k razvoju obravnavane metodologije. Predlog prispevkov k razvoju metode.

●●● Oblikovanje odprtega prostora

Davorin Gazvoda

Vzroki za nastanek in tipologija objektov vrtno umetnosti. Grajeni in zeleni odprti prostor. Sodobno krajinsko oblikovanje. Generiranje krajinskih oblik. Sovisnost arhitekturnega in krajinskega oblikovanja. Upoštevanje socialnih, psiholoških in krajinskega ekoloških vidikov oblikovanja mestnega odprtega prostora. Nove paradigme pri oblikovanju odprtega prostora. Kritičen pregled najnovejših oblikovalskih dosežkov na področju oblikovanja odprtega prostora.

●●● Deležniki v procesu arhitekturnega in urbanističnega oblikovanja

Gregor Čok

Produktivno bivalno in delovno okolje. Poseg v prostoru – kaj načrtujemo, za koga in kje? Deležniki v procesu in njihova vloga (uporabnik, stroka, javnost, mediji, odločevalci). Pristop deležnikov v procesu oblikovanja. Ukrepi za oblikovanje antropogenega okolja.

●●● Prostorsko načrtovanje industrijskih, poslovnih in podjetniških con

Gregor Čok

Gospodarske dejavnosti v fizičnem prostoru. Strateška izhodišča za strukturno in programsko načrtovanje con. Planski nivo (tipologija con in lokacijski kriteriji). Projektni nivo (tipološki elementi). Alternativne prostorske oblike in management con.

●●● Sensitive Urban Places

Tadeja Zupančič

Detailed review of architectural and urban research/design methods and the design of micro urban and architectural places in the city. Architecture as a reflection of other professions from the perspective of the methods dealt with. Professional profile as a starting point of possible methodological contributions. Proposal of methodological developments.

●●● Design of Open Space

Davorin Gazvoda

Reasons for existence and typology of the objects of garden art. Transition of garden art in more complex design of open space. Built and green open space. Modern landscape design. Generation of landscape forms. Interdependence of architectural and landscape design. Inclusion of sociological, psychological and landscape–ecological issues in design of city open space. New paradigms in design of open space. Critical overview of recent design achievements in the field of open space design.

●●● Stakeholders in the Architectural and Urban Design Process

Gregor Čok

Productive living and working environment. Spatial development – what is planned, for whom, and where? Stakeholders in the design process and their roles (user, profession, public, media, decision makers). Stakeholder approach in the design process. Measures for anthropogenic environment design.

●●● Spatial Design of Industrial, Business and Entrepreneurial Zones

Gregor Čok

Economic activities in the physical space. Strategic starting points for structural and programmatic zone design. Planning level (zone typology and location criteria). Project design level (typological elements). Alternative spatial forms and zone management.

●●●● **Teorija projektiranja in tehnične aplikacije
v arhitekturi**
— povezava s tehniko

●●●● **Teorija arhitekturnega projektiranja**
Igor Toš

Projektiranje kot intersubjektni, interdisciplinarni, večfazni ustvarjalni proces priprave posegov v okolje. Vplivni dejavniki na arhitekturo. Subjekti arhitekturnih procesov. Projektiranje kot komunikacija, dogovor, koordinacija, integracija prispevkov. Vloga arhitekta. Aspekti, vrste in faze projektiranja. Vloga predpisov in norm. Projektiranje kot reševanje problemov, kot odločanje, kot ustvarjalni proces. Osnovni pojmi psihologije ustvarjanja. Osnove metodologije in tehnologije projektiranja, osnovne splošne in posebne metode in tehnike, primerjave metod. Sistemske metode v projektiranju in problem specializacije. Odnos nazorov in metod, teorije in prakse. Problem vrednotenja smotrov, sredstev in rešitev. Vrednostni sistemi in kriteriji. Etika in estetika v projektiranju.

●●●● **Integrirana praksa in modeliranje stavb**
Tatjana Isaković

Pristopi k integrirani praksi: vrste znanj skozi življenjski cikel projekta. Integrirano upravljanje znanj pri projektne delu. Osnove sistemskega mišljenja in aplikacije. Sistem projekta: okolje, elementi in odnosi. Vrste projektov in vloga projektnih skupin. Analiza komunikacij: viri, informacije in dokumentacija. Analiza procesov in organizacijskih struktur upravljanja timov. Formiranje timov, skupinsko delo in komunikacija. Organizacijske strukture in formiranje timov za integrirano prakso. Digitalni projekt: izmenjava dokumentacije in sodelovanje v skupinah. Integracija s pomočjo Informacijskega modeliranja zgradb. Tehnike izboljšanja kakovosti konstruiranja in dobra praksa. Projektiranje za izgradnjo, dokumentiranje, arhiviranje, ponovna raba. Upravljanje projektnih skupin: CAD management in majhne skupine.

●●●● **Theory of Planning and Technological Application in
Architecture**
— relation to technology

●●●● **Architectural Design Theory**
Igor Toš

Design as an inter-subject, interdisciplinary, multi-phase and creative process of preparations for the intervention in environment. Factors that influence architecture. Subjects in architectural processes. Design as communication, agreement, coordination and integration of contributions. The role of an architect. Aspects, types and phases of design process. The role of regulations and norms. Design as a problem solving, decision making, as a creative process. Basic concepts in psychology of creativity. Foundations of design methodology and technology, basic general and specific methods and techniques, comparison of methods. Systems methods in design and the problem of specialization. Relation between standpoints and methods, theories and practice. Problem of goal, resource and solution assessment. Value systems and criteria. Ethics and aesthetics in design.

●●●● **Integrated Practices and Building Modelling**
Tatjana Isaković

Approaches to integrated practices: knowledge of project life-cycle. Integrated practices and project knowledge management, the systems thinking approach fundamentals and applications. The project system: environments, elements and relationships, the scope of projects and the role of design teams. Project and teamwork system analyses methodologies, technological, organizational and process analyses for collaborative practices. Team forming, collaborative work and communication. Digital project and optimization of collaborative practices. Integrated practices with building information modelling. Designed-built best practices, documentation, archiving and re-use. Management of design teams, CAD management and small groups.

●●●● Visoko-tehnološka arhitektura

Ljubomir Miščević

Sodobni materiali, sestavi in strukture za arhitekturno snovanje oz. projektiranje visokotehnološke arhitekture. Kontinuiteta razvoja arhitekturne zamisli in gradbene tehnologije ob use hitrejšem odkrivanju novih rešitev, njihovi uporabi in spremljanju kot izziv kreativnosti. Obveznost spremljanja in poglobljenega poznavanja tehnoloških odkritij. Izbrane teme: eko-tech; bioklimatski high-tech; ekstremna arhitektura; virtualni high-tech.

●●●● Sodobna arhitekturna tehnologija

Martina Zbašnik-Senegačnik

Sodobna arhitekturna tehnologija; kriteriji za izbor gradiv; ekološka gradiva: naravna, lokalna, reciklirna, obnovljiva; nizkoenergijska gradiva; hidroizolativna in toplotnoizolativna gradiva; »pametna« gradiva; nano gradiva; tehnične tekstilije.

●●●● Požarna varnost grajenega okolja

Domen Kušar

Pri projektiranju mora arhitekt poleg ostalih zahtev upoštevati tudi varnost ljudi in dobrin v sami zgradbi in njeni okolici. K temu ga zavezuje tudi zakonodaja. Zato so pri predavanjih podrobneje obdelani trije sklopi varnostnih problemov: varnost pred požari – vzroki požarov in eksplozij, sistem varnostnih ukrepov za preprečitev požarov, za omejitev širjenja požarov, za evakuacijo in reševanje ljudi in dobrin ter za intervencijo gasilcev, protipožarne naprave, itd.; varnost pri delu – vzroki nevarnosti, ki izhajajo iz dela oziroma tehnologije in ki izhajajo iz same zgradbe, ukrepi za odpravo in zmanjšanje nevarnosti: fizikalnih (padci, eksplozije, udari, vibracije, hrup, toplotni udar, svetlobni udar, električni udar, itd.), kemičnih (dim, strupene in jedke snovi, itd.) bioloških in drugih; varnost pred onesnaženjem – vzroki onesnaženja zraka, vode in zemlje, ukrepi za odpravo nevarnosti onesnaženja okolja, čistilne naprave.

●●●● High-Tech Architecture

Ljubomir Miščević

Contemporary building materials, systems and structures in architectural design and construction of high-tech architecture. Continuous development of architectural discourse and construction technologies through increasing world of discoveries, their application and monitoring, which post new challenges to creativity. The obligation of architects in pursuing and adopting the high-tech technology in architectural practice. Selected themes: eco-tech, bioclimatic high-tech, extreme architecture, virtual high-tech.

●●●● Contemporary Architectural Technology

Martina Zbašnik-Senegačnik

Subject is divided into following components: contemporary architectural technologies, building materials selection criteria, ecological building materials: natural, local, recycled, renewable, low energy, hydro- and thermo insulating, smart building materials; nano building materials and techno textiles.

●●●● Fire Safety of Built Environment

Domen Kušar

While planning architects have to take safety of people, assets, building itself and its surroundings into the account. The planners have to respect legislation as well. The course thus introduces three components of safety problematics: safety against fires – causes of fires and explosions, system of safety measures for prevention of fires, for restraint of spreading of fires, for evacuation and rescuing of people and assets and for intervention of firemen, firefighting devices, etc; safety at work – causes of danger, technology, measures behind expedition and reduction of danger such as: physical (falls, explosions, hits, vibrations, noise, hot blow, light blow, electric blow, etc), chemical (smoke, poisonous and pungent substances, etc.) biological or any other; safety against pollution – causes of pollution of air, waters and lands, measures for expedition of danger of environment pollution of, water treatment plants.

●●●● Okoljska fizika za arhitekto

Jaume Roset

Študije s področja okoljske fizike; toplotni vidik; akustika; osvetlitev; »arhitekturne kombinacije« toplote, akustike in osvetlitve z vidika okoljske fizike.

●●●● Energijski in okoljski vidiki načrtovanja stavb

Sašo Medved

Okoljske sfere in procesi v njih; energija in okolje; energija in sodobne družbe (človek); sonaravni razvoj in pomen rabe energije v stavbah; modeliranje širjenja onesnaževal v okolju; tehnologije in tehnike za učinkovito rabo energije v stavbah; tehnologije za izkoriščanje obnovljivih virov energije z razpršenimi in daljinskimi energetske sistemi pri oskrbi s toploto in električno energijo; modeliranje rabe energije v stavbah; metode presoje energijske učinkovitosti snovi, stavb in naselij; modeliranje in metode presoje okoljskih pritiskov snovi, stavb in naselij; metode za ekonomsko vrednotenje energetskih in okoljskih tehnologij.

●●●● Mikroklimatske razmere v mestih in stavbah

Sašo Medved

Modeliranje energijskih in snovnih tokov v urbanem okolju; senzibilno in latentno shranjevanje toplote v grajenem okolju in naravi; uravnavanje lokalnega podnebja v urbanem okolju; tokovne razmere in transport onesnaževal v urbanem okolju; mehanizmi prenosa toplote; časovno ustaljen in neustaljen prenos toplote v homogenih in nehomogenih gradbenih konstrukcijah; časovno ustaljen in neustaljen prenos vode in vodne pare v gradbenih konstrukcijah; prenos toplote v transparentnih elementih ovoja stavb; modeliranje in vrednotenje toplotnih mostov; modeliranje prenosa sončnega sevanja in svetlobe v stavbah; shranjevanje toplote v gradbenih konstrukcijah; adaptivni modeli toplotnega ugodja; toplotni odziv stavb; načrtovanje notranjega bivalnega okolja in rabe energije na osnovi toplotnega odziva stavb.

●●●● Environmental Physics for Architects

Jaume Roset

Studies in the field of environmental physics; thermal aspects; acoustics; lighting; »architectural combinations« of thermal, acoustics and lighting from the environmental physics perspective.

●●●● Energy and Environment Assessment of Buildings

Sašo Medved

Environment related problems caused by construction and utilization of contemporary buildings and settlements due to the materials and energy demand; environmental spheres, natural processes in environmental spheres and their change through anthropogenic sources of pollution; importance of rational use of materials and energy in buildings and principles and technologies for energy supply based on dissipate and district energy systems; analytical and numerical methods for energy and environment assessments of buildings are introduced; methods for technology and economy based feasibility studies of buildings related environment protection technologies.

●●●● Microclimate of Urban Areas and Buildings

Sašo Medved

Modelling of energy and mass flows in the urban environment, sensible and latent heat storage in built environments and nature, microclimatic balance in urban environment, flows ratio and transfer of pollutants in urban environment, mechanisms of heat transfer, discreet and gradual heat transfer through homogenous and inhomogeneous built structures, discreet and gradual water and humidity transfer through homogenous and inhomogeneous built structures, transfer of heat through transparent envelopments of buildings, heat-loss, modelling and evaluation of joints, transfer of sun radiation and sunlight in buildings (modelling), heat storage in built structures, adaptive models of living thermal comfort, thermal response of buildings, planning of interior living environment and energy use based on the thermal response of buildings.

●●●● Pasivna hiša

Martina Zbašnik–Senegačnik

Parametri ugodja v prostoru; tehnologija gradnje pasivnih in nizkoenergijskih hiš; komponente pasivne in nizkoenergijske hiše (toplotna izolacija, okna in vrata, sistemi ogrevanja in prezračevanja, sončna zaščita, itd); ekološke pasivne hiše (hiše iz naravnih gradiva: slame, ilovice, itd); pasivne hiše večjih dimenzij (poslovni objekti, šole in vrtci, javne zgradbe, planinski domovi v visokogorju, industrijski objekti, itd); sanacije zgradb po principih pasivne gradnje (toplotna izolacija, toplotni mostovi, prezračevanje, ogrevanje, itd); inovativne tehnologije (npr. aktiviranje betonske mase, stensko hlajenje in ogrevanje, itd).

●●●● Izbrani primeri iz zgodovine arhitekture in konstrukcij

Lara Slivnik

Načela in razvoj oblikovanja konstrukcij objektov, ki so pomembno vplivali na razvoj arhitekture: Kristalna palača, Palača strojev, LeCorbusierov paviljon L'Esprit Nouveau, Miesov paviljon v Barceloni, itd vse do najnovejših konstrukcij na razstavah v Hannovru leta 2000 in v Šanghaju leta 2010.

●●●● Konstrukcije v arhitekturi

Vojko Kilar

Predmet podaja kompleksne sklope znanj vezane na zasnovo in analizo konstrukcij kot so računalniški modeli, obtežbe, materiali in načini računalniške simulacije obnašanja konstrukcij. v nadaljevanju so podana osnovna znanja o delu s programi za analizo konstrukcij in napotki za pravilno modeliranje konstrukcij. Posebna pozornost je namenjena opisu možnosti in načinov za povezavo med 3D arhitekturnimi modeli in načrti z matematičnimi modeli v programih za analizo in avtomatsko dimenzioniranje konstrukcij. Predmet je obogaten tudi s primeri računalniških simulacij, ki študentom omogočajo neposrednejši stik z inženirskim delom predmeta.

●●●● Renewable Sources of Energy in Buildings

Martina Zbašnik–Senegačnik

Parameters of living comfort, building technologies of passive and low-energy houses, the components of passive and low-energy houses (a thermal insulation, windows and doors, the systems of warming and ventilation, sun protection, etc), the ecological passive houses (houses made from natural materials: straw, clay, earth, etc), big passive houses (offices, schools and kindergartens, mountain huts, factories, etc), the building renovation in passive house technology (thermal insulation, thermal bridges, ventilation, warming, etc), the newest technologies (activation of concrete mass, cooling and warming in the wall, etc).

●●●● Selected Topics in Building and Construction History

Lara Slivnik

The course offers a critical examination of the transformations in architectural and constructional history: Crystal Palace, Palais des Machines, Le Corbusier's pavilion L'Esprit Nouveau, Mies's Barcelona Pavilion, etc and more recent from Hannover EXPO 2000 to Shanghai EXPO 2010.

●●●● Structures in Architecture

Vojko Kilar

The course is oriented toward the preliminary design and analysis of structures. Main teaching topics include: computer models, loading, materials and simulations of structural behaviour with computer programs. Basic knowledge on selected programs for static analysis and basic information on structural modelling are given. Special attention is given to the communication between 3D architectural models and structural mathematical models. The course is also supported with prepared computer simulations of structural behaviour which enable a more direct connection with engineering component of the course.

●●●● Snovanje premostitvenih objektov

Tatjana Isaković

Predmet podaja kompleksne sklope znanj vezane na zasnovo, analizo in osnovne postopke za oceno primernosti dimenzij konstrukcijskih elementov mostov. Študent bo pridobil znanje o računalniškem modeliranju konstrukcije mostu, vključno z obtežbo, materiali in posameznimi konstrukcijskimi sklopi. Pridobil bo osnovna znanja o delu s programi za analizo konstrukcij, ki so primerni za analizo mostov. Poseben poudarek bo na pravilnem modeliranju konstrukcij. Študent bo spoznal tudi ustrezne načine za oceno nosilnosti konstrukcijskih elementov. Predmet je obogaten tudi s primeri računalniških simulacij, ki študentom omogočajo neposrednejši stik z inženirskim delom predmeta. Predvideno je kombinirano podajanje snovi v obliki predavanj in v obliki projektnega način študija pri katerem je možno tudi vključevanje v programe in sodelovanje študentov z drugih fakultet.

●●●● Potresna arhitektura

Vojko Kilar

V prvem delu se študentje naučijo osnovnih pojmov in principov potresnega inženirstva ter aktualne filozofije projektiranja na potresnih področjih. Okvirno je obrazložena tudi potresna obtežba in pomembnost konstrukcijske zasnove stavbe za njeno obnašanje med potresi. v drugem delu je poudarek na arhitekturni obravnavi potresne odpornosti stavb in na analizi preverjenih oz. izkustvenih načinov zagotavljanja horizontalne togosti stavb. Poseben poudarek je namenjen identiteti kulturne krajine skozi poudarjeno arhitekturno artikulacijo konstrukcijskih elementov, ki izražajo potresno zasnovo in ogroženost s potresi. Obravnavan je tudi simbolni oz. metaforični odziv arhitekta na grožnjo s potresom.

●●●● Basics of Bridge Design

Tatjana Isaković

The main topics of the course are conceptual design, analysis and basic procedures for estimation of the dimensions of structural elements. Students will obtain the knowledge about computer based modelling of bridges, including modelling of different materials, loads and different groups of structural elements. He or she will obtain the knowledge about the computer software, which is intended for the analysis and design of bridges. The special attention will be devoted to the proper modelling. Proper procedures for estimation of the bridge strength will be considered, too. The course is supported with computer simulations of structural response. Lectures will be combined with project base and problem oriented work.

●●●● Earthquake Architecture

Vojko Kilar

In the first part the students get basic insight in the earthquake engineering field and actual philosophy of building design in earthquake prone areas. We describe the phenomena of earthquake loading as well as the importance of conceptual building design for actual behaviour of building during an earthquake. The second part is focused to architecture of earthquake resistant structures and analysis of existing or empirical mechanisms to achieve adequate horizontal stiffness of buildings. A special attention is given to the architectural identity of specific cultural region that can be accessed thru earthquake resistant building concept. The symbolic or metaphoric response of architect to earthquakes is also presented. The third part combines the first two parts and looks for a synergy between the earthquake engineering and architecture.