

	UNIVERSITY OF NOVI SAD FACULTY OF TECHNICAL SCIENCES	
	COURSES IN ENGLISH	

Course:		Generative Design in Architecture and Urbanism			
Course code:		AD0004			
ECTS credits:		6			
Lecturers:		Raković Mirko			
Number of classes(per week)					
Lectures: 2	Practice: 0	Other forms of classes: 2	Academic research: 0	Other: 2	
Prerequisite courses:					
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1. Educational objectives:					
Mastering basic programming skills used for solving various geometrical problems applied in architecture.					
2. Educational outcomes (acquired knowledge):					
<p><i>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.</i></p>					
3. Course content/structure:					
<p><i>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 #.</i></p>					
4. Teaching methods:					
<p><i>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.</i></p>					
Knowledge evaluation (maximum number of points 100)					
Pre-exam assignments		Compulsory	Points	Final examination	
Graphic paper		YES	70	Theoretical part of the exam	
Lecture attendance		YES	0		
Computer exercise attendance		YES	0		
Literature					
Relevant literature in English					