



UNIVERSITY OF NOVI SAD

FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning

STUDY PROGRAMME ACCREDITATION MATERIAL:

# DIGITAL TECHNIQUES, DESIGN AND PRODUCTION IN ARCHITECTURE AND URBAN PLANNING

MASTER ACADEMIC STUDIES

Novi Sad

2012.

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Programme name	Digital Techniques, Design and Production in Architecture and Urban Planning
Independent higher education institution where the programme is being executed	University of Novi Sad
Higher education institution where the programme is being executed	Faculty of Technical Sciences
Educational-scientific/educational-art field	Technical-Technological Science
Scientific, professional or art field	Architecture
Type of studies	Master Academic Studies
Study scope, expressed in ECTS	60
Academic degree, abbreviation	Master in Architecture, M.Arch.
Study length	1
Programme implementation starting year	
Future course implementation starting year (for new programme)	2013
Number of students attending this programme	0
Planned number of students to be enrolled in this programme	32
Programme approval date (state the approval issuer)	14.11.2012 - Science Education Council 29.11.2012 - University of Novi Sad Senate
Programme language	Serbian, English
Programme accreditation year	
Web address containing programme information	<a href="http://www.ftn.uns.ac.rs">http://www.ftn.uns.ac.rs</a>



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### Standard 00. Introduction

The study program of the Master academic studies – Digital Techniques, Design and Production in Architecture and Urban Planning presents the continuation of the UnderMaster academic studies of Architecture at the Faculty of Technical Sciences, University of Novi Sad.

The educational architectural curriculum envisages various study programs from basic designer disciplines to courses dealing with more specific topics and implementation of contemporary technologies in architecture, where this study program belongs.

Department of Architecture and Urban Planning insists on the multidisciplinary approach, which is the main approach in studying architecture. The study program Digital Techniques, Design and Production in Architecture and Urban Planning is exactly characterized by an interdisciplinary approach, which enrolls several other Departments from the Faculty of Technical Sciences in its educational process – from the Department of Civil Engineering, to Electro-technical and Mechatronics Department. A meaningful Department of Architecture and Urban Planning development strategy aspect is based on the possibility of expansion and exchange of knowledge through an intensive collaboration with other Architectural Faculties and Departments in the region, especially from Europe, which resulted in hiring visiting professors from relevant Universities, which contributes to the education of the students and its quality.

We see a greater mobility of students and teaching staff and a greater number of international research projects as a chance for generating a unique and recognizable position of the Department in the international terms. This program should, in the framework of its study group, give the students the opportunity to additionally concretize their knowledge from the field of digital technologies and their application in architecture, based on understanding the basic principles from various engineering fields.

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning**Standard 01. Programme Structure**

The name of this study programme of Master Academic Studies is Digital Techniques, Design and Production in Architecture and Urbanism.

Upon completion of studies student receives academic title: Master Engineer of Digital Design in Architecture.

The outcome of the learning process at this level of study is the knowledge that enable students, to work with specialized software tools in the field of new technologies in architecture, to use professional literature, the application of knowledge in solving practical problems in the field, or to continue their studies at the specialized or doctoral studies (if they decide to do so).

The prerequisites for enrolling the study programme are completed undergraduate studies, architecture or related disciplines, with at least 240 ECTS and passed enrolment exam. According to the Regulations on enrollment at study programs, when entering candidate can win up to 100 points based on grade point average in undergraduate studies and the results achieved in the entrance exam. The average score of the first university degree brings a maximum of 40 points.

The entrance examination will be conducted on the topic "Evaluation of knowledge in the field of digital technologies in Architecture". In this part of the entrance examination it is possible to win up to 60 points. After entrance examination Student Services publishes the final list of candidates by the number of points earned, according to which the enrollment is carried out.

The study program of Master Academic Studies Digital Technology, Design and Production in Architecture and Urbanism lasts one year and worth 60 ECTS. This study program includes required and selective courses, professional practice and master thesis. Within the program there are three required courses and four selective positions in which students choose courses depending on personal preferences.

Course content and type of each object are given in the Curriculum of study programme or in the Subject Specification Tables.

The study program of each course is designed to give students the opportunity to concretize problem on specific issues that have certain areas of digital technologies in architecture.

Subjects in this study program last one semester, and thereby make the appropriate number of ECTS credits. Standards established that one ECTS credit equals approximately 30 hours of student activities (lectures, exercises, preparation for exams, ...). Student obligations on the exercises may include the writing of seminar papers and homework, project assignments, semester and graphic works in which every activity of students during the teaching process is monitored and evaluated by Regulation of teaching, methodology of awarding ECTS, evaluation criteria of exam prerequisites and by method of student knowledge assessment which was adopted at faculty level.

Upon enrollment each student is assigned an advisor who directs her/him, according to student interests, and which elective positions to choose, where to do the internship and which thesis topic to choose. The proposal that compile the student and her/his advisor approves the Commission for the quality of the study program. Advisor, during studying at the Faculty, follows the work and progress of the candidate that has been added to.

Teaching is done through lectures and exercises. During the lectures the provided material is thought, using appropriate didactic materials, with the necessary explanations that contribute to a better understanding of the subject matter.

On exercises, which follow the lectures, concrete tasks are solved and examples that further illustrate the material are presented. On exercises, also, additional explanations of the material which is presented in lectures are provided.

The study program envisage that students, according to their preferences during studying, carry out the required professional practice in architectural firms. Classes are held in the amphitheater, computer labs and classrooms-workshops in which models are made or displayed.



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### Standard 02. Programme Objectives

The purpose of the study programme is the education of students for the profession of Master engineer of Digital design in Architecture in accordance with the needs of architectural profession and constant development and implementation of new technologies in construction and design process.

Through realization of this master study program of academic studies are educated engineers masters of Digital techniques, design and production in architecture and urbanism who are qualified for the call of CAAD specialist and possess competence in the European and World scene.

At the same time, we get educated staff that meets the needs of national labor market in practical application of knowledge and skills necessary for the design and construction of specific architectural programs and tasks.





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### Standard 03. Programme Goals

The objective is to achieve student's scientific competencies and academic skills in the field of Digital design techniques and production in Architecture and Urbanism. This also includes the development of creative abilities in considering problems and the ability of critical thinking, the development of teamwork skills and the mastering of specific practical skills necessary in the profession.

The objective of the study programme is also to educate an expert who possesses sufficiently consistent and useful knowledge in the field of design, visualization and building construction that in the process of drafting design and construction documentation including CAD / CAM technologies.



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MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning

### Standard 04. Graduates` Competencies

Master students of the Master academic studies in Architecture and Urban Planning are competent to solve real problems in the practice, as well as to continue education if they decide so. Also, the master graduates are qualified to acquire the title of the chief designer in the field of Digital Design, Techniques and Production in Architecture. The competences include, above all, the development of the ability for critical thinking, ability of problem analysis, solution synthesis of real problems in the field of CAD/CAM technologies in architecture. Qualifications that indicate the end of the Master academic studies acquire students:

- who have demonstrated systematic knowledge and understanding in the field of digital design in architecture that complements the knowledge gained at the under Master academic studies, being the basis for developing critical thinking and application of knowledge;
- who are able to apply knowledge in solving problems in the new or unknown environment in wider or multidisciplinary fields within the educational-scientific field of the study;
- who are able to clearly and unambiguously transfer knowledge and the way of making conclusions to the professional and wider public;
- who possess the ability to continue the studies in the way they independently choose.

When it comes to the specific capabilities of students, mastering the study programme of the master studies, the students acquires detailed knowledge and understanding of all disciplines of the chosen study group, as well as the ability for solving specific problems using the scientific methods and procedures. Master students of Digital Design, Techniques and Production in Architecture are able to adequately write and present results of their research, that is, to concretize and present their project work.

During the study we insist on intensive use of CAD / CAM technology, specific hardware resources, as well as training students to use the latest software packages for the design and graphic presentation.

Graduates master academic course in the field of digital design and production techniques in architecture gain knowledge how to economically use the natural resources of Republic of Serbia.

They are fully aware of the position and responsibility of the designers of the future in promoting and implementing the principles of sustainable architecture and urbanism.

Special attention is paid to the development of skills for teamwork and the development of professional ethics.



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Digital Techniques, Design and Production in  
Architecture and Urban Planning

### Standard 05. Curriculum

Master studies curriculum for Digital Techniques, design and production of architecture and urbanism is formed to meet all of our goals.

Through a series of elective courses offered, students have the opportunity to meet their own research and design aspirations and continue their own professional development profile.

All courses are one semester and carry an appropriate number of ECTS points with one point corresponding to approximately 30 hours of student activities.

The curriculum is defined with description of each course that contains: the name, type of course, academic year and semester, number of ECTS credits, name of the teacher, the course goal with expected outcomes, knowledge and competences, prerequisites for attending the course, course content, suggested readings, teaching methods, the method of assessment and evaluation, and other data.

The study program is harmonized with the European standards in terms of admission requirements, length of study, conditions of transition to the next year, graduation and modes of study.

An integral part of curriculum for Digital techniques, design and production of architecture and urbanism is a professional practice and practice for at 45 hours, which is implemented in the relevant scientific research institutions, relevant institutions dealing with the problems of design and construction in architecture.

Students complete studies developing a master work, which consists two inseparable parts. The first part consist research study - master, as a preparation / research necessary for a deeper understanding of the problem issue master work deals, and program defining of the project. The second part is the preparation and defense of Master paper, as a continuation of the first phase of research, which represents the architectural and / or urban design.

Before defense of master work, the quality of the completed work and its compliance with established quality system master works assessed a five-member committee, consisting of teachers and staff departments. Same commission review works from all candidates submit in one master term. If work gets positive review from committee, the candidate gains right to present master thesis and defense it. The final work will be presented and defended in front committee that consist at least three teachers with at least one must be from another department or faculty. The final score for master work is performed on the basis of evaluation of theoretical and methodological and the design part, as well as the presentation and defense.



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	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Digital Techniques, Design and Production in Architecture and Urban Planning</span>	

Table 5.2 Course specification

Course:		<h2>Digital Design in Architecture and Urban Planning</h2>				
Course id:	AD0001					
Number of ECTS:	8					
Teachers:	Stojaković Z. Vesna, Šidanin S. Predrag, Tepavčević B. Bojan					
Course status:	Mandatory					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	2	0	1		
Precondition courses		None				
1. Educational goal:						
Learning basic software tools and programming skills in the means of solving various problems applied in architecture and urban planning.						
2. Educational outcomes (acquired knowledge):						
To apply acquired knowledge in the further educational process and professional work.						
3. Course content/structure:						
Introduction and definition of the term digital design in architecture and urbanism. History and theory of using computer algorithms and programming in visual arts, architecture and urbanism. Examples of the application of digital design in architecture. Parametric, generative, interactive and performance based design. Solving geometric, architectural spatial installation problems using Processing programming language or using software tools that support parametric and generative design (Rhino/Grasshopper).						
4. Teaching methods:						
Lecture to be held in amphitheater or computer laboratory, exercise in the computer laboratory. During exercises, a student is required to do practical oriented tasks. Knowledge check is conducted through an exam, where a student is obliged to do and apply one of the given problems. Examination task can be related to the task from the course from elective position 3.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Computer exercise attendance		Yes	0.00	Theoretical part of the exam	Yes	30.00
Graphic paper		Yes	70.00			
Lecture attendance		Yes	0.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	A. Chaszar	Blurring the Lines: Computer-Aided Design and Manufacturing in Contemporary Architecture (Architecture in Practice)		Academy Press	2006	
2,	Y. Madkour, O. Neumann	Emergent Programmatic Form-ation: Parametric Design Beyond Complex Geometries		Verlag	2009	
3,	M. Garcia	Architectural Design: The Patterns of Architecture		Wiley	2010	
4,	B. Kolarevic	Architecture in the Digital Age: Design and Manufacturing		Taylor & Francis	2005	
5,	B. Aranda, C. Lasch, S. Kwinter, C. Belmont	Pamphlet Architecture 27: Tooling		Princeton Architectural Press	2005	



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Table 5.2 Course specification

Course:		<b>Architectural Visualization</b>				
Course id:	AD0002					
Number of ECTS:	7					
Teachers:	Stojaković Z. Vesna, Šidanin S. Predrag, Tepavčević B. Bojan					
Course status:	Mandatory					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	2	0	1		
Precondition courses		None				
1. Educational goal: Enabling the students to to generate and visualize architectural scene by using various digital techniques.						
2. Educational outcomes (acquired knowledge): To apply acquired knowledge in the further educational process and professional work.						
3. Course content/structure: Visual perception and visualization. Advanced techniques in graphics processing digital images. A critical study of architectural visualization types by purpose and manner of presentation. Examples of different approaches to modeling and representation in relation to the different goals of presentation. Techniques visualization, animation techniques, video post-production techniques, real-time Web3D, Quick Time VR scenes. Optimization of presentation for the web and auditory display. The application of software tools for preparation of presentation: 3ds Max, V-Ray, Adobe After Effects, Adobe Dreamweaver.						
4. Teaching methods: Lecture exercises to be held in computer laboratory. Consultations. Parts of the subject that form logical units are to be examining in two tests. Tests are performed in the computer lab. A student has gained the conditions for the next test if in the previous acquires at least 30% of the points. For a student to pass the exam, in addition to other requirements, he or she must have at least 30% of the points from each of two tests. Exam result is based on attendance of lectures and exercises and test rates.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Complex exercises		Yes	70.00	Practical part of the exam - tasks	Yes	30.00
Literature						
Ord.	Author	Title		Publisher	Year	
1,	H. Sondermann	Photoshop in architectural graphics		Springer Vienna Architecture	2009	
2,	M. Kuhlo, E. Eggert	Architectural, Rendering with 3ds Max and V-Ray		Elsevier	2010	
3,	F. Legrenzi	VRay- The Complete Guide, Industrie Grafiche Stilgraf			2008	
4,	D. Brooker, M. Bousquet i ostali.	3ds Max 2010 Architectural Visualization - Advanced to Expert		3dats	2009	



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Table 5.2 Course specification

Course:		<h2>Digital fabrication in Architecture</h2>				
Course id:	AD0003					
Number of ECTS:	8					
Teachers:	Wiltsche -. Albert, Stavrić -. Milena, Tepavčević B. Bojan					
Course status:	Mandatory					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
3	0	2	0	1		
Precondition courses		None				
1. Educational goal:						
Enabling the students to make physical models of complex forms generated from digital 3D models by using various digital techniques.						
2. Educational outcomes (acquired knowledge):						
To apply acquired knowledge in the further educational process and professional work.						
3. Course content/structure:						
<p>Introduction and definition of the concept of production and digital fabrication in architecture. History and theory of application of 3D models in order to generate architectural models and architectural structures. Geometric principles and strategies of 3D modeling in relation to the different tasks of creating physical models. Techniques for 2D and 3D CAM fabrication. The logic of the 3D model production for CNC (Computer Numerical Control) digital fabrication process. The logic for creating 3D models (Rapid Prototyping) for digital fabrication process. Examples of making physical models generated from 3D digital models in relation to the use of different digital fabrication techniques. The properties of materials used for digitally generated physical models.</p>						
4. Teaching methods:						
Lectures and exercises in the laboratory for modeling and digital fabrication. Consultation. Teaching consists of 3 segments: the theoretical part, demonstration and development of two digitally fabricated models. In the theoretical part the various techniques of digital fabrication and the role of geometry and materials in its construction are described. 2 tasks are performed on exercises. On the first task students work independently, and the second task was designed for work in a team with up to 5 members. Topic can be associated with other subjects such as parametric modeling or generative design in which digitally generated form is defined. 2nd task may be related to the interactive systems, where digitally fabricated model makes structural system capable of changing forms as a response to environmental influences. The course has no formal final exam and is considered to be successfully completed if the student through independent and team work successfully completes planned tasks						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Complex exercises		Yes	70.00	Theoretical part of the exam	Yes	30.00
Computer exercise attendance		No	0.00			
Lecture attendance		Yes	0.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	L. Iwamoto	Digital Fabrications: Architectural and Material Techniques		Princeton Architectural Press	2009	
2,	B. Kolarevic	Manufacturing Material Effects: Rethinking Design and Making in Architecture		Routledge	2008	
3,	D. Schodek, M. Bechtold, J.K. Griggs, K. Kao, K. Steinberg	Digital Design and Manufacturing: CAD/CAM Applications in Architecture and Design		Wiley	2004	



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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Generative design in architecture and urbanism</h2>				
Course id:	AD0004					
Number of ECTS:	6					
Teachers:	Šiđanin S. Predrag, Dragojlov - Vesna, Stojaković Z. Vesna					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
2	0	2	0	2		
Precondition courses		None				
1. Educational goal:						
Mastering basic programming skills used for solving various geometrical problems applied in architecture.						
2. Educational outcomes (acquired knowledge):						
The outcome of the course is to master the technique of programming or scripting in one of the offered programme or scripting languages in order to solve complex geometric and / or dynamic problems applicable in the architecture, as well as creating student's own tools for modeling that do not exist in the software packages for architects.						
3. Course content/structure:						
Introduction and definition of the concept of generative design. History and theory of using computer algorithms and programming in architecture. Examples of the application of algorithms and generative modeling in contemporary architecture: space tessellation using different geometric models, L-systems and shape grammar, multi-agent systems and cellular automata in architecture. Solving architectural and geometric problems by writing scripting or programming in one of the listed languages: MAXScript, rhinoscript, VBScript, VB.net or C #.						
4. Teaching methods:						
Teaching is conducted through lectures and computer exercises. During the exercises the student is required to do practice-oriented tasks. Knowledge check takes place through the exam, where student is required to do the practical application of a given problem.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Computer exercise attendance		Yes	0.00	Theoretical part of the exam	Yes	30.00
Graphic paper		Yes	70.00			
Lecture attendance		Yes	0.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	K. Terzidis	Expressive Form: A Conceptual Approach to Computational Design		Routledge	2003	
2,	M. Silver	Architectural Design: Programming Cultures: Architecture, Art and Science in the Age of Software Development		Academy Press	2006	
3,	N. Leach	Architectural Design: Digital Cities		Wiley	2009	
4,	J.Wainwright	Maxscript101 video tutorial			2006	


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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Interactive systems in architecture</h2>			
Course id:	AD0007				
Number of ECTS:	5				
Teachers:	Borovac A. Branislav, Tepavčević B. Bojan				
Course status:	Elective				
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
2	0	2	0	1	
Precondition courses		None			
1. Educational goal:					
Training students in solving interactive and dynamic architectural problem by using mechatronic and embedded systems.					
2. Educational outcomes (acquired knowledge):					
The outcome of this course is to master the process of selection and use of mechatronic systems and embedid applied to architectural task.					
3. Course content/structure:					
Introduction and definition of the concept of interactive systems in architecture. Introduction to the basic concepts in the field of interactive systems, mechatronics and embedded systems. During the course, students learn to 1: identify the problem, 2: create the conceptual design of an architectural problem 3: identify the most suitable mechatronic or embedded systems 4: configure the whole mechatronic and embedded systems, program it for that purpose, test and eliminate errors detected 5: integrate mechatronic and embedded systems in architectural problem 6: compile all the documentation 7: follow predefined deadlines for each phase of work 8: during the entire process of applying a professional approach and a high level of ethics					
4. Teaching methods:					
For each school year the architectural task is defined. It has to be solved by the creating and using of interactive systems. Students are divided into teams of up to 5 members who carry out a given task. Students divide themselves into teams. Each team aims to implement a predefined architectural interactive task. The course has no formal final exam and is considered to be successfully completed if the team successfully designed and implemented an interactive system in a given task.					
Knowledge evaluation (maximum 100 points)					
Pre-examination obligations		Mandatory	Points	Final exam	
Complex exercises		Yes	70.00	Theoretical part of the exam	
Computer exercise attendance		Yes	0.00	Mandatory	Points
Lecture attendance		Yes	0.00	Yes	30.00
Literature					
Ord.	Author	Title		Publisher	Year
1,	L. Bullivant	Architectural Design: 4dspace: Interactive Architecture		Academy Press	2005
2,	M. Fox, M. Kemp	Interactive Architecture		Princeton Architectural Press	2009
3,	K. Terzidis	Algorithms for Visual Design Using the Processing Language		Wiley	2009
4,	J. Noble	Programming Interactivity		O'Reilly Media	2009





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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Parametric Design in Architecture and Urbanism</h2>				
Course id:	AD0005					
Number of ECTS:	6					
Teachers:	Stavrić -. Milena, Wiltsche -. Albert, Tepavčević B. Bojan					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
2	0	2	0	2		
Precondition courses <span style="margin-left: 100px;">None</span>						
1. Educational goal: Training students to solve architectural problems by using parametrically defined problems and advanced modeling techniques.						
2. Educational outcomes (acquired knowledge): The ability to define and solve parametrically defined problems of geometric form in architecture.						
3. Course content/structure: Introduction and definition of the concept of parametric modeling. History and theory of digital design in architecture and application of parametric modeling. Principles of parametric modeling. Examples of the parametric modeling application in architecture. Solving different geometric problems by defining parametric control of models. The application of software tools for parametric modeling: 3ds max,parametric array, rhino-grasshopper.						
4. Teaching methods: Lectures and exercises in the computer lab. Consultation. The exam consists of creating parametric defined models in some of the offered software. Examination task can be associated with the task from Digital fabrication course where the the development of physical models from 3D models is necessary .						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Computer exercise attendance		Yes	0.00	Theoretical part of the exam	Yes	30.00
Graphic paper		Yes	70.00			
Lecture attendance		Yes	0.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	M. Meredith	From Control to Design: Parametric/Algorithmic Architecture		Actar	2008	
2,	D. Rutten	Rhinoscript101 Primer Collection			2010	
3,	J.Wainwright	Maxscript101 video tutorial			2006	
4,	M. Khabazi	Algorithmic modelling with Grasshopper			2009	



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Table 5.2 Course specification

Course:		<b>Web design in Architecture</b>					
Course id:	AD0008						
Number of ECTS:	5						
Teacher:	Vidaković P. Milan						
Course status:	Elective						
Number of active teaching classes (weekly)							
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:			
2	0	2	0	1			
Precondition courses		None					
1. Educational goal: Enabling students for using technologies for web content making and introduction to the principles of web design.							
2. Educational outcomes (acquired knowledge): Students are trained to work independently in the field of complex web content formation.							
3. Course content/structure: Basic technologies for Web Design: HTML, XHTML, CSS. Characteristics of Internet network and HTTP protocol. Multimedia types of data on the web. Streaming. Usability of web site: web page design, content design, site design. Presentation for people with special needs. Multilingualism and localization of content. Making presentations in some of the software packages Adobe Dreamweaver and Adobe Flash.							
4. Teaching methods: Consultation, computer exercises, lectures.							
Knowledge evaluation (maximum 100 points)							
Pre-examination obligations		Mandatory	Points	Final exam		Mandatory	Points
Project defence		Yes	50.00	Oral part of the exam		Yes	50.00
Literature							
Ord.	Author	Title			Publisher	Year	
1,	D. Lawrence, S. Tavakol	Balanced Website Design - Optimising Aesthetics, Usability and Purpose			Springer-Verlag	2007	
2,	J. Nielsen	Designing Web Usability			Peachpit Press	1994	
3,	B. Pfaffenberger et al.	HTML, XHTML, and CSS Bible			John Wiley and Sons	2004	



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Table 5.2 Course specification

Course:		<b>Complex Timber Structures</b>				
Course id:	AD0009					
Number of ECTS:	5					
Teacher:	Kočetov-Mišulić Đ. Tatjana					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
2	0	2	0	1		
Precondition courses		None				
1. Educational goal:						
Mastering the knowledge necessary for solving architectural design problems in materialization of complex structural forms in timber and wood based products.						
2. Educational outcomes (acquired knowledge):						
Achieving competencies for application of acquired knowledge in design and shaping of complex form timber structures.						
3. Course content/structure:						
Modern timber and wood based materials. Innovative production and processing technologies. Achievements of modern wood technologies and 3d design in architecture. Genesis of linear timber structural systems into spatial timber structures with complex forms. Shaping of basic linear and planar structural elements in bearing structures of complex forms and in different structural systems. Joints and connections, industrialization of production. Significance and role of wood based panels in complex form structures. The role of software in dynamic simulation of complex form timber structure, prediction and control of bearing capacity and stability. Case studies – illustrations with realized projects and critical discussion from aesthetic and designers point of view.						
4. Teaching methods:						
Course is taken trough lectures, computational tasks and tutorials. Checking of accepted knowledge level is trough realization of model project (individually or in team), with theoretical description and defense of applied solution. Model project implies and includes synchronized materialization in wood of tasks related with subjects: “Digital fabrication and production in architecture”, “Parametric modeling in architecture and urbanism” or “Advanced techniques of digital fabrication and production in architecture”.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Complex exercises		Yes	70.00	Writing the final paper with theoretic basis	Yes	30.00
Exercise attendance		Yes	0.00			
Lecture attendance		Yes	0.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Slavid R	Wood Architecture		Laurence King Publishing	2005	
2,	Pottmann H., Asperl A., Hofer M. and Kilian A.	Architectural Geometry		Bentley Institute Press	2007	
3,	Pottmann, H., Wallner, J.	Computational Line Geometry		Springer Verlag, Heidelberg	2010	
4,	Ceccato, C.; Hesselgren, L.; Pauly, M.; Pottmann, H.; Wallner, J. (Eds.)	Advances in Architectural Geometry 2010			2010	
5,	Vouga E., Höbiger M., Wallner J and. Pottmann H	Design of self-supporting surfaces			2011	



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Table 5.2 Course specification

Course:		<b>Contemporary theories and technologies applied to architecture, urbanism and design 1</b>				
Course id:	AT04					
Number of ECTS:	6					
Teachers:	Vais I. Dana, Atanacković-Jeličić T. Jelena, Rapačić R. Milan					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
2	2	0	0	2		
Precondition courses						
1. Educational goal:						
<p>The goal of this course is to introduce students to the theoretical principles of modern methodologies in architectural design. Students will learn about the philosophical directions of the end of the 20th century and the way they influenced the creation of the evolutionary dynamic systems, morphogenetic principles of the creation of form and the application of these principles in the field of contemporary architectural and urban design</p>						
2. Educational outcomes (acquired knowledge):						
<p>In this course, students are trained to solve complex, functional and formal problems in the field of architecture and urbanism. Students will be using modern methodologies in the design process to develop analytical thinking and the ability to expand knowledge in solving the complex problems of the built environment. Also students will be familiar with the optimization process and evolutionary systems and potential applications in the design process.</p>						
3. Course content/structure:						
<p>The basic principles of modern methodologies in the design process-philosophical ideas; Algorithm / chart as a starting point; Using of contemporary methodologies in architectural and urban design; Application of modern techniques and technologies to architectural and urban design; Application of adaptable systems to the problems in the field of architecture, urbanism and urban planning-programming, functional, structural aspects. Top down / bottom up process, Finding Form / form making, Emergence. Complex adaptable systems without central coordination. Evolutionary Systems / morphogenesis. Biomimicry. Digital morphogenesis</p>						
4. Teaching methods:						
Lectures, exercises, consultations, and oral exam.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Exercise attendance		Yes	5.00	Oral part of the exam	Yes	30.00
Project		Yes	50.00			
Project task		Yes	15.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Delez, Žil	Ponavljjanje i razlika		Fedon	2009	
2,	Delez, Žil	Pregovori		Karpos	2010	
3,	Gatari, Feliks; Delez, Žil	Kafka		IZDAVAČKA KNJIZARNICA ZORANA STOJANOVICA	1998	
4,	Gatari, Feliks; Delez, Žil	Šta je filozofija?		IZDAVAČKA KNJIZARNICA ZORANA STOJANOVICA	1995	
5,	Gatari, Feliks; Delez, Žil	Anti-Edip: Kapitalizam i shizofrenija		IZDAVAČKA KNJIZARNICA ZORANA STOJANOVICA	1990	
6,	Bodrijar, Žan	Pakt o lucidnosti ili Inteligencija Zla		Arhipelag	2009	
7,	Debor, Gi	Društvo spektakla			1967	



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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Theory and Criticism of Urban Environment</h2>				
Course id:	A001					
Number of ECTS:	6					
Teacher:	Kostreš Lj. Milica					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
2	2	0	0	2		
Precondition courses		None				
1. Educational goal:						
<p>Within the course students will be presented with the theoretical and methodological assumptions of contemporary urban studies aimed at considering the complex processes of urban areas within the overall spatial and social context. Dominant issues of the development of the contemporary cities will be treated with a critical approach, analysis of relevant theories, as well as by analyzing urban spaces in which a variety of influential forces are materialized.</p>						
2. Educational outcomes (acquired knowledge):						
<p>Students will be trained to develop proper analytical and critical apparatus that will be able to adapt to the specifics of their own scientific research and practical work. Students will be directed towards the understanding of urban transformations as the results of the process that cause them.</p>						
3. Course content/structure:						
<p>Transformation processes of contemporary cities - the wider context; Modern concept of urban, Contemporary theories of urban growth and development; Specific themes and processes in the development of cities - critical analysis, spatial parameters as key factors of urban transformation - theoretical and practical considerations, the concept of vertical urbanism in theory and practice; Cities of the future; Modern technology as the tool of urban design and city development.</p>						
4. Teaching methods:						
<p>Lectures, Practice in Design, Consultations          Course grade is formed based on the lecture and practice attendance, success at colloquiums, written and oral examination.</p>						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam		
Exercise attendance		Yes	5.00	Oral part of the exam		
Lecture attendance		Yes	5.00			
Term paper		Yes	20.00			
Term paper		Yes	20.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Mamford, L.	Grad u istoriji		Marso:Book, Beograd	2003	
2,	Džejkobs, Dž.	Smrt i život velikih američkih gradova		Mediterran Publishing, Novi Sad	2011	
3,	Kofman, E & E Lebas	Writings on Cities – Henri Lefebvre		Blackwell Publishing, Oxford	2006	
4,	LeGates, R & F Stout	The City Reader		Routledge, London, New York	2011	
5,	Sassen, S.	A Sociology of Globalization		W.W.Norton & Company, New York, London	2007	
6,	Ng, E. (ed.)	Designing High-Density Cities		Earthscan, London	2010	



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Table 5.2 Course specification

Course:		<b>Advanced Animation and Video Post Techniques in Architecture</b>				
Course id:	AD0010					
Number of ECTS:	5					
Teacher:	Obradović M. Ratko					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
2	0	2	0	1		
Precondition courses		None				
1. Educational goal: Enabling students for spatial visualization and spatial model generation in architecture.						
2. Educational outcomes (acquired knowledge): Use of graphic programs for 3D visualization, and a good perception of space.						
3. Course content/structure: Graphical programming systems and models. Ways of presenting information. Simulation and animation. User interface. The structure of software systems for spatial design. Recording facilities. Representation of projection and views. The classic looks. Orthogonal and Axonometric projections. Perspective. Design of computer views . Camera movement. Forming curves and surfaces. Changes in the shape of objects. Global shape changes. Changes in free form. Spatial transformation. Configuring space. 3D modeling, development process of solid and wire architectural models of three-dimensional objects using a specialized software. Modeling process: using polygons and NURBS. Representation. Setting the scene: arranging virtual objects. Preparation and analysis of materials. Creating materials. UVW mapping. Basics of light and shadows. Exterior and interior lighting. Photometry of lights. Determination of the distance from camera to image plane. Fractals. Sketching: 3D scenes, setting the scene: the eye point and the image plane. Sketching as a basis for the animation. Basics of animation and its application in architecture. Dynamics in computer graphics. 3D rendering, Mental ray rendering, generating a two-dimensional image-results. Application of Fly-through animation in architecture.						
4. Teaching methods: Lectures, exercises, consultation.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Computer exercise attendance		Yes	5.00	Test	Yes	30.00
Lecture attendance		Yes	5.00			
Project		Yes	30.00			
Project task		Yes	15.00			
Project task		Yes	15.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Alan Watt	3D Computer Graphics		Addison Wesley	2000	
2,	Autodesk	Autodesk 3DS MAX Tutorial guide		Autodesk	2005	
3,	Ratko Obradović, Ivan Pinčjer, Ivica Nikolić, Gojko Vladić	Dizajn prostornih oblika-odabrani primeri		Fakultet tehničkih nauka, Novi Sad	2009	
4,	Dominic Case	Film Technology in Post Production		Focal Press	2001	
5,	Gary H Anderson	Video Editing and Post Production		Focal Press	1999	
6,	Adele Droblas, Seth Greenberg	Adobe Premiere Pro CS3 Bible		Wiley	2008	
7,	Mark Christiansen	Adobe After Effects CS5 Visual Effects and Compositing Studio Techniques		Adobe Press	2001	
8,	Chris Meyer, Trish Meyer	Creating Motion Graphics with After Effects		Elsevier	2010	
9,	Adobe	Adobe Premiere Pro 2.0: Učionica u knjizi		CET	2006	



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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Representation of a Wider Physical Environment</h2>			
Course id:	A291				
Number of ECTS:	5				
Teacher:	Šiđanin S. Predrag				
Course status:	Elective				
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
2	0	3	0	0	
Precondition courses		None			
1. Educational goal: Enabling students to use basic computer application software for representation of a wider physical environment.					
2. Educational outcomes (acquired knowledge): To apply acquired knowledge in the further educational process as well as in the future professional development.					
3. Course content/structure: Introduction, defining and explaining wider glossary of geoinformation technology. Fundamentals of GIS: differences from related systems, application and history. Principles of GIS: data structure about Earth, mapping, basic concepts and characteristics of GIS, how GIS operates and system architecture and components. Application of GIS: GIS data base structures, raster and vector models of data base, ``object`` data base, data collection and storage in GIS, analysis and presentation of collected data. Future of GIS. An Overview of leading GIS software.					
4. Teaching methods: Lectures and Practice in the computer laboratory. Consultations. Part of the course which represents a logical whole is to be passed in four colloquiums. Colloquiums are done in the computer laboratory. Students may take the next colloquium if he/she won at least 30% of the points at the previous colloquium. In order for the student to pass the examination, he/she has to win at least 30% of the points at each of the four colloquiums besides other prerequisites. Course grade is formed based on the lecture and practice attendance and success at the colloquium.					
Knowledge evaluation (maximum 100 points)					
Pre-examination obligations		Mandatory	Points	Final exam	
Complex exercises		Yes	70.00	Practical part of the exam - tasks	
Computer exercise attendance		Yes	0.00		
Lecture attendance		Yes	0.00		
Literature					
Ord.	Author	Title		Publisher	Year
1,	Kukrika, M.	Uvod u GIS		Geografski fakultet beogradskog univerziteta, Beograd	2004


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Table 5.2 Course specification

Course:		<b>Architecture Theory and Criticism</b>				
Course id:	AD0006					
Number of ECTS:	6					
Teacher:	Krklješ M. Milena					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
2	2	0	0	2		
Precondition courses		None				
1. Educational goal:						
Introduction to the basic theories and conceptual frameworks that define the emergence of architectural works. Reviewing the relationship of architecture and the wider social and cultural context. The evaluation and assessment of the interaction of different levels and layers of existing space, particularly in terms of protection, programs, proportion, transport, environment, typology...Development of synthesis opinions about architecture. The establishment and development of critical observation, study, analysis and evaluation of architectural structures.						
2. Educational outcomes (acquired knowledge):						
Ability to act individually or in a team in the field of architecture theory and criticism.						
3. Course content/structure:						
Theories and conceptual frameworks in architecture. The problem of the role, position, identity and potential of architectural structures. Types and forms of architectural structures (the structures, projects and studies, competition projects, ephemeral and spatial structure, texts and publications ...). Forms of action in architecture (design and construction, history, theory and criticism, education, communication in architecture ...). The program in architecture as well as theoretical and phenomenological question. Architectural form - content, function and meaning. Architectural language - reading and writing. The concept and theory of criticism. Types of critical texts. Analytical theoretical frameworks. Ways of writing critical text.						
4. Teaching methods:						
Lectures; Practice; Workshops. Term paper and oral examination.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Exercise attendance		Yes	5.00	Oral part of the exam	Yes	30.00
Presentation		Yes	10.00			
Project task		Yes	15.00			
Term paper		Yes	20.00			
Term paper		Yes	20.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	Kenet Frempton	Moderna arhitektura – kritička istorija		Orion art	2004	
2,	Neil Leach	Rethinking architecture, Routledge		London & New York	1997	
3,	Michael Hays	Architecture Theory since 1968		Columbia Book of Architecture, MIT Press, Cambridge, Mass	1998	
4,	Kate Nesbitt	Theorizing a New Agenda for Architecture, An Anthology of Architectural Theory 1965-1995		Princeton Architectural Press, New York	1996	
5,	Kristijan Norberg Šulc	Egzistencija, prostor, arhitektura		Građevinska knjiga, Beograd	1999	
6,	Rem Koolhaas	S, M, L, XL		The Monacelli Press, New York	1998	
7,	Kevin Linč	Slika jednog grada		Građevinska knjiga, Beograd	1986	





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Table 5.2 Course specification

Course:		<b>Professional Practice - Master</b>				
Course id:	A390					
Number of ECTS:	3					
Teachers:						
Course status:	Mandatory					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
0	0	0	0	3		
Precondition courses		None				
1. Educational goal: Acquiring practical knowledge.						
2. Educational outcomes (acquired knowledge): Application of acquired knowledge in further education and profession.						
3. Course content/structure: Integral part of the Architecture and Urban Planning curriculum is the professional practice and practical work lasting 45 hours, which is carried out in adequate scientific institutions, relevant institutions dealing with problems of planning, design or building, as well as in private or public enterprises dealing with activities relevant for acquisition of adequate practical experience in the field of architecture and urban planning.						
4. Teaching methods: Research, consultations, practical work.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Project		Yes	50.00	Oral part of the exam	Yes	50.00
Literature						
Ord.	Author	Title		Publisher	Year	



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Table 5.2 Course specification

Course:		<b>Studijski istraživački rad</b>			
Course id:	ADS28				
Number of ECTS:	8				
Teachers:					
Course status:		Mandatory			
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
0	0	0	13	0	
Precondition courses		None			
1. Educational goal:					
2. Educational outcomes (acquired knowledge):					
3. Course content/structure:					
4. Teaching methods:					
Knowledge evaluation (maximum 100 points)					
Pre-examination obligations		Mandatory	Points	Final exam	
				Mandatory	Points
Literature					
Ord.	Author	Title		Publisher	Year



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Table 5.2 Course specification

Course:		<b>Izrada i odbrana master rada</b>				
Course id:	AD28					
Number of ECTS:	10					
Teachers:						
Course status:	Mandatory					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
0	0	0	0	10		
Precondition courses		None				
1. Educational goal:						
2. Educational outcomes (acquired knowledge):						
3. Course content/structure:						
4. Teaching methods:						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points



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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Modeling Based on Perspective Images</h2>			
Course id:	AD0011				
Number of ECTS:	5				
Teachers:	Stojaković Z. Vesna, Tepavčević B. Bojan				
Course status:	Elective				
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
2	0	2	0	0	
Precondition courses		None			
1. Educational goal:					
Education in the field of methods for the generation of digital spatial models from photographs, and training students to use basic IBM computer application.					
2. Educational outcomes (acquired knowledge):					
To apply the knowledge gained in the process of further education as well as in their future professional work.					
3. Course content/structure:					
Introduction, definition and clarification of basic terms of image-based modeling. Visual perception. Theories of perception and space understanding. Stereoscopy and perspective relationships. The relationship between perspective images and photos. Systems and methods for image-based modeling. Single-image-based modeling. Photogrammetry, arial and terrestrial. Image-based modeling of architectural structures. Te extraction of attributes and repetition. Image-based modeling of the built environment. Complex projects and simultaneous use of different approaches.					
4. Teaching methods:					
lectures and exercises in the computer lab. Consultation. Part of the material that make up the logical units are placed in the two colloquies . Colloquies are done in the computer lab. To pass the exam, in addition to other requirements, student must have at least 30% of points from both colloquies. Exam evaluation is based on attendance of lectures and practice, and the success of the colloquia.					
Knowledge evaluation (maximum 100 points)					
Pre-examination obligations		Mandatory	Points	Final exam	
Graphic paper		Yes	20.00	Practical part of the exam - tasks	
Graphic paper		Yes	20.00	Mandatory	Points
Laboratory exercise attendance		Yes	5.00	Yes	50.00
Lecture attendance		Yes	5.00		
Literature					
Ord.	Author	Title		Publisher	Year
1,	H. Zisserman, R. Zisserman, A. Zisserman	Multiple view geometry in Computer Vision		Cambridge University Press, Cambridge	2000
2,	M. Kasser, Y. Egels, (ed.)	Digital Photogrammetry		Taylor & Francis	2000
3,	P. Zigmund	3D Shape - Its unique place in Visual Perception		MIT Press, London	2008
4,	K. HANKE, P. GRUSSENMEYER	ARCHITECTURAL PHOTOGRAMMETRY: Basic theory, Procedures, Tools			2002



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Table 5.2 Course specification

Course:		<h2>Dynamic Analysis and Simulation in Architecture</h2>				
Course id:	AD0012					
Number of ECTS:	5					
Teachers:	Tepavčević B. Bojan, Stojaković Z. Vesna					
Course status:	Elective					
Number of active teaching classes (weekly)						
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:		
2	0	2	0	0		
Precondition courses		None				
1. Educational goal:						
The goal of this course is to acquire basic knowledge in the field of analysis and simulation object performances in relation to different influences from environment/ surroundings.						
2. Educational outcomes (acquired knowledge):						
The outcome of this course is to master the basic function of digital tools in design based on analysis of performance.						
3. Course content/structure:						
Introduction and definition of the concept design based on the analysis of performance. History and theory of application design based on the performance analysis in architecture. Examples of application of acoustic analysis, insulation, solar radiation, thermal analysis, CFD analysis, and visual accessibility. Application of evolutionary algorithms in function optimization of architectural design. Application software packages dynamic analysis and simulation performance: Ecotect and Ansys. The application of software tools that support the application of genetic algorithms in architectural design process: Grasshopper-Galapagos.						
4. Teaching methods:						
Teaching is conducted through lectures and computer practice. During practice, student is required to do practice-oriented tasks. Knowledge evaluation takes place through the exam, where the student is required to do practical application of given problem.						
Knowledge evaluation (maximum 100 points)						
Pre-examination obligations		Mandatory	Points	Final exam	Mandatory	Points
Computer exercise attendance		Yes	5.00	Theoretical part of the exam	Yes	30.00
Graphic paper		Yes	60.00			
Lecture attendance		Yes	5.00			
Literature						
Ord.	Author	Title		Publisher	Year	
1,	B. Kolarevic	Performative Architecture: Beyond Instrumentality		Routledge	2005	
2,	M. Hensel, A. Menges, M. Weinstock	Emergent Technologies and Design: Towards a Biological Paradigm for Architecture		Routledge	2010	



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Table 5.2 Course specification

Course:		<h2 style="margin: 0;">Theory of curves and surfaces</h2>			
Course id:	AD0013				
Number of ECTS:	5				
Teachers:	Navalušić V. Slobodan, Štulić B. Radovan, Tepavčević B. Bojan				
Course status:	Elective				
Number of active teaching classes (weekly)					
Lectures:	Practical classes:	Other teaching types:	Study research work:	Other classes:	
2	0	2	0	0	
Precondition courses		None			
1. Educational goal:					
The goal of this course is to acquire adequate knowledge in various fields of geometry of curves and surfaces (synthetic projective, differential, algebraic, descriptive) and to their generation and visualization.					
2. Educational outcomes (acquired knowledge):					
The outcome of course is to have a basis for the generation of curves and surfaces, and their geometric transformations, using appropriate software to create the desired function of spatial forms.					
3. Course content/structure:					
The basic elements of flat and spatial curves. Tangent, principal normal and binormal. Osculate, normal and rectification plane. Torsion and radius of torsion. Touch of curves. Analytical and synthetic defining curves. Generation of curves using transformations (perspective, projective, birational, general). The basic surface elements. Tangent plane and normal to the surface. Envelope and surface plane. Principal curvatures and principal directions of the surface.					
4. Teaching methods:					
Teaching is conducted through lectures, computer practice and consultations. Knowledge evaluation takes place through the exam, where the student is required to do and practically implementati of a given problem.					
Knowledge evaluation (maximum 100 points)					
Pre-examination obligations		Mandatory	Points	Final exam	
Computer exercise attendance		Yes	30.00	Theoretical part of the exam	
Graphic paper		Yes	30.00	Mandatory	Points
Lecture attendance		Yes	10.00	Yes	30.00
Literature					
Ord.	Author	Title		Publisher	Year
1.	Velimirović Lj., Stanimirović P., Zlatanović M	Geometrija krivih i površi		Univerzitet u Nišu	2010
2.	H. Pottmann, A. Asperl, M. Hofer and A. Kilian	Architectural Geometry		Bentley Institute Press	2007



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning

### Standard 06. Programme Quality, Contemporaneity and International Compliance

The study programme is consistent with the modern world scientific developments and the status of the profession, and comparable to similar programmes in foreign higher education institutions. The study programme in the field of Digital design in Architecture is designed to be complete and comprehensive and offers students the latest scientific and technical knowledge in this field.

The study programme in Digital techniques, design and production in Architecture is comparable to and in compliance with:

1. The Master of Advanced Studies in CAAD, ETH, Zurich  
<http://www.mas.caad.arch.ethz.ch/>
2. Master in Advanced Architecture, Institute for Advanced Architecture of Catalonia, Barcelona  
<http://www.iaac.net/educational-programs/master-in-advanced-architecture-2>
3. MSc Adaptive Architecture and Computation, The Bartlett School of Architecture London  
<http://www.bartlett.ucl.ac.uk/graduate/programmes/postgraduate/mscdiploma-adaptive-architecture-and-computation>



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning

### Standard 07. Student Enrollment

Faculty of Technical Sciences, in accordance with social demands and its resources, enrolls certain number of students to the Master academic studies Digital techniques, design and production in Architecture, as budget financed or self financed students, which is defined by the special decision of the teaching and research faculty council and the founder. Student selection and enrolment of the applied candidates is based on their success in the previous education and entrance examination defined by the Rules of student enrolment to the study programmes.

Students from other study programmes, as well as individuals who completed different under Master academic studies that are worth at least 240 ECTS may enroll to this study programme, which is defined by Regulations on student enrollment in academic courses.

Thereby the Evaluation Committee (consisting of the department chefs participating in the realization of the study programme and the manager of the study programme) evaluates the passed examinations and other student activities relevant for the enrolment, and based on the recognized number of credits determines whether the student may enroll to the Master academic studies.

Candidates who, in the opinion Evaluation Committee, have completed an appropriate study program are eligible to enroll in the master studies. Evaluation Committee decides whether the candidates who are eligible to enroll have to take entrance exam. If Evaluation Committee make a decision on taking the entrance exam, the candidates take the exam: Testing knowledge in the field of the study program. The final ranking list of the candidates for enrollment is formed based on success in previous studies, the duration of the study and achieved success on the entrance exam, as defined by the Regulations on student enrollment in study courses.

Committee, in accordance with Regulations on student enrollment in the study programs, has the right to approve the registration of candidates who have not completed the appropriate basic academic courses in duration of four years, worth a minimum of 240 ECTS, and only in the case of vacancies remain after the registration of all candidates who meet the requirements set for Competition (appropriate baseline studies, passed the entry exam). Candidates who, according to the professional judgment of Committee, have not completed the relevant study program of undergraduate studies may be approved enrollment if they pass the entrance exam. In this case, Committee determines, for each candidate separately, differences in the courses from basic academic studies that candidate should pass. Sum of ECTS cases defined by the difference can not exceed 30 (thirty).

The members of the Evaluation Committee are the manager of the study program, the heads of all departments to which subjects from a given study program belong, or teachers determined by the heads of departments, in accordance with the Regulations on student enrollment in courses.





## Study Programme Accreditation

MASTER ACADEMIC STUDIES

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### Standard 08. Student Evaluation and Progress

The evaluation of students is performed by continual monitoring of students' accomplishments and the points obtained in fulfilling prerequisites and taking examinations.

The students master the study programme by taking examinations and thus obtaining a certain number of ECTS credits, in accordance with the study programme of Master Academic Studies. Each course at the study programme has a set number of ECTS credits which students obtain on successfully passing the examination. Number of ECTS credits is determined based on student workload while working on certain subjects and applying a uniform methodology Faculty of Engineering, for all study programmes. Students' success in mastering a certain course is constantly monitored during classes and is presented in points. Maximum number of points obtained in a course is 100. Students obtain points from a course through their work during classes, fulfilment of their prerequisites and taking the examination. The minimum number of points that a student can obtain by completing pre-exam obligations during the class is 30 and the maximum 70. Each course at the study programme has a clear and publicly known mode of obtaining points. The way of obtaining points during classes involves the number of points that students obtain through of each type of activity during classes or completing given prerequisites and taking exams.

Students final achievement at a course is presented using grades from 5 (fail) to 10 (excellent). A student's grade is based on the overall number of points obtained on fulfilling prerequisites and taking the examination, and in accordance with the quality of acquired knowledge and skills.

For a student to be allowed to take an exam, he/she needs to be awarded at least 15 ECTS credits in subject's prerequisites. Additional terms for taking exams are defined for each subject individually.

Student's advancement during the studying is determined by Regulations for studying at Master Academic Studies.





## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning

### Standard 09. Teaching Staff

For the realization of the study program – Digital Technique, Design and Production in Architecture and Urban Planning, there is teaching staff with necessary professional and scientific qualifications. The number of lecturers coincides with the demands of the study programme and depends on the number of courses they lecture and the number of classes at these courses. The total number of teachers is sufficient to cover the total number of classes on the study programme, so each teacher has an average of 180 active classes (lectures, tutorials, practice classes, field classes) per year, i.e. 6 classes per week. In order to improve lecture organization and the knowledge development of students, a certain number of visiting professors from national and international universities give lectures to the students. The number of associates corresponds to the needs of the study programme. Total number of associates at the study programme is sufficient for the realization of total number of classes in the programme, so that the associates have average 300 classes of active teaching annually, that is, 10 classes per week on average. A certain number of external associates, whose professional work and competences additionally contribute to the student education, are also engaged in lecturing. Scientific and professional qualifications of the teaching staff relate to the educational and scientific field and the level of their participation. Each teacher has at least five references from the narrow scientific or professional field in which they lecture on the study programme. The size of the lecture group is up to 32 students, practice groups are up to 16 students, and laboratory practice groups are up to 8 students. No teacher has more than 12 classes per week. All data on teachers and assistants (CV, selections, and references) are available to the public

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### Science, arts and professional qualifications

Name and last name:	Vais I. Dana		
Academic title:	Guest Professor		
Name of the institution where the teacher works full time and starting date:	-		
Scientific or art field:	Architectural-Urbanistic Planning, Design and Theory		
Academic carieer	Year	Institution	Field
Academic title election:	2008	Faculty of Technical Sciences - Novi Sad	Architectural-Urbanistic Planning, Design and Theory
PhD thesis	2000	Tehcnical University of Cluj Napoca - Kluz	Architecture
Bachelor's thesis	1989	University of Architecture and Urban Planning "Ion Mincu" - Bukurest	Architecture
Magister thesis	-		Architecture
Education Specialist Thesis	-		Architecture

#### List of courses being held by the teacher in the accredited study programmes



ID	Course name	Study programme name, study type
1. A010S	Contemporary theories in architecture and urbanism-selected chapters	( A00) Architecture, Specialised Academic Studies
2. AE03	Interior Design	(AH0) Architecture, Master Academic Studies
3. AT04	Contemporary theories and technologies applied to architecture, urbanism and design 1	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies (AH0) Architecture, Master Academic Studies
4. AT05	Contemporary theories and technologies applied to architecture, urbanism and design 2	(AH0) Architecture, Master Academic Studies
5. AUP05	Interior Design 3	(AH0) Architecture, Master Academic Studies
6. AUP06	Strategies and methods in architecture and urban design	(AH0) Architecture, Master Academic Studies
7. A010	Contemporary theories in architecture and urbanism-selected chapters	( A00) Architecture, Doctoral Academic Studies
8. A116C	Tekstualna funkcija arhitekture i grada - odabrana poglavlja(uneti naziv na engleskom)	( A00) Architecture, Doctoral Academic Studies ( AS0) Scenic Design, Doctoral Academic Studies

#### Representative references (minimum 5, not more than 10)

1.	Osnivač i urednik časopisa Arhitectura and Urbanism Faculty of the UTC-N, "Logie" (nominated publication Biennale of Architecture in Bucharest)
2.	Vicinity (a)midst foam bubbles, "Arhitext" nr. 9-10/2007, Bucharest, pp.XXXIV-XXXV (Romanian), XXXV-XXXVI (English)
3.	Expressionists Features in Contemporary Architecture [in Romanian], Editura Presa
4.	Dwelling [in Romanian], Technical University of Cluj-Napoca publication, Cluj, 1997
5.	Stalni dopisnik časopisa "Arhitext Design" (Bucharest) od 1999 do danas
6.	Luis Barragán – fisa de istorie contemporana / Luis Barragán - File of Contemporary History, in: "logiA" nr. 9/2006, pp. 88-92 (Rom. & Engl)
7.	Osnivač i urednik časopisima arhitekture: "Alaprajz" (Budapest), Octagon (Bucharest)
8.	Defining Space and Spatial Metaphors: Architecture and Urban Space at the Margins, Book of Proceedings, Conference Defining Space, Dublin, 11-13th October, 2007, pp. 85-86
9.	Monographs Arhitext (Architects contemporary Romanian, 2006-2009) Vol 1-4
10.	Secolul urbanizarii globale / The Century of Global Urbanization, in "Arhitext" nr. 12/2006, pp. 62-67 (Romanian), 68-71 (English)

#### Summary data for teacher's scientific or art and professional activity:

Quotation total :	
Total of SCI(SSCI) list papers :	
Current projects :	Domestic : <input type="text"/> International : <input type="text"/>

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### Science, arts and professional qualifications

Name and last name:		Wiltsche -. Albert	
Academic title:		Guest Professor	
Name of the institution where the teacher works full time and starting date:		-	
Scientific or art field:		Geometric Space Theory and Interpretation in Architecture and Urbanism	
Academic carier	Year	Institution	Field
Academic title election:	2012		Geometric Space Theory and Interpretation in Architecture and Urbanism
PhD thesis	2000	University of Graz - Graz	Mathematics
Magister thesis	1998	University of Graz - Graz	Mathematics
List of courses being held by the teacher in the accredited study programmes			
	ID	Course name	Study programme name, study type
1.	A116DS	Modern techniques of the geometric space representation	( A00) Architecture, Specialised Academic Studies ( G10) Geodesy and Geomatics, Specialised Academic Studies
2.	AD0003	Digital fabrication in Architecture	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
3.	AD0005	Parametric Design in Architecture and Urbanism	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
4.	A116E	Modern techniques of the geometric space representation	( A00) Architecture, Doctoral Academic Studies ( AS0) Scenic Design, Doctoral Academic Studies
Representative references (minimum 5, not more than 10)			
1.	Stavric, M.; Wiltsche, A.: Spatializing Flat Ornament. - in: Experience-centered Approach and Visuality In The Educations of Mathematics and Physics. (2012), S. 223 - 224		
2.	Stavric, M.; Wiltsche, A.: Geometrie und Wahrnehmung. - in: Geometrie, Kunst und Wissenschaft. (2007), S. 346 - 359		
3.	Manahl, M.; Wiltsche, A.: "Kobra" aus Brettsperholz - Neue Methoden zur Realisierung von Freiformflächen aus ebenen Elementen an Prototyp erprobt. - in: Konstruktiv 286 (2012) , S. 26 - 27		
4.	Wiltsche, A.: Non-standard Formen in der Architektur. - in: Informationsblätter der Geometrie (2012) 1, S. 13 - 18		
5.	Zedlacher, S.; Wiltsche, A.: Kinder und neue Medien. - in: GAM - Graz Architecture Magazine 6 (2010) , S. 240 - 241		
6.	Wiltsche, A.: A space cubic and its one-parameter automorphism groups. - in: Journal of geometry 88 (2008) 1-2, S. 178 - 193		
7.	Wiltsche, A.; Schimek, H.; Stavric, M.: Geometric aspects in Producing Non-Standard Architecture with Standard Tools. - in: Journal for geometry and graphics 12 (2008) 2 , S. 205 - 214		
8.	Wiltsche, A.: A polynomial tool for blending surfaces. - in: Grazer mathematische Berichte 348 (2005) , S. 113 - 124		
9.	Wiltsche, A.: Blending curves. - in: Journal for geometry and graphics 9 (2005) 1 , S. 67 - 75		
10.	Stavric, M.; Wiltsche, A.; Schimek, H.: New Dimension in Geometrical Education. - in: KoG 9 (2005) , S. 45 - 54		
Summary data for teacher's scientific or art and professional activity:			
Quotation total :		0	
Total of SCI(SSCI) list papers :		0	
Current projects :		Domestic :	International :
		0	0



Science, arts and professional qualifications



Name and last name:	Atanacković-Jeličić T. Jelena		
Academic title:	Associate Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 17.09.2001		
Scientific or art field:	Architectural-Urbanistic Planning, Design and Theory		
Academic carieer	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Architectural-Urbanistic Planning, Design and Theory
PhD thesis	2007	Faculty of Technical Sciences - Novi Sad	Architectural-Urbanistic Planning, Design and Theory
Magister thesis	2005	Faculty of Technical Sciences - Novi Sad	Architectural-Urbanistic Planning, Design and Theory
Bachelor's thesis	2001	Faculty of Technical Sciences - Novi Sad	Architectural-Urbanistic Planning, Design and Theory

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	A371	Architectural Design 3	( A00) Architecture, Undergraduate Academic Studies
2.	F412I2	Design for all	( F00) Graphic Engineering and Design, Undergraduate Academic Studies
3.	A231	Housing 1	( A00) Architecture, Undergraduate Academic Studies
4.	A341	Housing 2	( A00) Architecture, Undergraduate Academic Studies
5.	A363	Interior Design 1	( A00) Architecture, Undergraduate Academic Studies
6.	A602	Contemporary theories and technologies applied to architecture, urbanism and design	( A00) Architecture, Undergraduate Academic Studies
7.	A801	Synthesis project	( A00) Architecture, Undergraduate Academic Studies
8.	ASI282	Interior design	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
9.	ASI331	Design for all in arts and culture	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
10.	RPR007	Strategic Management in Urban Planning	( RPR) Regional Development Planning and Management, Master Academic Studies
11.	RPR012	City Management	( RPR) Regional Development Planning and Management, Master Academic Studies
12.	A010S	Contemporary theories in architecture and urbanism- selected chapters	( A00) Architecture, Specialised Academic Studies
13.	A118S	Contemporary technologies applied to architecture and urbanism	( A00) Architecture, Specialised Academic Studies
14.	AE03	Interior Design	(AH0) Architecture, Master Academic Studies
15.	AT04	Contemporary theories and technologies applied to architecture, urbanism and design 1	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies (AH0) Architecture, Master Academic Studies
16.	AT05	Contemporary theories and technologies applied to architecture, urbanism and design 2	(AH0) Architecture, Master Academic Studies
17.	AUP05	Interior Design 3	(AH0) Architecture, Master Academic Studies
18.	A010	Contemporary theories in architecture and urbanism- selected chapters	( A00) Architecture, Doctoral Academic Studies
19.	A118	Contemporary technologies applied to architecture and urbanism	( A00) Architecture, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)

1.	Štulic, Radovan; Atanacković, Jelena: Implementation of computer technologies in descriptive geometry teaching: surfaces of revolution, Journal Facta Universitatis, 2003, Vol. 2, No. 5, str. 379- 385
2.	Atanacković-Jeličić, J: O održivom razvoju, kutijama i Vilijemu Okamu (On sustainable development, boxes and William of Ockham), U: Dadić-Dinulović, T: Srbija: Moj slučaj/ Serbia: My Case, Beograd: Clio, British Council Serbia, 2008, ISBN 978-86-908463-1-3. str. 182- 202.
3.	Reba, D; Dinulović, R; Atanacković Jeličić, J; Kostreš, M: Now/Sada: Teaching by Design/Italy Now, Fakultet tehničkih nauka, Univerzitet u Novom Sadu, 2011, ISBN 978-86-7892-365-4
4.	Kostreš, M; Maraš, I; Atanacković Jeličić, J: Re-viewing Cityscapes, Facta Universitatis, Series: Architecture and Civil Engineering, Vol. 5, No. 1, 2007, pp. 77-85, ISSN 0354 – 4605

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Representative references (minimum 5, not more than 10)				
5.	Kostreš, M; Maraš, I; Atanacković Jeličić, J: "Design Tool for Making Meaning - Rebuilding "the Lost Communities" on the Outskirts of the Cities in Serbia", BDC Journal – Bollettino del Dipartimento do Conservazione dei Beni Architettonici ed Ambientali, Università degli Studi di Napoli Federico II, Vol. 9, No. 1, 2009, pp. 82-92, ISSN 1121-2918			
6.	Glavni arhitektonsko/građevinski projekat Centralne zgrade Univerziteta u Novom Sadu (projektovan 2008, u izvođenju 2011-2012); deo projektantskog tima u sastavu: Igor Maraš, dr Jelena Atanacković Jeličić, mr Milica Kostreš, Marko Todorov, Marija Dorić, dr Darko Reba; Prikazano na međunarodnoj izložbi ""NOW/SADA" (8-26. decembar 2011. godine) sa dvojezičnim katalogom Now/Sada:Teaching by Design/Italy Now, str. 7-10, ISBN 978-86-7892-365-4			
7.	Otkupna nagrada na međunarodnom konkursu za zgradu Muzeja savremene umetnosti Vojvodine, deo projektantskog tima u sastavu Jelena Atanacković Jeličić, Stanislav Grgić, Emir Hadžiahmetović, Ivana Miškeljin, Bojana Miškeljin, Marko Todorov. Prikazano u dvojezičnom katalogu izložbe pristiglih radova na konkurs (67 konkursnih rešenja, iz 11 zemalja centralne i jugoistočne Evrope) New Museum-The Museum of Contemporary Art Vojvodina, Project Exhibition: Architectural Design for a New Building of the Museum of Contemporary Art Vojvodina, January 27-Jun 27, 2007, MOCAV 033 i prikazano na međunarodnoj izložbi ""NOW/SADA" (8-26. decembar 2011. godine) sa dvojezičnim katalogom Now/Sada:Teaching by Design/Italy Now, str. 55-58, ISBN 978-86-7892-365-4. Sastav međunarodnog žirija: Odile Seyler (Francuska), Živko Grozdanić (direktor Muzeja savremene umetnosti Vojvodine), prof. dr Kokan Grčev (Društvo arhitekata Makedonije), mr Tomaž Kancler (Društvo arhitekata Maribora, Slovenija), akademik prof. Bran			
8.	Zeković, M; Konstantinović, D; Atanacković-Jeličić, J: Architectural Design - as it is taught at the Department of Architecture, logiA - The studio of Architecture, 2007, Faculty of Architecture, University of Cluj, Romania, <a href="http://www.utcluj.ro/logia/index_en.html">http://www.utcluj.ro/logia/index_en.html</a>			
9.	Aerodrom Čenej, idejno rešenje, maketa i prezentacija. Autorski tim: Todorov Marko, Miškeljin Ivana, Tihomir Janjušević, Dejan Ecet, Radomir Kojić, Igor Maraš, Jelena Atanacković Jeličić. Izložba u holu zgrade Vlade Vojvodine, od 4.5.-11.5.2012. Prikazano u "Aerodrom Čenej- prateća publikacija", Departman za arhitekturu i urbanizam, Fakultet tehničkih nauka, Novi Sad, 2012, ukupno strana 47, ISBN 987-7892-398-2, dostupno i na <a href="http://arhns.com">http://arhns.com</a>			
10.	Izložba: Atanacković-Jeličić, J; Grgić, S; Hadžiahmetović, E; Miškeljin, B; Miškeljin, I; Todorov, M: Kutija - mikrosvet nacionalne kulture, Dom omladine, Galerija "Magacin", 23. februar - 1. mart, Beograd, 2008.			
Summary data for teacher's scientific or art and professional activity:				
Quotation total :	0			
Total of SCI(SSCI) list papers :	0			
Current projects :	Domestic :	0	International :	0



Science, arts and professional qualifications

Name and last name:	Borovac A. Branislav		
Academic title:	Full Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.10.1975		
Scientific or art field:	Mechatronics, Robotics and Automation and Integral Systems		
Academic carieer	Year	Institution	Field
Academic title election:	1998	Faculty of Technical Sciences - Novi Sad	Mechatronics, Robotics and Automation and Integral Systems
PhD thesis	1986	Faculty of Technical Sciences - Novi Sad	Robotics and Flexible Automation
Magister thesis	1982	Faculty of Technical Sciences - Novi Sad	Robotics and Flexible Automation
Bachelor's thesis	1975	Faculty of Technical Sciences - Novi Sad	Mechanical Engineering

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	EM436	Mechatronics	( M30) Energy and Process Engineering, Undergraduate Academic Studies
2.	H102	Fundamentals in Product Development	( H00) Mechatronics, Undergraduate Academic Studies
3.	H1404	Mechatronics	( H00) Mechatronics, Undergraduate Academic Studies ( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
4.	H308	Industrial Robotics	( H00) Mechatronics, Undergraduate Academic Studies
5.	I600	Industrial Robotics	( F10) Engineering Animation, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
6.	BM116A	Basics of medical robotics	( BM0) Biomedical Engineering, Undergraduate Academic Studies
7.	EM436A	Mechatronics	( E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
8.	II1035	Industrial robotics	( I10) Industrial Engineering, Undergraduate Academic Studies ( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies
9.	H1503	Non Industrial Robotics and Automation in Buildings	( H00) Mechatronics, Master Academic Studies ( I10) Industrial Engineering, Master Academic Studies
10.	HDOK1 S	Selected topics in industrial robotics	( E11) Power, Electronic and Telecommunication Engineering, Specialised Academic Studies
11.	HDOK2 S	Selected topics in non-industrial robotics	( I12) Industrial Engineering, Specialised Academic Studies
12.	IMDR0S	Selected chapters in enterprise's design, organization and control	( I12) Industrial Engineering, Specialised Academic Studies ( I22) Engineering Management, Specialised Academic Studies
13.	NIT05	Advanced Technology for Material Handling	( NIT) Industrial Engineering - Advanced Engineering Technologies, Master Academic Studies
14.	AD0007	Interactive systems in architecture	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
15.	H828	Advanced robotics	( H00) Mechatronics, Master Academic Studies
16.	H829	Advanced robotics	( I10) Industrial Engineering, Master Academic Studies ( M40) Technical Mechanics and Technical Design, Master Academic Studies
17.	IIDS6	Selected chapters in automation	( I12) Industrial Engineering, Specialised Academic Studies
18.	GD018	Automation and Robotics in Construction	( G00) Civil Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies



List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
19. HDOK-1	Selected Chapters in Industrial Robotics	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies ( H00) Mechatronics, Doctoral Academic Studies ( M40) Technical Mechanics, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies
20. HDOK-2	Selected Chapters in Non-Industrial Robotics	( E10) Power, Electronic and Telecommunication Engineering, Doctoral Academic Studies ( H00) Mechatronics, Doctoral Academic Studies ( I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies ( M40) Technical Mechanics, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies
21. HDOKL1	Selected topics in non-industrial robotics	( H00) Mechatronics, Doctoral Academic Studies ( M00) Mechanical Engineering, Doctoral Academic Studies ( M40) Technical Mechanics, Doctoral Academic Studies
22. HDOKL2	Selected topics in non-industrial robotics	( H00) Mechatronics, Doctoral Academic Studies ( M40) Technical Mechanics, Doctoral Academic Studies
23. IMDR0	Science of Industrial Engineering and Management	( I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies
24. IMDR80	Selected chapters in automation	( I20) Industrial Engineering / Engineering Management, Doctoral Academic Studies



Representative references (minimum 5, not more than 10)

1.	M. Vukobratović, V. Potkonjak, K. Babković, B. Borovac, Simulation model of general human and humanoid motion, <i>Multibody System Dynamics</i> , Volume 17, Number 1, (February, 2007), pp. 71-96 (ISSN 1384-5640 (Print) 1573-272X (Online))
2.	Vukobratović M., Borovac B., Potkonjak V., Towards a Unified Understanding of Basic Notions and Terms in Humanoid Robotics, <i>Robotica</i> (2007) Vol. 25, pp. 87-101
3.	Vukobratović M., Borovac B., Potkonjak V., ZMP: A Review of Some Basic Misunderstandings, <i>Int. Jour. of Humanoid Robotics</i> , Vol. 3, No. 2 (2006), pp. 153-176
4.	V. Potkonjak, M. Vukobratović, K. Babković, B. Borovac, General Model of Dynamics of Human and Humanoid Motion: Feasibility, Potentials and Verification, <i>Int. Jour. of Humanoid Robotics</i> , Vol. 3, No. 2 (2006), pp. 21-48
5.	Vukobratović M., Borovac B., Babković K., "Contribution to the Study of Anthropomorphism of Humanoid Robots", <i>Int. Jour. of Humanoid Robotics</i> , Vol. 2, No. 3 (2005), pp. 361-387
6.	Vukobratović M., Borovac B., Note on the Article "Zero-Moment Point- Thirty Five Years of its Life", <i>Int. Jour. of Humanoid Robotics</i> , Vol. 2, No.2, June 2005, pp. 225-227
7.	Vukobratović M., Borovac B., "Zero-Moment Point- Thirty Five Years of its Life", <i>Int. Jour. of Humanoid Robotics</i> , Vol. 1, No.1, March 2004, pp. 157-173
8.	M. Vukobratović, D. Andrić, B. Borovac, "How to Achieve Various Gait Patterns from Single Nominal ", <i>International Journal of Advanced Robotic Systems</i> , Vol. 1., No. 2, Page 99-108, 2004
9.	L. Juhas, A. Vujanić, N. Adamović, L. Nagy, B. Borovac "A Platform for Micro-Positioning Based on Piezo-Legs", <i>The Journal of Mechatronics</i> , Vol. 11, (2001), pp.869-897
10.	M. Vukobratović, D. Andrić, B. Borovac, "Humanoid Robot Motion in Unstructured Environment - Generation of Various Gait Patterns from a Single Nominal ", <i>Cutting Edge Robotics</i> , Edited by V. Kordic, A. Lazanica, M. Merdan, Published by pIV pro literatur Ver-lag Robert Mayer-Scholz, © 2005 Advanced Robotic Systems International, Page 577-598, 2005

Summary data for teacher's scientific or art and professional activity:



Quotation total :	1998		
Total of SCI(SSCI) list papers :	35		
Current projects :	Domestic :	2	International : 1



	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Digital Techniques, Design and Production in Architecture and Urban Planning</span>	

### Science, arts and professional qualifications

Name and last name:		Dragojlov -. Vesna	
Academic title:		Guest Professor	
Name of the institution where the teacher works full time and starting date:		-	
Scientific or art field:		Geometric Space Theory and Interpretation in Architecture and Urbanism	
Academic carieer	Year	Institution	Field
Academic title election:	2012		Geometric Space Theory and Interpretation in Architecture and Urbanism
Magister thesis	2002	University of Denver - Denver	Applied Arts and Design
Magister thesis	1992	Faculty of Philology - Beograd	English
List of courses being held by the teacher in the accredited study programmes			
	ID	Course name	Study programme name, study type
1.	AD0004	Generative design in architecture and urbanism	( ADO) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
Representative references (minimum 5, not more than 10)			
1.	2012 - INFANT – međunarodni festival alternativnog i novog teatra: izložba mojih radova i radova mojih studenata pod naslovom „Signali iz Pustinje“		
2.	Dragojlov V.: Hypertextual Fiction: Exploration in Multilinear Lyricism In: "Interrupt 2" Conference: Electronic Literature and Visual Arts, Brown University, Providence, RI, USA. 2012.		
3.	Dragojlov V., Mosul I.: Application of the art and architecture principles in the design of spatial models In: Generative Art Conference, Rim, Italija. 2011.		
4.	Dragojlov V.: Digital Arts at UATIn: ISIA Roma, Graduate School of Design, Rim, Italija. 2010.		
5.	Dragojlov V.: Teaching Generative Art at a Technologically Advanced University: Its Challenges and Awards In: Generative Art Conference, University of Polytechnics, Milano, Italija. 2009.		
Summary data for teacher's scientific or art and professional activity:			
Quotation total :			
Total of SCI(SSCI) list papers :			
Current projects :		Domestic :	International :

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Digital Techniques, Design and Production in Architecture and Urban Planning</span>	

### Science, arts and professional qualifications

Name and last name:		Kočetov-Mišulić Đ. Tatjana	
Academic title:		Assistant Professor	
Name of the institution where the teacher works full time and starting date:		Faculty of Technical Sciences - Novi Sad 01.01.1989	
Scientific or art field:		Constructions in Civil Engineering	
Academic carieer	Year	Institution	Field
Academic title election:	2009	Faculty of Technical Sciences - Novi Sad	Constructions in Civil Engineering
PhD thesis	2008	Faculty of Technical Sciences - Novi Sad	Constructions in Civil Engineering
Magister thesis	1997	Faculty of Technical Sciences - Novi Sad	Constructions in Civil Engineering
Bachelor's thesis	1988	Faculty of Technical Sciences - Novi Sad	Constructions in Civil Engineering
List of courses being held by the teacher in the accredited study programmes			
	ID	Course name	Study programme name, study type
1.	GG203	Actions on Structures	( G00) Civil Engineering, Undergraduate Academic Studies
2.	GG30	Concrete Structures	(G00) Civil Engineering, Undergraduate Academic Studies
3.	GG34	Timber Structures	(G00) Civil Engineering, Undergraduate Academic Studies
4.	GI308A	Fundamentals in Civil Engineering	( GI0) Geodesy and Geomatics, Undergraduate Academic Studies
5.	A305	Bearing structures 1	( A00) Architecture, Undergraduate Academic Studies
6.	GG37	Basics of design in civil engineering structures	( G00) Civil Engineering, Undergraduate Academic Studies
7.	GG411	Masonry structures	(G00) Civil Engineering, Undergraduate Academic Studies
8.	GH407	Concrete structures - Hydrotechnics	(G00) Civil Engineering, Undergraduate Academic Studies
9.	GP406	Concrete structures - Roads	(G00) Civil Engineering, Undergraduate Academic Studies
10.	GG514	Special Timber Structures	(G00) Civil Engineering, Master Academic Studies
11.	GG517	Damages and Repair of Masonry, Steel and Timber Structures	(G00) Civil Engineering, Master Academic Studies
12.	URZP62	Assessment of Damaged Structures	( ZP1) Disaster Risk Management and Fire Safety, Master Academic Studies
13.	AD0009	Complex Timber Structures	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
Representative references (minimum 5, not more than 10)			
1.	Zakić, B., Kočetov Mišulić, T., Čakić, B. (1998): "Montažne drvene kuće u svetu i kod nas". Univerzitet u Prištini, Priština, SRJ, 105 str.		
2.	Zakić, B., Lekić, R., Đukić, Lj., Kočetov, T. (1992): "Naponsko stanje u truss joist nosačima". "Materijali i konstrukcije", br. 1-2, Beograd, SRJ, str. 30-36.		
3.	Zakić, B., Kočetov Mišulić, T. (2000): "Osnovi plastične teorije kod drveta". "Materijali i konstrukcije", Beograd, SRJ, 43 br. 3-4, str. 37-40.		
4.	Zakić, B., Kočetov, T. (1994): "Composite beam structures - wood and concrete". Proceedings of 4th ASCCS International Conference on Steel-Concrete Composite Structures, Košice, Slovakia, pp. 328-334.		
5.	Kočetov Mišulić, T., Gramatikov, K. (2003): "Proračun i ispitivanje veza u drvenim konstrukcijama prema EC-5 i EN standardima". Zbornik radova INDIS 2003. - 9.og nacionalnog simpozijuma, Novi Sad, SCG, str. 291-298.		
6.	Kočetov Mišulić, T., Stevanović, B. (2005): "Preporuke za održavanje, praćenje, i ocenu stanja drvenih konstrukcija". Zbornik radova IV naučno-stručnog savetovanja Ocena stanja, održavanje i sanacija građevinskih objekata i naselja, Zlatibor, str.175-180.		
7.	Stevanović, B., Kočetov Mišulić, T. (2005): "Faktori obezbeđenja trajnosti i zaštita drvenih konstrukcija". Zbornik radova IV naučno-stručnog savetovanja Ocena stanja, održavanje i sanacija građevinskih objekata i naselja, Zlatibor, SCG, str.181-186.		
8.	Kočetov Mišulić T., Stevanović B. (2008): "Eksperimentalna podloga za uvođenje klasa čvrstoće četinarske rezane građe na domeće tržište" „Materijali i konstrukcije”, br. 4, Beograd, str. 50-62.		
9.	Kočetov Mišulić, T., Gramatikov, K. (2005): "Experimentally supported investigation of in row nailed connections under monotone and cyclic loadings". Proceedings of the 11th International MASE Symposium, Ohrid, Republic Macedonia, SI-2, pp. 275-280.		
10.	Zakić, B., Janković, D., Kovačević, D., Kočetov, T. (1990): "Izmereni smičući i glavni naponi kod lameliranih lepljenih konstrukcija". Zbornik radova IX Kongresa JUDIMK-a, Novi Sad, SFRJ, Knjiga II, str. 265-273.		
Summary data for teacher's scientific or art and professional activity:			
Quotation total :		0	
Total of SCI(SSCI) list papers :		0	
Current projects :		Domestic :	1
		International :	0



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning

## Science, arts and professional qualifications

Name and last name:	Kostreš Lj. Milica		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 17.09.2001		
Scientific or art field:	Architectural-Urbanistic Planning, Design and Theory		
Academic carier	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Architectural-Urbanistic Planning, Design and Theory
PhD thesis	2012	Faculty of Technical Sciences - Novi Sad	Architectural-Urbanistic Planning, Design and Theory
Magister thesis	2005	Faculty of Technical Sciences - Novi Sad	Architectural-Urbanistic Planning, Design and Theory
Bachelor's thesis	2001	Faculty of Technical Sciences - Novi Sad	Architectural-Urbanistic Planning, Design and Theory

## List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	A353	Landscape Architecture 1	( A00) Architecture, Undergraduate Academic Studies
2.	A372	Urban Design 3	( A00) Architecture, Undergraduate Academic Studies
3.	A364	Principles of Design for All 1	( A00) Architecture, Undergraduate Academic Studies
4.	A505	Contemporary trends and processes in urban design	( A00) Architecture, Undergraduate Academic Studies
5.	A801	Synthesis project	( A00) Architecture, Undergraduate Academic Studies
6.	ASI281	Urban Design	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
7.	GI305A	Spatial and Urban Planning	( GI0) Geodesy and Geomatics, Undergraduate Academic Studies
8.	A001	Theory and Criticism of Urban Environment	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies ( AH0) Architecture, Master Academic Studies
9.	A006S	Theoretical Discourse in Architecture – Selected Chapters	( A00) Architecture, Specialised Academic Studies
10.	A008S	Development of typology of urban spaces	( A00) Architecture, Specialised Academic Studies
11.	RPR001	Sustainable Regional Development and EU Strategies	( RPR) Regional Development Planning and Management, Master Academic Studies
12.	A116AS	Urban and regional dynamics and functional principles	( A00) Architecture, Specialised Academic Studies ( GI0) Geodesy and Geomatics, Specialised Academic Studies
13.	AE01	Contemporary Interiors and Design	( AH0) Architecture, Master Academic Studies
14.	AUP06	Strategies and methods in architecture and urban design	( AH0) Architecture, Master Academic Studies
15.	RPR21	Contemporary Theories, Methods and Technologies in Urban Planning	( RPR) Regional Development Planning and Management, Master Academic Studies
16.	SDGI2A	Urbanism and Spatial Planning - selected chapters	( GI0) Geodesy and Geomatics, Specialised Academic Studies
17.	A008	Development of the Typology for Urban Space– Selected Chapters	( A00) Architecture, Doctoral Academic Studies
18.	A116A	Urban and regional dynamics and functional principles	( A00) Architecture, Doctoral Academic Studies ( AS0) Scenic Design, Doctoral Academic Studies

## Representative references (minimum 5, not more than 10)

1.	Kostreš, M., Maraš, I., Atanacković-Jeličić, J., Re-viewing Cityscapes, Facta Universitatis, Series: Architecture and Civil Engineering, Vol. 5, No. 1, 2007, pp. 77-85
2.	Kostreš, M & D Reba, 'Housing for the new economic elite - a case study of Novi Sad', Facta Universitatis - series: Architecture and Civil Engineering, Vol. 8, No.3, 2010, pp. 329-343, ISSN 0354 – 4605, UDC 728.1/3.(497.11)(045)=111
3.	Trkulja, J., Kostreš, M., Maraš, I.: A City in Flux, Creating a New Urban Identity and Promoting Sustainable Designs, BDC Journal, Vol.9, 2008, pp. H2(1)- H2(10), ISSN 1121-2918
4.	Kostreš, M., Maraš, I., Atanacković-Jeličić, J., Design Tool for Making Meaning - Rebuilding "the Lost Communities" on the Outskirts of the Cities in Serbia, BDC Journal, Vol.9, 2008, pp. A2(1)- A2(10), ISSN 1121-2918



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning

Representative references (minimum 5, not more than 10)

5.	Maraš, I., Atanacković Jeličić, J., Kostreš, M., Todorov, M., Dorić, M., Reba, D. Glavni arhitektonsko/građevinski projekat Centralne zgrade Univerziteta u Novom Sadu/Central building of University of Novi Sad (projektovan 2008, u izvođenju 2011-2012) Prikazano na međunarodnoj izložbi "NOW/SADA" (8-26. decembar 2011. godine) sa dvojezičnim katalogom Now/Sada:Teaching by Design/Italy Now, str. 7-10, ISBN 978-86-7892-365-4
6.	Usvojeni urbanistički plan "PDR MIŠELUKA II U NOVOM SADU, br. 1.4.15/2006" (objavljen u: Sl. list Grada Novog Sada br. 38/2008) i prikazan u radu u časopisu međunarodnog značaja verifikovanom posebnom odlukom (M24) : Kostreš, M; Reba, D: 'Housing for the new economic elite - a case study of Novi Sad', Facta Universitatis - series: Architecture and Civil Engineering, Vol. 8, No.3, 2010, pp. 329-343, ISSN 0354 – 4605, UDC 728.1/3.(497.11)(045)=111. Obradivač plana: JP "Urbanizam" Novi Sad Investitor plana: JP "Zavod za izgradnju grada" Novi Sad Stručna kontrola plana: Komisija za planove Skupštine grada Novog Sada; rukovođenje: predsednik dr Milica Kostreš Sprovođenje procesa usvajanja, kontrola i usaglašavanje sa važećim propisima Republike Srbije: Uprava za urbanizam i stambene poslove Grada Novog Sada i Član veća grada Novog Sada zadužen za urbanizam i zaštitu životne sredine dr Jelena Atanacković Jeličić
7.	Reba, D; Dinulović, R; Atanacković Jeličić, J; Kostreš, M: Now/Sada:Teaching by Design/Italy Now, Fakultet tehničkih nauka, Univerzitet u Novom Sadu, 2011, ISBN 978-86-7892-365-4
8.	Kostreš, M, I Maraš & J Atanacković-Jeličić, 'Prilog metodologiji projektovanja javnih prostora urbane periferije', u Kurtović-Folić, N., ur., Unapređenje strategije obnove i korišćenja javnih prostora u prostornom i urbanističkom planiranju i projektovanju, Fakultet tehničkih nauka, Univerzitet u Novom Sadu, 2011, Novi Sad, str. 55-70, ISBN 978-86-7892-254-1
9.	Reba, D & M Kostreš, 'Analiza potencijala otvorenih prostora centralnih područja vojvođanskih gradova kao mesta socijalizacije', u Kurtović-Folić, N., ur., Unapređenje strategije obnove i korišćenja javnih prostora u prostornom i urbanističkom planiranju i projektovanju, Fakultet tehničkih nauka, Univerzitet u Novom Sadu, 2011, Novi Sad, str. 33-55, ISBN 978-86-7892-254-1
10.	Kostreš, M, 'Urbani konteksti arhitektonskih objekata za scenske događaje u Republici Srbiji', u Dinulović, R, D Konstantinović & M Zeković, ur., Arhitektura scenskih objekata u Republici Srbiji, Fakultet tehničkih nauka, Univerzitet u Novom Sadu, 2011, Novi Sad, str. 137-152, ISBN 978-86-7892-255-8
Summary data for teacher's scientific or art and professional activity:	
Quotation total :	0
Total of SCI(SSCI) list papers :	0
Current projects :	Domestic : 0 International : 0



UNIVERSITY OF NOVI SAD

FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning

## Science, arts and professional qualifications

Name and last name:	Krklješ M. Milena		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.01.2004		
Scientific or art field:	Architectural-Urbanistic Planning, Design and Theory		
Academic carier	Year	Institution	Field
Academic title election:	2011	Faculty of Technical Sciences - Novi Sad	Architectural-Urbanistic Planning, Design and Theory
PhD thesis	2011	Faculty of Technical Sciences - Novi Sad	Architectural-Urbanistic Planning, Design and Theory
Magister thesis	2007	Faculty of Technical Sciences - Novi Sad	Architectural-Urbanistic Planning, Design and Theory
Bachelor's thesis	2002	Faculty of Technical Sciences - Novi Sad	Architectural-Urbanistic Planning, Design and Theory

## List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
1. A204	Architecture Analysis, Functions and Typology 2	( A00) Architecture, Undergraduate Academic Studies
2. A302	Architecture Analysis, Functions and Typology 1	( A00) Architecture, Undergraduate Academic Studies
3. A802	Interior Design 2	( A00) Architecture, Undergraduate Academic Studies
4. ASI391	Architecture Theory and Criticism	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
5. A000	Architecture Theory and Criticism	(AH0) Architecture, Master Academic Studies
6. A006S	Theoretical Discourse in Architecture – Selected Chapters	( A00) Architecture, Specialised Academic Studies
7. A003AS	Theoretical research in architecture, urbanism and design	( A00) Architecture, Specialised Academic Studies
8. A116S	Cultural Function of Architecture and a City – Selected Chapters	( A00) Architecture, Specialised Academic Studies
9. AD0006	Architecture Theory and Criticism	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
10. AE02	Architectural Composition in Interior Design	(AH0) Architecture, Master Academic Studies
11. AE04	Furniture	(AH0) Architecture, Master Academic Studies
12. AT06	Transition and transformation of architectural programs	(AH0) Architecture, Master Academic Studies
13. AUP04	Landscape architecture 2	(AH0) Architecture, Master Academic Studies
14. RPR22	Landscape Planning and Sustainable Development	( RPR) Regional Development Planning and Management, Master Academic Studies
15. A116	Cultural Function of Architecture and a City – Selected Chapters	( A00) Architecture, Doctoral Academic Studies ( AS0) Scenic Design, Doctoral Academic Studies
16. A003B	Theoretical research in architecture, urbanism and design	( A00) Architecture, Doctoral Academic Studies

## Representative references (minimum 5, not more than 10)

1.	Krklješ M., Jevtic M.: Playgrounds in Novi Sad (Serbia) and their influences on children's health and development, HEALTHMED, 2012, vol. 6 br. 3, pp. 864-874
2.	Nedučin D., Krklješ M., Kurtović-Folić N.: Hospital Outdoor Spaces - Therapeutic Benefits and Design Considerations , Facta universitatis - series: Architecture and Civil Engineering, 2010, Vol. 8, No 3, pp. 293-305, ISSN 0354-4605, UDK: 725.51(045)=111
3.	Krklješ M., Kubet V., Hiel K.: Interrelationship of Public Spaces and Built-In Corner Buildings Based On the Examples of Modernism in "Mali Liman" Area in Novi Sad, Facta universitatis - series: Architecture and Civil Engineering, 2009, Vol. 7, No 2, pp. 145-153, ISSN 0354-4605, UDK: 711.4-111:721(45)
4.	Krklješ M., Hiel K., Bandić A.: Importance of Landscape Design in Kindergarten's Courtyards - A Case Study of Novi Sad, Serbia, 1. INTERNATIONAL CONFERENCE OF BENA ISTANBUL 2012: SUSTAINABLE PLANNING AND SAFE ENVIRONMENT, Istanbul: Istanbul Technical University, Istanbul, 21-24 Jun, 2012, pp. 189-200, ISBN 978-975-561-421-2
5.	Krklješ M., Kubet V., Bandić A.: Typological analysis of squares based on their geometric shape - a case study of Novi Sad, 3. moNGeometrija, Novi Sad: Faculty of Technical Sciences, Novi Sad, 21-24 Jun, 2012, pp. 255-262, ISBN 978-86-7892-405-7
6.	Krklješ M., Kubet V., Carić O.: Public Squares Perception Depending on Morphology of Corner Buildings, 2. moNGeometrija, Beograd: Faculty of Architecture Belgrade, Serbian Society for Geometry and Graphics, 24-27 Jun, 2010, pp. 279-289, ISBN 978-86-7924-038-5



UNIVERSITY OF NOVI SAD

FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning

Representative references (minimum 5, not more than 10)

7.	Krklješ M., Ilić B.: Transformation of City in Serbia at the Beginning of 21st Century: Comparative Study of Belgrade and Novi Sad - City Fortress, 5. iNDiS, Novi Sad: Faculty of Technical Sciences, 23-25 Novembar, 2009, pp. 283-288, ISBN 978-86-7892-221-3
8.	Hiel K., Fraser D., Krklješ M.: Improvements to the Urban Block Spaces and Their Reconnection to the Adjacent Danube in Novi Sad, 1. International Conference The Urban Project, Delft: TU Delft, 4-6 Jun, 2008, pp. 169-177, ISBN 978-1-58603-999-8
9.	Krklješ M., Nedučin D., Kubet V.: Analysis of Public Squares in Central Area of Novi Sad, 2. International Conference GNP 2010 Civil Engineering – Science and Practice, Podgorica: Faculty of Civil Engineering, University of Montenegro, 3-7 Mart, 2008, pp. 603-608, ISBN 978-86-82707-14-1
10.	Krklješ M.: Deca i javni prostori grada, u: Kurtović-Folić N., ur.: Zbornik radova: Unapređenje strategije obnove i korišćenja javnih prostora u prostornom i urbanističkom planiranju i projektovanju, Novi Sad, Fakultet tehničkih nauka, 2011, str. 105-122, ISBN 978-86-7892-254-1

Summary data for teacher's scientific or art and professional activity:

Quotation total :	7			
Total of SCI(SSCI) list papers :	1			
Current projects :	Domestic :	1	International :	1



Science, arts and professional qualifications

Name and last name:		Navalušić V. Slobodan	
Academic title:		Full Professor	
Name of the institution where the teacher works full time and starting date:		Faculty of Technical Sciences - Novi Sad 01.12.1975	
Scientific or art field:		Machine Elements, Construction Principles, Machine and Mechanizm	
Academic carieer	Year	Institution	Field
Academic title election:	2006	Faculty of Technical Sciences - Novi Sad	Machine Elements, Construction Principles, Machine and Mechanizm Theory, Power and Motion Transfer and Eng. Communication
PhD thesis	1996	Faculty of Technical Sciences - Novi Sad	Machine Elements, Construction Principles, Machine and Mechanizm Theory, Power and Motion Transfer and Eng. Communication
Magister thesis	1986	Faculty of Technical Sciences - Novi Sad	Machine Elements, Construction Principles, Machine and Mechanizm Theory, Power and Motion Transfer and Eng. Communication
Bachelor's thesis	1975	Faculty of Technical Sciences - Novi Sad	Thermal Energetics and Thermotechnics
List of courses being held by the teacher in the accredited study programmes			
	ID	Course name	Study programme name, study type
1.	A555	Perspective	( G10) Geodesy and Geomatics, Undergraduate Academic Studies
2.	EOS03	Fundamentals in Mechanical Engineering(Machine elements and Materials)	( E01) Power Engineering - Renewble Sources of Electrical Energy, Undergraduate Professional Studies
3.	F202	Fundamentals in Mechanical Engineering	( F00) Graphic Engineering and Design, Undergraduate Academic Studies
4.	GG03	Descriptive Geometry	( G00) Civil Engineering, Undergraduate Academic Studies
5.	GI104	Descriptive Geometry in Geomatics	( G10) Geodesy and Geomatics, Undergraduate Academic Studies
6.	M108	Engineering Graphic Communications	( M20) Mechanization and Construction Engineering, Undergraduate Academic Studies ( M30) Energy and Process Engineering, Undergraduate Academic Studies ( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies ( P00) Production Engineering, Undergraduate Academic Studies
7.	M2610	Graphic Communications and CAD	( H00) Mechatronics, Undergraduate Academic Studies
8.	S012	Descriptive Geometry and Engineering Drawing	( S00) Traffic and Transport Engineering, Undergraduate Academic Studies ( S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
9.	IA013	Interactive Engineering Graphics	( F10) Engineering Animation, Undergraduate Academic Studies
10.	ASO5	Descriptive Geometry with Perspective 1	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
11.	ASO9	Descriptive Geometry with Perspective 2	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
12.	ZC007	Engineering Graphic Communications	( ZC0) Clean Energy Technologies, Undergraduate Academic Studies
13.	M2511	Methodology of Design	( M22) Mechanization and Construction Engineering, Master Academic Studies
14.	M2655	Maintenance of Agricultural Machinery	( M22) Mechanization and Construction Engineering, Master Academic Studies
15.	AD0013	Theory of curves and surfaces	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
16.	DM213	Contemporary Methods of Designing and Machine Constructing	( M00) Mechanical Engineering, Doctoral Academic Studies
17.	DM409	Selected Chapter in Power and Motion Transmission	( M00) Mechanical Engineering, Doctoral Academic Studies
18.	AID04	Haptic devices usage in the virtual environment	( F20) Engineering Animation, Doctoral Academic Studies

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning

## Representative references (minimum 5, not more than 10)

1.	Milojević, Z., Navalušić, S., Zeljković, M.: " NC VERIFICATION AS A COMPONENT OF VIRTUAL MANUFACTURING", Academic Journal of Manufacturing Engineering, Vol. 5, No 2-2007., Editura Politehnica, žtimisoara, Romania, pp: 48-54, 2007. ISSN: 1583-7904
2.	Milojević, Z., Navalušić, S., Zeljković, M.: " DEVELOPMENT OF THE MODULE FOR REAL'TIME VERIFICATION OF NC MACHINING PROGRAM", Journal Manufacturing Engineering Manufacturing Accuracy Increasing problems, Wroclaw, 2007
3.	Milojević, Z., Navalušić, S., Zeljković, M.: " AN EXACT APPROACH TO 3-AXIS MILLING NC SIMULATION AND VERIFICATION", Journal Manufacturing Engineering Vol.3, No.5, Kosicah, 2006., pp. 14-17
4.	Milojević, Z., Navalušić, S., Zeljković, M.: " DEVELOPMENT OF THE MODULE FOR VERIFICATION OF NC MACHINING PROGRAM ", Journal of Machine Engineering, Vol.5 No. 1-2, Intelligent Machines and factories, Wroclaw, 2005. god., pp. 177-185
5.	Zeljković, M., Zeljković, Ž., Navalušić, S., Milojević, Z.:" SOFTWARE SOLUTION DEVELOPMENT FOR THE GRINDING WHEEL PROFILING CYCLE ON THE CNC GRINDING MACHINE", Journal of Machine Engineering, Vol.4 No. 1-2, Machine tools and factories of the knowledge, Wroclaw, 2004. god., pp. 254-262
6.	Desnica E., Letić D., Gligorić R., Navalušić S.: Implementation of information technologies in higher technical education, Metalurgia international, 2012, Vol. 17, No 3, pp. 76-82, ISSN 1582-2214
7.	Milojević Z., Navalušić S., Milankov M., Obradović R., Harhaji V., Desnica E.: System for femoral tunnel position determination based on the X - ray , HealthMED, 2011, Vol. 5, No 4, pp. 894-900, ISSN 1840-2991
8.	Desnica E., Letić D., Navalušić S.: Concept of distance learning model in graphic communication teaching at university level education, Technics Technologies Education Management, 2010, Vol. 5, No 2, pp. 378-388, ISSN 1840-1503
9.	Milojević Z., Navalušić S., Milankov M., Obradović R., Desnica E., Harhaji V.: Methodology for 3D femur approximate model generation, HealthMED, 2011, Vol. 5, No 5, pp. 1211-1217, ISSN 1840-2991
10.	Navalušić, S., R. Gatalo, M. Zeljković: Automated Gearbox Design Based on Principles of Expert System Building, JSPE Publication Series No.1, Advancement of Intelligent Production, edited by Eiji Usui, Elsevier Science B. V., Amsterdam - Lausanne - New York - Oxford - Shannon - Tokyo, 1994, pp. 45-50

## Summary data for teacher's scientific or art and professional activity:

Quotation total :	0		
Total of SCI(SSCI) list papers :	4		
Current projects :	Domestic :	0	International : 0





Science, arts and professional qualifications

Name and last name:	Obradović M. Ratko		
Academic title:	Full Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 02.09.1993		
Scientific or art field:	Computer Graphics		
Academic carier	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Computer Graphics
PhD thesis	2000	Faculty of Sciences - Novi Sad	Computer Graphics
Magister thesis	1997	Faculty of Sciences - Novi Sad	Computer Graphics
Bachelor's thesis	1993	Faculty of Technical Sciences - Novi Sad	Machine Elements, Construction Principles, Machine and Mechanizm Theory, Power and Motion Transfer and Eng.Communication

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
1. IA020	Advanced Display Technologies	( F10) Engineering Animation, Undergraduate Academic Studies
2. M108	Engineering Graphic Communications	( M20) Mechanization and Construction Engineering, Undergraduate Academic Studies ( M30) Energy and Process Engineering, Undergraduate Academic Studies ( M40) Technical Mechanics and Technical Design, Undergraduate Academic Studies ( P00) Production Engineering, Undergraduate Academic Studies
3. S012	Descriptive Geometry and Engineering Drawing	( S00) Traffic and Transport Engineering, Undergraduate Academic Studies ( S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
4. IA006	Spatial Shape Design	( F10) Engineering Animation, Undergraduate Academic Studies
5. IA009	3D Modeling	( F10) Engineering Animation, Undergraduate Academic Studies
6. IA014	Advanced Engineering Animation	( F10) Engineering Animation, Undergraduate Academic Studies
7. IGA013	Character Animation	( F10) Engineering Animation, Undergraduate Academic Studies
8. IGA055	Special Visual Effects	( F10) Engineering Animation, Undergraduate Academic Studies
9. IGB034	Video in Engineering Animation	( F10) Engineering Animation, Undergraduate Academic Studies
10. IGB340	Fundamentals of Engineering Animation	( F10) Engineering Animation, Undergraduate Academic Studies
11. ZC007	Engineering Graphic Communications	( ZC0) Clean Energy Technologies, Undergraduate Academic Studies
12. IA018	Computer Geometry	( F20) Engineering Animation, Master Academic Studies
13. AD0010	Advanced Animation and Video Post Techniques in Architecture	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
14. E2528	Computer game development	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
15. IA005	History of Animation	( F20) Engineering Animation, Master Academic Studies
16. AID08	Advanced Interdisciplinary Scientific Visualization	( F20) Engineering Animation, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)

1.	Milojević Z., Navalušić S., Milankov M., Obradović R., Harhaji V., Desnica E.: System for femoral tunnel position determination based on the X - ray, HealthMED, 2011, Vol. 5, No 4, pp. 894-900, ISSN 1840-2991
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**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning

## Representative references (minimum 5, not more than 10)

2.	Milojević Z., Navalušić S., Milankov M., Obradović R., Desnica E., Harhaji V.: Methodology for 3D femur approximate model generation, HealthMED, 2011, Vol. 5, No 5, pp. 1211-1217, ISSN 1840-2991
3.	Bojić S., Golub M., Müller J., Obradović R., Martinov M.: Convective drying of naked seeded oil pumpkin seeds (Cucurbita pepo L.) in a medium scale batch dryer with different modes of air circulation., Zeitschrift für Arznei- und Gewürzpflanzen, 2012, Vol. 17, No 3, pp. 108-115, ISSN 1431-9292
4.	Obradović R., Popkonstantinović B., Beljin B.: Algorithm for Approximation Transitional Developable Surfaces Between two Polygons, rad je u štampi, Technics Technologies Education Management / TTEM, 2012, Vol. 7, No 4, ISSN 1840-1503
5.	Obradović R., Petter O., Vidaković M., Popkonstantinović B., Popović B., Milojević Z.: Using Contemporary 3D Web Technologies in the Process of CAD Model Design (prihvaćen za objavljivanje u 2013), Technics Technologies Education Management, 2013, Vol. 8, No 1, 2/3, ISSN 1840-1503
6.	Obradović R., Vujanović M., Popkonstantinović B., Šiđanin P., Beljin B., Kekeljević I.: Fine Arts Subjects at Computer Graphics Studies at the Faculty of Technical Sciences in Novi Sad, rad je u štampi, Technics Technologies Education Management / TTEM, 2013, Vol. 8, No 1, ISSN 1840-1503
7.	Obradović R., Obradović M., Mišić S., Popkonstantinović B., Petrović M., Malešević B.: Investigation of Concave Cupolae Based Polyhedral Structures and Their Potential Application in Architecture, rad je u štampi, Technics Technologies Education Management / TTEM, 2013, Vol. 8, No 3, ISSN 1840-1503
8.	Milojević Z., Navalušić S., Obradović R., Milankov M., Dragoi M., Beju L.: System for 3D Approximate Model Generation of the Femur and Screw Built into Human Knee, Academic Journal of Manufacturing Engineering – AJME, 2010, Vol. 8, No 1, pp. 73-78, ISSN 1583-7904
9.	Obradović R.: The Plane Section of the Surface of Revolution, Facta universitatis - series: Architecture and Civil Engineering, 2005, Vol. 3, No 2, pp. 235-242, ISSN 0354-4605, UDK: 514.752.2:681.3.06(045)=20
10.	Obradović R., Milojević Z.: Plane section of cone and cylinder in computer geometry, Facta universitatis - series: Architecture and Civil Engineering, 2005, Vol. 2, No 3, pp. 195-207, ISSN 0354-4605

## Summary data for teacher's scientific or art and professional activity:

Quotation total :	50		
Total of SCI(SSCI) list papers :	7		
Current projects :	Domestic :	0	International : 1



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FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning

## Science, arts and professional qualifications

Name and last name:		Okanović Đ. Dušan	
Academic title:		Assistant Professor	
Name of the institution where the teacher works full time and starting date:		Faculty of Technical Sciences - Novi Sad	
		01.02.2004	
Scientific or art field:		Applied Computer Science and Informatics	
Academic carier	Year	Institution	Field
Academic title election:	2012	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
PhD thesis	2012	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Magister thesis	2006	Faculty of Technical Sciences - Novi Sad	Computer Science
Bachelor's thesis	2002	Faculty of Technical Sciences - Novi Sad	Computer Science
List of courses being held by the teacher in the accredited study programmes			
	ID	Course name	Study programme name, study type
1.	E233	Internet Networks	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( G10) Geodesy and Geomatics, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2.	ISIT23	Web Programming	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
3.	ISIT30	Business process management systems	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
4.	ISIT34	Identity Management	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
5.	ISIT36	Software Development Tools	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
6.	ISIT43	Configuration and Administration of Computer Systems	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
7.	ISIT45	eTrade and eBanking technologies and systems	( SII) Software and Information Technologies (Indija), Undergraduate Professional Studies
8.	SE0024	Software Construction and Testing	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
9.	SE239A	Web programming	( P00) Production Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
10.	EP007	Document and content management	( I20) Engineering Management, Specialised Professional Studies ( IB0) Engineering Management - MBA, Specialised Professional Studies
11.	AD0008	Web design in Architecture	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies

**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
12. E2522	Software Standardization and Quality	( E20) Computing and Control Engineering, Master Academic Studies ( MR0) Measurement and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies ( E10) Power, Electronic and Telecommunication Engineering, Master Academic Studies
13. DRNI05	Selected Topics in Software Standardization and Quality	( E20) Computing and Control Engineering, Doctoral Academic Studies ( F20) Engineering Animation, Doctoral Academic Studies

## Representative references (minimum 5, not more than 10)

1.	Okanović D., van Hoorn A., Konjović Z., Vidaković M.: SLA-Driven Adaptive Monitoring of Distributed Applications for Performance Problem Localization, Computer Science and Information Systems (ComSIS), 2012, ISSN 1820-0214
2.	Dušan Okanović, Zora Konjović, Automatska inicijalizacija klasa iz XML datoteke, Zbornik radova YU INFO 2005 (CD), Kopaonik 2005.
3.	Dušan Okanović, Milan Vidaković, Upotreba JMX MLet servisa za ažuriranje verzija Java aplikacija, Zbornik radova YU INFO 2007 (CD), Kopaonik 2007.
4.	Đorđe Obradović, Milan Vidaković, Zora Konjović, Dušan Okanović, "Generator ekranskih formi za JBoss Seam bazirane aplikacije", Zbornik radova YU INFO 2008 (CD), Kopaonik 2008.
5.	Dušan Okanović, Milan Vidaković, "Primena jBPM okruženja u implementaciji eUprave", Zbornik radova YU INFO 2009 (CD), Kopaonik 2009.
6.	Valentin Penca, Siniša Nikolić, Dušan Okanović, "Detekcija Skype saobraćaja sistemom za detekciju upada u mrežu Snort", Zbornik radova YU INFO 2009 (CD), Kopaonik 2009.
7.	Okanović D., Vidaković M.: Software Performance Prediction Using Linear Regression, 2. International Conference on Information Society Technology and Management, Kopaonik, 29 mart-3 februar, 2012
8.	Okanović D., van Hoorn A., Konjović Z., Vidaković M.: Towards Adaptive Monitoring of Java EE Applications, 5. International Conference on Information Technology - ICIT, Amman, 11-13 Maj, 2011, ISBN 9957-8583-0-0
9.	Okanović D., Konjović Z., Vidaković M.: Continuous Monitoring System for Software Quality Assurance, 15. International Scientific Conference on Industrial Systems - IS, Novi Sad, 14-16 Septembar, 2011
10.	Okanović D., Vidaković M.: One Implementation of The System for Application Version Tracking and Automatic Updating, Proceedings of the IASTED International Conference on Software Engineering - SE 2007, Innsbruck, 12-14 februar 2008.

## Summary data for teacher's scientific or art and professional activity:

Quotation total :	0		
Total of SCI(SSCI) list papers :	0		
Current projects :	Domestic :	0	International : 0



Science, arts and professional qualifications

Name and last name:		Rapačić R. Milan	
Academic title:		Assistant Professor	
Name of the institution where the teacher works full time and starting date:		Faculty of Technical Sciences - Novi Sad 01.12.2006	
Scientific or art field:		Automatic Control and System Engineering	
Academic carieer	Year	Institution	Field
Academic title election:	2011	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
PhD thesis	2011	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
Master's thesis	2006	Faculty of Technical Sciences - Novi Sad	Automatic Control and System Engineering
List of courses being held by the teacher in the accredited study programmes			
	ID	Course name	Study programme name, study type
1.	AU41	Digital Control Systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies
2.	E237	Optimization Methods	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
3.	E237A	Optimization Methods	( GI0) Geodesy and Geomatics, Undergraduate Academic Studies
4.	GI005	Intelligent Control Systems	( GI0) Geodesy and Geomatics, Undergraduate Academic Studies
5.	H1405	Optimization Methods	( H00) Mechatronics, Undergraduate Academic Studies
6.	H302	Control Systems 2	( H00) Mechatronics, Undergraduate Academic Studies
7.	BM118A	Nonlinear programming and optimal control	( BM0) Biomedical Engineering, Undergraduate Academic Studies
8.	BM130A	Digital control systems in bioengineering	( BM0) Biomedical Engineering, Undergraduate Academic Studies
9.	E2316	Real-time control systems	( E20) Computing and Control Engineering, Undergraduate Academic Studies
10.	SEAU01	Nonlinear programming and evolutionary computations	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
11.	SEAU03	Real-time control algorithms	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies
12.	AU511	Adaptive and Advanced Control	( E20) Computing and Control Engineering, Master Academic Studies ( MR0) Measurement and Control Engineering, Master Academic Studies
13.	A118S	Contemporary technologies applied to architecture and urbanism	( A00) Architecture, Specialised Academic Studies
14.	AT03	Optimization and control techniques in architectural design	(AH0) Architecture, Master Academic Studies
15.	AT04	Contemporary theories and technologies applied to architecture, urbanism and design 1	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies (AH0) Architecture, Master Academic Studies
16.	AT05	Contemporary theories and technologies applied to architecture, urbanism and design 2	(AH0) Architecture, Master Academic Studies
17.	DAU010	Selected Chapters in Nonlinear Control Systems	( E20) Computing and Control Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies
18.	A118	Contemporary technologies applied to architecture and urbanism	( A00) Architecture, Doctoral Academic Studies



**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
19.	DAU005 Selected Chapters in Optimization Methods	( E20) Computing and Control Engineering, Doctoral Academic Studies
Representative references (minimum 5, not more than 10)		
1.	Milan R. Rapaić, "Optimalno i suboptimalno upravljanje klasom sistema sa raspodeljenim parametrima", doktorska disertacija, FTN Novi Sad, 2011	
2.	Milena Petković, Milan R. Rapaić, Zoran D. Jeličić, Alessandro Pisano (2012) On-line adaptive clustering for process monitoring and fault detection, Expert Systems with Applications, Volume 39 Issue 11, September, 2012 Pages 10226-10235	
3.	Milan R. Rapaić, Zoran D. Jeličić, Optimal control of heat diffusion systems, Nonlinear Dynamics, Vol 62, Number 1-2, 39-51, 2010	
4.	Alessandro Pisano, Milan R. Rapaić, Zoran D. Jeličić, Elio Usai, Sliding mode control approaches to robust regulation of linear multivariable fractional-order dynamics, International Journal of Robust and Nonlinear Control, Volume 20, Issue 18, pages 2045–2056	
5.	Željko Kanović, Milan Rapaić, Zoran Jeličić, Generalized Particle Swarm Optimization Algorithm - Theoretical and Empirical Analysis with Application in Fault Detection, Applied Mathematics and Computation (in press, doi:10.1016/j.amc.2011.05.013)	
6.	Milan R. Rapaić, Zeljko Kanovic, Time-Varying PSO - Convergence Analysis, Convergence Related Parameterization and New Parameter Adjustment Schemes, Information Processing Letters , 109 (2009) 548–552	
7.	Milan R. Rapaić, Tomislav B. Šekara, Novel direct optimal and indirect method for discretization of linear fractional systems, Electrical Engineering, DOI: 10.1007/s00202-011-0195-5	
8.	Jovan K. Popović, Milica T. Atanacković, Ana S. Pilipović, Milan R. Rapaić, Teodor M. Atanacković, Stevan Pilipović, A new approach to the compartmental analysis in pharmacokinetics: fractional time evolution of diclofenac, Journal of Pharmacokinetics and Pharmacodynamics, Vol. 37, No. 2, (2010) 119-134	
9.	Jovan K. Popović, Milica T. Atanacković, Ana S. Pilipović, Milan R. Rapaić, Teodor M. Atanacković, Stevan Pilipović, Remarks on the mass balance for multi-compartmental models; a nonlinear compartmental model, Journal of Pharmacokinetics and Pharmacodynamics, Vol. 37, No. 2 (2010) 217-220	
10.	Jovan K. Popović, Diana Dolićanin, Milan R. Rapaić, Stevan L. Popović, Stevan Pilipović, Teodor Atanacković, A nonlinear two compartmental fractional derivative model, European Journal of Drug Metabolism and Pharmacokinetics, (in press: DOI 10.1007/s13318-011-0057-6)	
Summary data for teacher's scientific or art and professional activity:		
Quotation total :	85	
Total of SCI(SSCI) list papers :	11	
Current projects :	Domestic :	0
	International :	0

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 6	
	<b>Study Programme Accreditation</b> MASTER ACADEMIC STUDIES <span style="float: right;">Digital Techniques, Design and Production in Architecture and Urban Planning</span>	

### Science, arts and professional qualifications

Name and last name:		Stavrić -. Milena	
Academic title:		Guest Professor	
Name of the institution where the teacher works full time and starting date:		-	
Scientific or art field:		Geometric Space Theory and Interpretation in Architecture and Urbanism	
Academic carieer	Year	Institution	Field
Academic title election:	2012		Geometric Space Theory and Interpretation in Architecture and Urbanism
PhD thesis	2002	Faculty of Architecture - Beograd	Architecture
Magister thesis	2000	Faculty of Architecture - Beograd	Architecture
List of courses being held by the teacher in the accredited study programmes			
	ID	Course name	Study programme name, study type
1.	AD0003	Digital fabrication in Architecture	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
2.	AD0005	Parametric Design in Architecture and Urbanism	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
3.	A116B	Geometric Theories in Architectural Structures' Generation	( A00) Architecture, Doctoral Academic Studies
Representative references (minimum 5, not more than 10)			
1.	Stavric, M.; Šidanin, P.; Tepavčević, B.: Architectural scale models in the digital age. (2013), Springer Verlag, Wien, New York. S. 220 ISBN 978-3-7091-1447-6		
2.	Stavric, M.; Wiltsche, A.: Spatializing Flat Ornament. - in: Experience-centered Approach and Visuality In The Educations of Mathematics and Physics. (2012), S. 223 – 224		
3.	Stavric, M.; Stokic, D.; Ilic, M.: Visualisation and Modeling in Digital Age / Vizualizacija i modelovanje u digitalnom dobu. (2010)		
4.	Stavric, M.; Wiltsche, A.: Geometrie und Wahrnehmung. - in: Geometrie, Kunst und Wissenschaft. (2007), S. 346 - 359		
5.	Stavric, M.; Marina, O.: Parametric Modeling for Advanced Architecture. - in: International journal of applied mathematics and informatics [Elektronische Ressource] 5 (2011) 1, S. 9 - 16		
6.	Stavric, M.; Schimek, H.: Nonstandard Architecture with Ornaments and Planar Elements. - in: GAM - Graz Architecture Magazine (2009) , S. 226 - 227		
7.	Wiltsche, A.; Schimek, H.; Stavric, M.: Geometric aspects in Producing Non-Standard Architecture with Standard Tools. - in: Journal for geometry and graphics 12 (2008) 2 , S. 205 - 214		
8.	Stavric, M.; Wiltsche, A.; Schimek, H.: New Dimension in Geometrical Education. - in: KoG 9 (2005) , S. 45 - 54		
9.	Kosic, T.; Krstic- Furundzic, A.; Stavric, M.: Geometric Complexity of Freeform Glass Facade Design. - in: Recent, Current @ near- Future Research on Structural Glass. (2012), S. 35 - 38		
10.	Stavric, M.: Structural Glass - Architectural Geometry. - in: Cost Training School " Structural Glass"- Presentation Handsouts. (2012), S. 310 - 339		
Summary data for teacher's scientific or art and professional activity:			
Quotation total :		0	
Total of SCI(SSCI) list papers :		0	
Current projects :		Domestic :	International :
		0	0





Science, arts and professional qualifications

Name and last name:	Stojaković Z. Vesna		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.06.2005		
Scientific or art field:	Geometric Space Theory and Interpretation in Architecture and Urbanism		
Academic carier	Year	Institution	Field
Academic title election:	2011		Geometric Space Theory and Interpretation in Architecture and Urbanism
PhD thesis	2011	Faculty of Technical Sciences - Novi Sad	Architecture
Bachelor's thesis	2004	Faculty of Technical Sciences - Novi Sad	Architecture
Magister thesis	-		Architecture

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	A555	Perspective	( G10) Geodesy and Geomatics, Undergraduate Academic Studies
2.	GG03	Descriptive Geometry	( G00) Civil Engineering, Undergraduate Academic Studies
3.	IA017	Image Based Modeling	( F10) Engineering Animation, Undergraduate Academic Studies
4.	IGA003	Computer Image Processing in Engineering Animation	( F10) Engineering Animation, Undergraduate Academic Studies
5.	Z418	Geometry of Eco-spatial Visualization	(Z20) Environmental Engineering, Undergraduate Academic Studies
6.	IA006	Spatial Shape Design	( F10) Engineering Animation, Undergraduate Academic Studies
7.	IA007	Geometry and Visualization of 3D Space	( F10) Engineering Animation, Undergraduate Academic Studies
8.	A210	Art techniques of drawing and architectural presentations	( A00) Architecture, Undergraduate Academic Studies
9.	A210S	Art techniques of drawing and architectural presentations	( A00) Architecture, Undergraduate Academic Studies
10.	A342	Architectural representations 1 - basic level	( A00) Architecture, Undergraduate Academic Studies
11.	A342S	Architectural representations 1 - Advanced level	( A00) Architecture, Undergraduate Academic Studies
12.	A377	Architectural representations 3	( A00) Architecture, Undergraduate Academic Studies
13.	A555	Perspective	( A00) Architecture, Undergraduate Academic Studies
14.	IA003	Perspective	( F10) Engineering Animation, Undergraduate Academic Studies
15.	ZC007	Engineering Graphic Communications	( ZC0) Clean Energy Technologies, Undergraduate Academic Studies
16.	A291	Representation of a Wider Physical Environment	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
17.	IA254	Presentation Techniques of Architectural and Urban Space	( F20) Engineering Animation, Master Academic Studies
18.	A116DS	Modern techniques of the geometric space representation	( A00) Architecture, Specialised Academic Studies ( G10) Geodesy and Geomatics, Specialised Academic Studies
19.	A118SB	Geometric theories in architectural structures' generation	( A00) Architecture, Specialised Academic Studies
20.	AD0001	Digital Design in Architecture and Urban Planning	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
21.	AD0002	Architectural Visualization	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
22.	AD0004	Generative design in architecture and urbanism	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
23.	AD0011	Modeling Based on Perspective Images	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
24.	AD0012	Dynamic Analysis and Simulation in Architecture	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
25.	A116B	Geometric Theories in Architectural Structures' Generation	( A00) Architecture, Doctoral Academic Studies



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<b>Study Programme Accreditation</b>					
MASTER ACADEMIC STUDIES			Digital Techniques, Design and Production in Architecture and Urban Planning		
List of courses being held by the teacher in the accredited study programmes					
	ID	Course name	Study programme name, study type		
26.	A116E	Modern techniques of the geometric space representation	( A00) Architecture, Doctoral Academic Studies ( AS0) Scenic Design, Doctoral Academic Studies		
27.	AID03	3D representation of the real world environment	( F20) Engineering Animation, Doctoral Academic Studies		
Representative references (minimum 5, not more than 10)					
1.	V. Stojaković, B. Tepavčević, Image-based modeling approach in creating 3D morphogenetic reconstruction of Liberty Square in Novi Sad, Journal of Cultural Heritage, 12, ISSN: 1296-2074, doi:10.1016/j.culher.2010.06.001, 2011, str. 105-110. (M22)				
2.	V. Stojaković, R. Štulić, Virtual Reconstruction of Kljajicevo Chapel, Journal for Geometry and Graphic, Vol. 14, No 10, ISSN 1433-8157, 2010, str.81-91.				
3.	V. Stojaković, Terrestrial Photogrammetry and Application to Modeling Architectural Objects, Facta Univesitatis, Series architecture and civil engineering, Vol. 6, No 1, ISSN 0354 – 4605, UDC 528.711:72.01+721(045)=111, Univerzitet u Nišu, Niš, 2008, str. 113-125				
4.	V. Stojaković, 3D Modeling Based on Photographic data, Novi Sad Journal of Mathematic, ISSN 1450-5444, Vol. 38, No.3, 2008, str. 65- 72.				
5.	Nedučin D., Stojaković V., Štulić R.: On reform of structure and content of the course of descriptive geometry, Pollack Periodica, Akademiai Kiado, ISSN 1788-1994) www.akademiai.com (SCOPUS), 2012, Vol. 7, pp. 85-93, ISSN 1788-1994				
6.	Marcijuš I., Stojaković V., Štulić R.: Linear geometric perspective in architectural curricula and spatial skills development, Pollack Periodica, Akademiai Kiado, ISSN 1788-1994) www.akademiai.com (SCOPUS), 2012, Vol. 7, pp. 77-84, ISSN 1788-1994				
7.	Stojaković V.: Virtuelne trodimenzionalne reprezentacije arhitektonskih objekata kreirane na osnovu perspektivnih slika, NAUKA PRAKSA, 2009, Vol. 12, No 1, pp. 208-211, ISSN 1451-8341				
8.	Stojaković V., Tepavčević B.: GENERATION AND APPLICATION OF DYNAMIC VIRTUAL RECONSTRUCTIONS OF URBAN PUBLIC SPACES, UNAPREĐENJE STRATEGIJE OBNOVE I KORIŠĆENJA JAVNIH PROSTORA U PROSTORNOM I URBANISTIČKOM PLANIRANJU I PROJEKTOVANJU, Novi Sad, Faculty of Technical Sciences, 2011, str. 69-86, ISBN 978-86-7892-254-1				
9.	V. Stojaković, Importance of Restitution in Cultural Heritage Research and Visualisation, S.A.V.E. Heritage - Safeguard of Architectural, Visual, Environmental Heritage, Capri, Italy, 2011, pp. 1-7.				
10.	V. Stojaković, B. Tepavčević, Single Image Ambiguity and Adjustment of Cultural Heritage Modeling Approach, Education and Research in Computer Aided Architectural Design in Europe - eCAADe, Ljubljana, 2011, pp. 99-106.				
Summary data for teacher's scientific or art and professional activity:					
Quotation total :			0		
Total of SCI(SSCI) list papers :			2		
Current projects :			Domestic :	2	International : 0



Science, arts and professional qualifications

Name and last name:		Šiđanin S. Predrag	
Academic title:		Full Professor	
Name of the institution where the teacher works full time and starting date:		Faculty of Technical Sciences - Novi Sad 01.10.2006	
Scientific or art field:		Geometric Space Theory and Interpretation in Architecture and Urbanism	
Academic carieer	Year	Institution	Field
Academic title election:	2010	Faculty of Technical Sciences - Novi Sad	Geometric Space Theory and Interpretation in Architecture and Urbanism
PhD thesis	2001	Faculty of Architecture, Delft University of Technology - Delft	Architecture
Magister thesis	1995	Faculty of Architecture, Delft University of Technology - Delft	Architecture
Bachelor's thesis	1981	Faculty of Architecture - Beograd	Architecture
List of courses being held by the teacher in the accredited study programmes			
	ID	Course name	Study programme name, study type
1.	A254	Presentation Techniques of Architectural and Urban Space	( A00) Architecture, Undergraduate Academic Studies
2.	A332	Modeling	( A00) Architecture, Undergraduate Academic Studies
3.	IA015	Application of Engineering Animation	( F10) Engineering Animation, Undergraduate Academic Studies
4.	IGB052	Engineering Animation and Other Media	( F10) Engineering Animation, Undergraduate Academic Studies
5.	A342	Architectural representations 1 - basic level	( A00) Architecture, Undergraduate Academic Studies
6.	A342S	Architectural representations 1 - Advanced level	( A00) Architecture, Undergraduate Academic Studies
7.	A365	Architectural representations 2	( A00) Architecture, Undergraduate Academic Studies
8.	A701	Introduction to Performance Studies	( A00) Architecture, Undergraduate Academic Studies
9.	ASI23B	Multimedia	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
10.	ASI272	Performance	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
11.	ASI273	New Media	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
12.	ASI283	Graphic design	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
13.	ASI332	Arts Management and Cultural Policy	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
14.	ASI333	New technologies in art and culture	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
15.	ASO1	Introduction to Scene Architecture, Technique and Design	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
16.	ASO16	Scale Modeling in Stage Design	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
17.	ASO22	Presentation Techniques in Stage Design	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
18.	ASO30	Scene Technique 4	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
19.	ASO31	Scenography 4	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
20.	ASO40	Phenomenology of Scene Design	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
21.	A291	Representation of a Wider Physical Environment	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
22.	IA254	Presentation Techniques of Architectural and Urban Space	( F20) Engineering Animation, Master Academic Studies
23.	RPR009	GIS and Regional Development	( RPR) Regional Development Planning and Management, Master Academic Studies
24.	A116CS	Scenic function of architecture and a city - selected chapters	( A00) Architecture, Specialised Academic Studies



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**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
25. AD0001	Digital Design in Architecture and Urban Planning	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
26. AD0002	Architectural Visualization	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
27. AD0004	Generative design in architecture and urbanism	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
28. ASM1	Scene architecture	( AS0) Scenic Architecture and Design, Master Academic Studies
29. ASM4	Project Management in scene architecture and design	( AS0) Scenic Architecture and Design, Master Academic Studies
30. AUP071	Representation of a Wider Physical Environment	(AH0) Architecture, Master Academic Studies
31. A116D	Scenic function of architecture and a city - selected chapters	( A00) Architecture, Doctoral Academic Studies ( AS0) Scenic Design, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)

1.	"A Cognitive Framework for an Urban Environment Design Tool", DKS group, TU Delft, Delft, The Netherlands - 405 str. ISBN 90-9014862/0 R11
2.	"The role of the new computer visualization in architecture - a change of paradigm in architectural practice", "La carre bleu"- Revue Internationale d'Architecture, Numéro3/4, 2000. Paris, France - ISSN 0008 6878 str. 25-43 R52
3.	"Electronic culture in Yugoslavia", zbornik radova - UNESCO-v simpozij "Synthesis", Ofenbah, Zapadna Nemačka, 1987. R54
4.	"Technoculture in Yugoslavia", knjiga radova sa kongresa "Technoculture in Europe", Documents of the Council of Europe, Strazbur, Francuska, 1989. R54
5.	"Historical overview of computer art in Yugoslavia", knjiga apstrakata Second Symposia of Electronic Art, SISEA, Hroningen, Holandija, 1990. R54
6.	"The Delft University of Technologys Campus Information System accessed by GIS and Virtual Reality technology", P. Šiđanin, M. J. Kraak i G. J. F. Smets, knjiga radova sa JEC, Hag, Holandija, 1995. R54
7.	"Virtual Reality, the new 3D interface for Geographical Information System", M. J. Kraak, G. Smets i P. Šiđanin, su knjizi radova sa 1st Conference on Spatial Multimedia and Virtual Reality, Lisabon, Portugal, 1995. R54
8.	"A computer simulation model of TU district of Delft with use of the GIS and VR", knjiga radova sa 3re International Conference on Design and Decision Support Systems in Architecture and Urban Planning, Spa, Belgija, 1996. R54
9.	"GIS and VR - an integration", knjiga radova sa EUROMEDIA 96 kongresa, London, Engleska, 1996. R54
10.	"A design tool for analysis and visual quality control of urban environments supported by object database", P. Šiđanin i W. Gerhardt, su knjizi radova sa 4th International Conference on Design and Decision Support Systems in Architecture and Urban Planning, Matriht, Holandija, 1998. R54

Summary data for teacher's scientific or art and professional activity:

Quotation total :	48
Total of SCI(SSCI) list papers :	5
Current projects :	Domestic : 1 International : 0



Science, arts and professional qualifications

Name and last name:		Štulić B. Radovan	
Academic title:		Full Professor	
Name of the institution where the teacher works full time and starting date:		Faculty of Technical Sciences - Novi Sad 01.11.1990	
Scientific or art field:		Geometric Space Theory and Interpretation in Architecture and Urbanism	
Academic carieer	Year	Institution	Field
Academic title election:	2006	University of Novi Sad - Novi Sad	Geometric Space Theory and Interpretation in Architecture and Urbanism
PhD thesis	1997	Faculty of Architecture - Beograd	Geometric Space Theory and Interpretation in Architecture and Urbanism
Magister thesis	1994	Faculty of Architecture - Beograd	Geometric Space Theory and Interpretation in Architecture and Urbanism
Bachelor's thesis	1990	Faculty of Technical Sciences - Novi Sad	Deformable Body Mechanics
List of courses being held by the teacher in the accredited study programmes			
	ID	Course name	Study programme name, study type
1.	A102	Descriptive Geometry 2	( A00) Architecture, Undergraduate Academic Studies
2.	A183	Geometry and Visualization of Free Forms	( A00) Architecture, Undergraduate Academic Studies
3.	A555	Perspective	( G10) Geodesy and Geomatics, Undergraduate Academic Studies
4.	AD06	Descriptive Geometry 1	( A00) Architecture, Undergraduate Academic Studies
5.	GG03	Descriptive Geometry	( G00) Civil Engineering, Undergraduate Academic Studies
6.	GI104	Descriptive Geometry in Geomatics	( G10) Geodesy and Geomatics, Undergraduate Academic Studies
7.	S012	Descriptive Geometry and Engineering Drawing	( S00) Traffic and Transport Engineering, Undergraduate Academic Studies ( S01) Postal Traffic and Telecommunications, Undergraduate Academic Studies
8.	Z418	Geometry of Eco-spatial Visualization	( Z20) Environmental Engineering, Undergraduate Academic Studies
9.	IA007	Geometry and Visualization of 3D Space	( F10) Engineering Animation, Undergraduate Academic Studies
10.	IA015	Application of Engineering Animation	( F10) Engineering Animation, Undergraduate Academic Studies
11.	ASO5	Descriptive Geometry with Perspective 1	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
12.	ASO9	Descriptive Geometry with Perspective 2	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
13.	A116DS	Modern techniques of the geometric space representation	( A00) Architecture, Specialised Academic Studies ( G10) Geodesy and Geomatics, Specialised Academic Studies
14.	A118SB	Geometric theories in architectural structures' generation	( A00) Architecture, Specialised Academic Studies
15.	AD0013	Theory of curves and surfaces	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
16.	A116B	Geometric Theories in Architectural Structures' Generation	( A00) Architecture, Doctoral Academic Studies
17.	A116E	Modern techniques of the geometric space representation	( A00) Architecture, Doctoral Academic Studies ( AS0) Scenic Design, Doctoral Academic Studies
Representative references (minimum 5, not more than 10)			
1.	Štulić R., Obradović R.: Ideal Shape of a Non-stressed Piston Ring, Agricultural Engineering 1 (1995) 3-4, pp. 78-83.		
2.	Štulić R.: Space Restitution of a Birational Qudratic Transformation, Proceedings of the 8th ASEE International Conference on Engineering Computer Graphics and Descriptive Geometry, Austin Texas, USA, 1998. Vol. 3, pp. 707-711.		
3.	Miljković N., Štulić R., Ercegan G., Jandrić Z.: Computer Aided Evaluation of Total Hip Prosthesis Stability, ISGG ASEE Journal for Geometry and Graphics, Volume 2 (1998), No. 2, pp. 141-149		
4.	Štulić R., Bajkin J., Milojević Z.: Generalisation of Sphere Polarity to Contour Line Determination and Shading of Surfaces of Revolution, Facta Universitatis, Series for Arrchitecture and Civil Engineering, Vol. 2., No.1, 1999., pp. 31-40.		



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**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning

## Representative references (minimum 5, not more than 10)

5.	Štulić R., Jandrić Z., Milojević Z.: Polar Cylinders of Surfaces of Revolution: Contour Line Determination, Journal for Mathematics, Vol. XXIX, NO. 3, (1999), pp. 349-356 .
6.	Dovniković L., Štulić R.: Uniform Constructions of the Rational 4th Order Parabolas, Zbornik Matice srpske za prirodne nauke (Matica srpska Proceedings for Natural Sciences), No.99, 2000, pp. 5-18.
7.	Štulić R., Dovniković L.: The Importance of Proper Graphics Education for Engineering Students, Proceedings of the 6th International Symposium, Interdisciplinary Regional Research, Novi Sad, 2002, CDROM 0505
8.	Štulić R., Sdroulias I.: On Particularities of Space Restituted Birational Quadratic Transformation, Proceedings of the 10th International Conference on Geometry and Graphics, Kiev, Ukraine, 2002, pp.74-78.
9.	Štulić R., Atanacković J.: Implementation of Computer Technologies In Descriptive Geometry Teaching: Surfaces of Revolution, Facta Universitatis, Vol. 2, No 5, 2003., pp. 379-385.
10.	Nikolić D., Štulić R., Šidanin P.: On the Flexibility of Deployable Dome Structures and their Application in Architecture, Proceedings of the 1st International Conference on Architecture & Urban Design. Tirana, Albania, 2012. pp.1053-1062.

## Summary data for teacher's scientific or art and professional activity:

Quotation total :	0		
Total of SCI(SSCI) list papers :	0		
Current projects :	Domestic :	1	International : 1



Science, arts and professional qualifications

Name and last name:	Tepavčević B. Bojan		
Academic title:	Assistant Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 01.01.2004		
Scientific or art field:	Geometric Space Theory and Interpretation in Architecture and Urbanism		
Academic carieer	Year	Institution	Field
Academic title election:	2011	Faculty of Technical Sciences - Novi Sad	Geometric Space Theory and Interpretation in Architecture and Urbanism
PhD thesis	2010	Faculty of Technical Sciences - Novi Sad	Geometric Space Theory and Interpretation in Architecture and Urbanism
Magister thesis	2007	Faculty of Technical Sciences - Novi Sad	Architectural-Urbanistic Planning, Design and Theory
Bachelor's thesis	2003	Faculty of Technical Sciences - Novi Sad	Architectural-Urbanistic Planning, Design and Theory

List of courses being held by the teacher in the accredited study programmes

	ID	Course name	Study programme name, study type
1.	A254	Presentation Techniques of Architectural and Urban Space	( A00) Architecture, Undergraduate Academic Studies
2.	A332	Modeling	( A00) Architecture, Undergraduate Academic Studies
3.	IA007	Geometry and Visualization of 3D Space	( F10) Engineering Animation, Undergraduate Academic Studies
4.	IA015	Application of Engineering Animation	( F10) Engineering Animation, Undergraduate Academic Studies
5.	IGB052	Engineering Animation and Other Media	( F10) Engineering Animation, Undergraduate Academic Studies
6.	A342	Architectural representations 1 - basic level	( A00) Architecture, Undergraduate Academic Studies
7.	A365	Architectural representations 2	( A00) Architecture, Undergraduate Academic Studies
8.	A377	Architectural representations 3	( A00) Architecture, Undergraduate Academic Studies
9.	ASI23A	Digital Design	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
10.	ASO12	Scene Architecture 1	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
11.	ASO16	Scale Modeling in Stage Design	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
12.	ASO22	Presentation Techniques in Stage Design	( AS0) Scenic Architecture, Technique and Design, Undergraduate Academic Studies
13.	A291	Representation of a Wider Physical Environment	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
14.	IA254	Presentation Techniques of Architectural and Urban Space	( F20) Engineering Animation, Master Academic Studies
15.	RPR009	GIS and Regional Development	( RPR) Regional Development Planning and Management, Master Academic Studies
16.	AD0001	Digital Design in Architecture and Urban Planning	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
17.	AD0002	Architectural Visualization	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
18.	AD0003	Digital fabrication in Architecture	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
19.	AD0005	Parametric Design in Architecture and Urbanism	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
20.	AD0007	Interactive systems in architecture	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
21.	AD0011	Modeling Based on Perspective Images	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
22.	AD0012	Dynamic Analysis and Simulation in Architecture	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies
23.	AD0013	Theory of curves and surfaces	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type		
24.	ASMI5B Digital and Media Design	( AS0) Scenic Architecture and Design, Master Academic Studies		
25.	ASMI7C Design of Virtual Space	( AS0) Scenic Architecture and Design, Master Academic Studies		
26.	AUP071 Representation of a Wider Physical Environment	(AH0) Architecture, Master Academic Studies		
Representative references (minimum 5, not more than 10)				
1.	Stojaković V., Tepavčević B., Image-based modeling approach in creating 3D morphogenetic reconstruction of Liberty Square in Novi Opis Sad, Journal of Cultural Heritage (ISDN 1296-2074) ISSN: 1296-2074, Vol. 12, str. 105-110			
2.	Stojaković V., Tepavčević B., Optimal Methods for 3D Modeling of Devastated Architectural Objects", International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XXXVIII-5/W1, ISSN 1682-1777, ISPRS, Trento, Italija, 2009. pp. 1-6;			
3.	Jovanović M., Tepavčević B., Škrinjar L., 2012 Influence of Origami Folding Patterns and Spatial Developabilty in Contemporary Architectural Design, International Scientific Conference moNGeometrija, str.517-529. Novi Sad, Srbija			
4.	Trgovi u Vojvodini: Morfogeneza fizička struktura i funkcije, FTN, Novi Sad, 2008.			
5.	Tepavčević B., Stojaković V., Digital Morphogenetic Reconstruction of Liberty Square in Novi Sad, Proceedings of the 5th international meeting of planning, design, construction and building renewal iNDiS 2009, Novi Sad, Srbija, 25-27. novembar, 2009. 451-456 str.			
6.	Radović Ranko; Atanacković Teodor; Spasić Dragan; Novaković Branislava: New Challenges and Opportunities for the City of Novi Sad, Novi Sad: Danube Comission and University of Novi Sad, 2004, str. 1- 157.			
7.	Šiđanin P., Tepavčević B., Maketarstvo za studente arhitekture, 2010, Fakultet tehničkih nauka, Novi Sad 2010., FTN Novi Sad, str. 190.			
8.	Stojaković V., Tepavčević B., 2011. Single Image Ambiguity and Adjustment of Cultural Heritage Modeling Approach, Education and Research in Computer Aided Architectural Design in Europe – eCAADe, str.99-106. Ljubljana, Slovenija			
9.	Tepavčević B., Stojaković V., 2012. Mathematical Concepts of Space in Contemporary Architecture, Nexus 2012 Relationship between Architecture and Mathematics, Milano, Italija			
10.	Šijakov M., Tepavčević B., Štulić R., 2011. Geometry and visualisations of free forms in architectural education, Mathematics in architecture and civil engineering design and education, University of Pécs Pollack Mihály Faculty of Engineering, pp.1-6. Pečuj, Mađarska			
Summary data for teacher's scientific or art and professional activity:				
Quotation total :	3			
Total of SCI(SSCI) list papers :	1			
Current projects :	Domestic :	1	International :	0



Science, arts and professional qualifications

Name and last name:	Vidaković P. Milan		
Academic title:	Associate Professor		
Name of the institution where the teacher works full time and starting date:	Faculty of Technical Sciences - Novi Sad 20.01.1998		
Scientific or art field:	Applied Computer Science and Informatics		
Academic carieer	Year	Institution	Field
Academic title election:	2009	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
PhD thesis	2003	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Magister thesis	1998	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics
Bachelor's thesis	1995	Faculty of Technical Sciences - Novi Sad	Applied Computer Science and Informatics

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
1. E239A	Web Programming	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( ES0) Power Software Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies (E10) Power, Electronic and Telecommunication Engineering, Undergraduate Academic Studies
2. E2K41	Distributed Artificial Intelligence and Intelligent Agents	( E20) Computing and Control Engineering, Undergraduate Academic Studies ( MR0) Measurement and Control Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
3. F501	WEB Design	( F00) Graphic Engineering and Design, Undergraduate Academic Studies ( F10) Engineering Animation, Undergraduate Academic Studies
4. GI211	Geoinformatics	( GI0) Geodesy and Geomatics, Undergraduate Academic Studies
5. GI111	Information technologies in geodesy	( GI0) Geodesy and Geomatics, Undergraduate Academic Studies
6. SE0006	Object oriented programming 1	( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
7. SE239A	Web programming	( P00) Production Engineering, Undergraduate Academic Studies ( SE0) Software Engineering and Information Technologies, Undergraduate Academic Studies ( SEL) Software Engineering and Information Technologies - Loznica, Undergraduate Academic Studies
8. E2501	Electronic Payment Systems	( E20) Computing and Control Engineering, Master Academic Studies ( SE0) Software Engineering and Information Technologies, Master Academic Studies
9. EP007	Document and content management	( I20) Engineering Management, Specialised Professional Studies ( IB0) Engineering Management - MBA, Specialised Professional Studies
10. AD0008	Web design in Architecture	( AD0) Digital Techniques, Design and Production in Architecture and Urban Planning, Master Academic Studies





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**Study Programme Accreditation**

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning

List of courses being held by the teacher in the accredited study programmes

ID	Course name	Study programme name, study type
11. DRNI03	Selected Topics in Internet-Based Systems	( E20) Computing and Control Engineering, Doctoral Academic Studies
12. DRNI05	Selected Topics in Software Standardization and Quality	( E20) Computing and Control Engineering, Doctoral Academic Studies ( F20) Engineering Animation, Doctoral Academic Studies
13. FDS152	Selected Topics in Computer Graphics	( F00) Graphic Engineering and Design, Doctoral Academic Studies
14. DAU014	Selected Topics in Computing	( E20) Computing and Control Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies
15. DRNI16	Selected Topics in Electronic Business	( E20) Computing and Control Engineering, Doctoral Academic Studies ( OM1) Mathematics in Engineering, Doctoral Academic Studies
16. DRNI18	Selected Topics in Distributed/Mobile computing	( E20) Computing and Control Engineering, Doctoral Academic Studies ( F20) Engineering Animation, Doctoral Academic Studies

Representative references (minimum 5, not more than 10)

1.	Vidaković, M., Milosavljević, B., "Internationalisation of the BISIS Library Information System", Proceedings of the 28th International Unicode Conference, Orlando, USA, September 7-9, 2005.
2.	Vidaković, M., Sladić, G., Zarić, M., "Metadata Harvesting Using Agent Technology", Proceedings of the 8th IASTED International Conference on Software Engineering and Applications (SEA 2004), Cambridge, USA, November 9-11, 2004., pp. 489-493
3.	Vidaković M., Sladić G., Komazec S., "Sistemi za upravljanje elektronskim sadržajima i njihova promena u eUpravi", Info M: časopis za informacione tehnologije i multimedijalne sisteme, 2006., pp. 36-41, ISSN 1451-4397
4.	Vidaković, M., Zubić, T., Milosavljević, B., Pupovac, B., Tošić, T., "Processing Bibliographic Documents in the Library Information System BISIS", Proceedings of the International Conference on Distributed Library Information Systems, Ohrid, Former Yugoslav Republic of Macedonia, June 1-6, 2004., pp. 65-91.
5.	Vidaković, M., Sladić, G., Konjović, Z., "Security Management In J2EE Based Intelligent Agent Framework", Proceedings of the 7th IASTED International Conference on Software Engineering and Applications (SEA 2003), Marina Del Rey, USA, November 3-5, 2003., pp. 128-133.
6.	Milosavljević B., Vidaković M., Komazec S. and Milosavljević G., "User Interface Code Generation for Data-Intensive Systems with EJB-based Data Models", In Software Engineering Research and Practice, Las Vegas, NV, USA, 2003.
7.	Vidaković, M., Konjović, Z., "EJB Based Intelligent Agents Framework", Proceedings of the 6th IASTED International Conference on Software Engineering and Applications (SEA 2002), Cambridge, USA, November 4-6, 2002., pp. 343-348.
8.	Vidaković M., "Agentska okruženja", Zadužbina Andrejević. Beograd, 2007, ISBN: 9-788672-446210
9.	Milosavljević B., Vidaković M., Java i Internet programiranje, FTN izdavaštvo, 2007., ISBN 978-86-7892-047-9
10.	Okanović D., Vidaković M., „Upotreba JMX mlet servisa za ažuriranje verzija aplikacija“, Zbornik radova YulInfo 2007 (CD), Kopaonik 2007.

Summary data for teacher's scientific or art and professional activity:

Quotation total :	119
Total of SCI(SSCI) list papers :	7
Current projects :	Domestic : 1 International : 0



## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning

### Standard 10. Organizational and Material Resources

To perform the study programme, the adequate human, spatial, technical and technological, library and other resources suitable to the study programme features and predicted students' number are provided. Classes on the study programme Digital Design, Techniques and Production in Architecture and Urbanism are held in such a manner so the minimum of 2 m<sup>2</sup> of space is provided per student. Lectures are held in amphitheatres, classrooms, computer and specialized laboratories. The specialized library of the Department for Architecture and Urban planning has over 3000 bibliographical units relevant for the study programme Digital Design, Techniques and Production in Architecture. There is also adequate equipment for all courses with the appropriate textbook literature, devices and supplementary equipment available on time and in a sufficient number for normal performance of the teaching process. Thereby, the adequate information technology is also available for performing the study programme. Faculty has the library and the study room and provides a seat for each student in amphitheatres, classrooms and laboratories.



### Study Programme Accreditation

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
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#### Standard 11. Quality Control

Estimation of the study programme quality is elaborated regularly and systematically via self-evaluation and external quality control. One should place an emphasis on the multi-decade practice of students' surveys.

Study programme quality control is elaborated in the following manners:

- Surveying students at final lecture from the given course.
- Surveying students on the quality of the study programme and logistic support to the studies in the event of awarding the Diploma. Also, the studying comfort (classroom cleanness and tidiness) is evaluated there.
- Surveying the teaching and non-teaching staff on the quality of the study programme and the logistic support to the studies. This survey evaluates the work of the Dean's office, Registrar's office, library, and other services at the Faculty. Furthermore, the studying comfort (classroom cleanness and tidiness) is also evaluated.

To monitor the quality of the study programme, there is also a committee with all heads of all Departments participating in the realization of the study programme, together with a student from each study group. Members of the Committee for Quality Control are listed in Table 11.1.

Table 11.1 Members of the committee for quality control

- ?.?? ???? ? ??????? ??????
- 1 ????????? ?????????? Full professor
  - 2 ????????? ?????????? Full professor
  - 3 ?????? ?????????????? Assistant Professor
  - 4 ????????? ?????????????? Non-teaching staff
  - 5 ????????? ?????????? Student



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## Study Programme Accreditation

MASTER ACADEMIC STUDIES

Digital Techniques, Design and Production in  
Architecture and Urban Planning

### Standard 12. Distance Education

Distance learning at the study programme Digital Design, Techniques and Production in Architecture and Urbanism at the Master academic studies is not provided for.