Study program: Mechanical engineering

Type and level of studies: Master academic studies

Course unit: Quality management and engineering

Teacher in charge: prof. dr. Mirko Djapic

Language of instruction: English

ECTS: 5

Prerequisites: None

Semester: Winter

Course unit objective:
The course is an introductory course in the area related to the quality of systems, products and processes. The aim of the course is to provide participants with fundamental knowledge related to the philosophy, principles and methodology of quality management and engineering in the modern business environment.

Learning outcomes of the Course unit
Acquiring knowledge and skills about philosophies, principles, methods and tools of quality management and engineering in the modern production systems on the management and operational engineering level.

Course unit contents
Theoretical classes
The concept and evolution of quality in engineering and management; Basic concepts and definitions; The principles of management and quality engineering; National Infrastructure for quality improvement; Theories and models in quality management; Standardized Management Systems; ISO 9000 principles, models and applications; Seven tools of management and quality engineering; Quality Function Deployment (QFD); FEMA methods; Quality costs; Modern concepts of quality improvement.
Practical classes
Practical exercising with modeling management system in the business enterprises and application seven tools of management and quality engineering. Students will prepared and defense project from the fields.

Literature
Knowles, G., Quality Management, Graem Knowles&bookboon.com, (e-book: www.bookbon.com), 2011
Pyzdek, T., Quality Engineering Handbook (Second Edition), MARCEL DEKKER, INC, 2003
Phadke, M. C., Quality Engineering Using Robust Design. Englewood Cliffs, NJ: Prentice Hall, 1989.

Number of active teaching hours				**Other classes**
Lectures: 2	Practice: 2	Other forms of classes:	Independent work: 1	

Teaching methods
Lectures are carried out in classrooms, using multimedia presentations. Exercises are carried out in classrooms unders the supervision of teacher, practicing examples of data processing procedures taught at classes. On the other hand, the student project comprises autonomous work of the student with consultations with the teacher.

Examination methods (maximum 100 points)

Exam prerequisites	**No. of points:**	**Final exam**	**No. of points:**
Student's activity during lectures	10	oral examination	
practical classes/tests	25	written examination	40
Seminars/homework		.....	
Project	25		
Other			

Grading system

Grade	**No. of points**	**Description**
10	**91-100**	Excellent
9	**81-90**	Exceptionally good
8	**71-80**	Very good
7	**61-70**	Good
6	**51-60**	Passing
5	**Less than 50**	Failing