Study program: Informatics

Course title: Software Quality Management

Professor/assistant: Erić D. Milan

Type of course: Compulory

ECTS credits: 6

Prerequisites: none

Aims of the course:

Introduction to the basic concepts of system quality and its application in the software development. During practical training, the student is introduced to a set of documents that keep a track of the software development and measure effectiveness and quality of work of a developer and his team, manage bugs reported by buyers or testers and deliver the software to the customers.

Learning outcomes:

After the course, the student will be able to apply the basics of system quality in developing specific software.

Syllabus:

Theoretical part:

- 1. **Basic terms**. Introduction to system quality. Evolution of quality development, terms and definitions of quality according to ISO 8402, standards (ISO, IES, EN, JUS ...) technical regulations, complying with domestic standards.
- 2. **Hierarchy of system quality documentation**. Rules of quality, procedures and instructions of the system quality, quality records, accreditation and certification system, quality plan, project plan, quality costs, tools and techniques in quality, examples of SRS techniques.
- 3. Development of software systems and a role of the testing life cycle
- 4. Monitoring changes in the software development
- 5. Review and inspection of software quality
- 6. Basics of testing
- 7. Standards that support testing (Industry Standard Test Documentation)

Practical part: Practical exercises

Literature:

- 1. S. Atanasijević, V. Nedić, Kvalitet u razvoju softvera, skripta, 2016
- 2. S. Atanasijević, V. Nedić, Priručnik za laboratorijske vežbe, VTŠ, Kragujevac, 2016
- 3. Živković Ž, Đorđević P. Upravljanje kvalitetom, IV izmenjeno i dopunjeno izdanje. Tehnički fakultet u Boru, Univerzitet u Beogradu. 2013. (dodatna literatura)
- 4. Heleta M. Projektovanje menadžment sistema kvaliteta. Beograd: Univerzitet Singidunum.2012
- 5. Jovan Popović, Testiranje softvera u praksi, CET, Beograd, 2012 (prva dva poglavlja)

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| otal number of active classes: 60 | Lectures: 30 | Practical classes: 30 |

Teaching methods: Lectures and practical computer exercises

Grading system (maximum 100 points)

grading scale from 5 to 10: below 51 points – student fails the exam, grade 6 from 51- 60 points, grade 7 from 61-70 points, grade 8 from 71-80 points, grade 9 from 81-90 points, grade 10 from 91- 100 points.

| Pre-exam obligations: | Points: | Final exam: | Points: |
|-----------------------------------|---------|--------------|---------|
| Activity during lectures | max 5 | Written exam | 50 |
| Practical training | max 5 | | |
| Project | max 10 | | |
| Term paper | max 30 | | |
| Minimum requirement for the final | 30 | | |
| exam | | | |