

<b>Óbuda University</b> John von Neumann Faculty of Informatics		Institute of Software Engineering	
<b>Name and code:</b> Advanced Software Engineering (NIXSF1EBNE)		<b>Credits:</b> 3	
<i>Computer Science MSc szak</i>		<i>Daytime tagozat 2022/23 tanév I. félév</i>	
Subject lecturers: Dr. habil József Tick			
Prerequisites: (kóddal)			
Weekly hours:		Lecture: 3	Seminar: 0
Way of assessment:		Lab. hours: 0	Consultation: 0
Midyear grade			
<b>Course description</b>			
<i>Goal:</i> Students will learn the theory and praxis of advanced Software Engineering.			
<i>Course description:</i> 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.			

<b>Lecture schedule</b>	
Education week	Topic
1	Requirements, assessments, scheduling, learning techniques
2	Introduction; Software processes
3	Agile software development; Requirement engineering; Test-1
4	System modelling; Architectural design
5	Design and implementation
6	Software testing; Test-2
7	Software evolution
8	Safety engineering
9	Security engineering; Test-3
10	Software reuse
11	Component-based software engineering
12	Service-oriented software engineering; Test-4
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 the Tests and the written assesment in the 13th week. (Tests-1 – Test-4: 4x8=32 points + Midterm test: 68 points = 100 points) Students must reach at least 50% on the tests and written assessment otherwise students can have a make up test (only of the Midterm test) in the last week of the semester. There is no Make-up test of the Test-1 – Test-4. Preconditions of signature based on test results:  
20% or more => signature (aláírás)  
or below 20% => disabled (letiltva)

<b>Midterm Test Scheduling</b>	
Education week	Topic
3	Test-1
6	Test-2
9	Test-3
12	Test-4
13	Midterm Test
14	Make up Test (if necessary)

<b>Midterm grade calculation methods</b>	
0-49%	failed (1)
50-62%	satisfactory (2)
63-74%	average (3)
75-86%	good (4)
87-100%	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.

<b>Type of exam</b>
<b>Exam grade calculation methods</b>
<b>References</b>
<b>Obligatory:</b>
Ian Sommerville: Software Engineering 10th Edition
<b>Recommended:</b>
Roger S. Pressman, Bruce R. Maxim: Software Engineering – a practitioner’s approach 8th Edition
<b>Others:</b>
Teaching materials in the Moodle system.