Course Unit Descriptor

Study Programme: Information Technologies – Master	
Course Unit Title: Advanced Topics in Software Engineering	
Course Unit Code: IT705	
Name of Lecturer(s): Gordana Rakić	
Type and Level of Studies: Master Academic Degree	
Course Status (compulsory/elective): Elective	
Semester (winter/summer): Summer	
Language of instruction: Serbian (primary), English (secondary)	
Mode of course unit delivery (face-to-face/distance learning): Face-to-face	
Number of ECTS Allocated: 7	
Prerequisites: None	

Course Aims:

The course covers recently developed areas and achievements in software engineering that are not covered in other courses of the curriculum. Examples of such areas are advanced approaches in software analysis, quality aware development, adaptive and self-adaptive systems, etc.

Learning Outcomes:

Minimal

At the of the course a successful student will be able to demonstrate knowledge on recently developed areas in software engineering

Desirable

At the of the course a successful student will be able to demonstrate deep understanding of recently developed areas in software engineering and discuss possible applications on a real-life example.

Syllabus:

Theory

Theoretical foundations of recent fields and achievements in software engineering. Technologies and software tools that might be used in practical applications. Principles of their usage.

Practice

Using appropriate software tools on illustrative examples to exercise covered principles and to better grasp possible usages of recent developments in practice.

Required Reading:

Recommended by lecturer, depending on chosen topics that will be covered during the course.

Weekly Contact Hours: 5	**Lectures:** 3	**Practical work:** 2

Teaching Methods:

At lectures, classical methodology is applied, through usage of a beam-projector. During exercises, a case studies are more deeply analyzed. Some aspects and principles are practically covered by software tools. Students build on their knowledge by researching each of the topics and the knowledge is checked through the creation of papers that are presented during and at the end of the course.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points

Active class participation	0	written exam	0
Practical work	40	oral exam	30
Preliminary exam(s)	0	…….	
Seminar(s)	30		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			