

Content

| Course Code | Course Name | Semester | Theory | Practice | Lab | Credit | ECTS |
|-------------|------------------------------|----------|--------|----------|-----|--------|------|
| INF 536 | Software Quality and Testing | 1 | 3 | 0 | 0 | 3 | 6 |

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| Prerequisites | |
| Admission Requirements | |

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| Language of Instruction | English |
| Course Type | Elective |
| Course Level | Masters Degree |
| Objective | The aim of the course is to understand the importance of the control if the software is designed in respect to user requirements. The main theories on quality and test processes of software engineering are represented and these theories are used for project development process. They involves software quality requirements, software test techniques, test flow and processes. An individual or group-based project is realized, which provides using all the theories learned during the semester. |
| Content | Week 1. Introduction to software quality Week 2. Introduction to quality control Week 3. Quality engineering Week 4. Introduction to software testing process Week 5. Software testing: Terms and techniques Week 6. Test automation and techniques Week 7. Partitioning the input domain and boundary testing Week 8. Software inspection Week 9. Midterm Week 10. Formal validation Week 11. Quality models and measurement Week 12. Risk analysis Week 13. Software reliability engineering Week 14. Project presentations |
| References | 1. Jeff Tian, "Software Quality Engineering: Testing, Quality Assurance, and Quantifiable Improvement", Wiley, 1 edition, 2005. 2. Christopher Fox, "Introduction to Software Engineering Design, Processes, Principles, and Patterns with UML2", Addison-Wesley, 2006. |

Theory Topics

| Week | Weekly Contents |
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| 1 | Introduction to software quality |
| 2 | Introduction to quality control |
| 3 | Quality engineering |
| 4 | Introduction to software testing process |
| 5 | Software testing: Terms and techniques |
| 6 | Test automation and techniques |
| 7 | Partitioning the input domain and boundary testing |
| 8 | Software inspection |
| 9 | Midterm |

| Week | Weekly Contents |
|------|----------------------------------|
| 10 | Formal validation |
| 11 | Quality models and measurement |
| 12 | Risk analysis |
| 13 | Software reliability engineering |
| 14 | Project presentations |