

Óbuda University John von Neumann Faculty of Informatics			Institute of Software Engineering		
Name and code: Advanced Software Engineering (NIXSF1EBNE)				Credits: 3	
Computer Science MSc			Daytime 2021/22 year I. semester		
Subject lecturers: Dr. habil József Tick					
Prerequisites: (with code)					
Weekly hours:		Lecture: 3	Seminar: 0	Lab. hours: 0	Consultation: 0
Way of assessment:		Midyear grade			
Course description					
Goal: Students will learn the theory and praxis of advanced Software Engineering.					
Course description: Formalism of the description of information technology- and software-systems, modeling, designing and developing complex information systems, design, model-based development methods of software systems, quality-based approach of software development. Verification, validation and testing of software systems. Agile approach, Software reuse, Component-based software engineering, Service-oriented software engineering.					

Lecture schedule	
Education week	Topic
1	Requirements, assessments, scheduling, learning techniques
2	Introduction; Software processes
3	Agile software development; Requirement engineering
4	System modelling; Architectural design
5	Design and implementation
6	Software testing
7	Software evolution
8	Safety engineering
9	Security engineering
10	Software reuse
11	Component-based software engineering
12	Service-oriented software engineering
13	Midterm test
14	Make-up test
Midterm requirements	
Preconditions of signature and midterm mark: the signature and the midterm mark are based on the results of a written assesment in the 13th week. Students must reach at least 50% on the written assessment otherwise students can have a make up test in the last week of the semester. Preconditions of signature based on test results: 20% or more => signature (aláírás) or below 20% => disabled (letiltva)	
Midterm Test Scheduling	
Education week	Topic
13	Midterm Test
14	Make up Test (if necessary)
Midterm grade calculation methods	
	0-49% failed (1) 50-62% satisfactory (2) 63-74% average (3) 75-87% good (4) 88-100% excellent (5)
Method of replacement	
If students did not achieve valid midterm mark during the semester, but achieved at least 20% (signature), can participate in a retake during the first ten days of the examination period.	
Type of exam	
Exam grade calculation methods	
References	
Obligatory:	
Ian Sommerville: Software Engineering 10th Edition	

Recommended:
Roger S. Pressman, Bruce R. Maxim: Software Engineering – a practitioner’s approach 8th Edition
Others:
Teaching materials in the Moodle system.