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| Óbuda University John von Neumann Faculty of Informatics | | Institute of Software Engineering | |
| Name and code: Advanced Software Engineering (NIXSF1EBNE) | | | Credits: 3 |
| <i>Computer Science MSc</i> | | <i>Daytime 2021/22 year I. semester</i> | |
| Subject lecturers: Dr. habil József Tick | | | |
| Prerequisites: (with code) | | | |
| Weekly hours: | | Lecture: 3 | Seminar: 0 |
| Way of assessment: | | Lab. hours: 0 | Consultation: 0 |
| Midyear grade | | | |
| Course description | | | |
| <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. | | | |

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| 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.