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 2020/21 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.