#### **MM2311**

Study program / course: Mechanical Engineering

Type and level of study: Master academic studies

**Course: Quality management** 

Lecturers: Slavko M. Arsovski, Bogdan S. Vasiljevic

**Status of course:** Mandatory for module M<sub>1</sub>, II semester

Number of ECTS: 6
Prerequisite: none

**The course objective:** The goal of the course is to introduce general theory of quality of products, processes and systems and specially to emphasize importance of quality in modern business environment. Beside theoretical knowledge from this field, students will master skill needed for engineer and manager of quality, especially in design, implementation and improvement of quality management system.

# The course outcome:

At the end of the course student will have:

- Understand concept of quality of products, processes and organizations in TQM in whole,
- Knowledge and implementation of QMS principles,
- Knowledge of structure and ability for implementation of analysis methods and improvement of existing QMS
- Ability for design and maintenance of QMS

# Syllabus:

# Theory

Strategic importance of quality, basic of TQM concept, quality of products, process management, quality improvement, advanced tools and methods for quality improvement, quality management system according to ISO 9000, design of QMS, implementation of QMS, determination and measurement of customers' demands, TQM and management of changes, inclusion of all employees in TQM, TQM and product development.

# Practice

Detailed design of demands of standards of quality system ISO 9000 during the auditory exercises, tutorial for writing of seminar papers and seminar presentation in the field of design and implementation of quality management system during research study. In research study students will be able to perform general research in the field of the course.

# **Recommended reading:**

- Arsovski S., Lazic M., Manual for engineers for quality, Center for quality, Faculty of Mechanical Engineering, Kragujevac 2008
- 2. Arsovski S., Process, Center for quality, Faculty of Mechanical Engineering, Kragujevac 2007
- 3. Lazic M., Tools, methods and techniques for quality improvement, Center for quality, Faculty of Mechanical Engineering, Kragujevac 2006

The number of hours of active teaching:			Other	
Theory:	Practical	Other forms of	Research study:	classes:
2	classes:	teaching:	0	1
	1,6	0,4		

# **Methods of teaching**

Lectures will be presented to students using Microsoft Power Point presentation. Teaching material is contained in books and manuals. Teaching and auditorial exercises are based on examples from literature. Tests will be performed during the semester and presentation of seminar papers and final exam.

Evaluation of knowledge (maximal 100 points)				
Pre-final exam obligations	Points	Final exam	Points	
Activities during the classes	0	Written	-	
Activities during the exercises	-	Oral presentation	30	
Tests:	40			
Homeworks:	30			