MM1411

Study program / course: Mechanical Engineering

Type and level of study: Master academic studies

Course: Maintenance of Technical Systems

Lecturers: Jeremić, M. Branislav; Todorović, M. Petar

Status of course: Obligatory for module M_1, I semester

Number of ECTS: 6

Precondition: None

The objective of course

The basic goal of this course is to introduce students with maintenance system organization methods in the various industrial fields, introducing with effectiveness evaluation methods of maintenance systems, with particular accent to safety and quality of maintenance systems, as same as to obtain knowledge of what is needed from technical system to fulfill in order to be suitable for maintenance. Students are also introduced with actual maintenance methods of technical systems (proactive, TPM, RCM, WCM).

The outcome of course

Students should be able to understand the role of modern technical systems maintenance, actual terminologies, as same as modern methods which are used in the field of maintenance. Ability of independent and creative work within maintenance function in various industrial fields, communal and public companies, small and medium companies and similar activities.

Syllabus

Theoretical study

Organization and Management of Maintenance Systems, Management with Material Resources, Maintenance expanses and evaluation of efficiency, Information Systems within Maintenance, Quality and Safety within Maintenance, Reliability and Relation of Technical system elements, Maintainability, Modern Maintenance Methods (proactive TPM,, RCM, WCM) and Future of Maintenance systems.

Practical Studies:

Information Systems within Maintenance, Quality and Safety within Maintenance, Modern Maintenance Methods (proactive TPM, RCM, WCM). In this course students are enabled to perform some basic researching within the course field.

Recommended reading

1. Todorović B. Jovan, Inženjerstvo održavanja tehničkih sistema, Institut za istraživanja i projektovanja u privredi, 2006.
2. Jeremić B., Terotehnologija: tehnologija održavanja tehničkih sistema, Eskod, 1992.

The number of hours of active teaching:				Other classes:
Theory: 2	Practical classes: 1.6	Other forms of teaching: 0.4	Research study: 0	1

Methods of teaching

Teaching is performed through lectures, auditorium and laboratory exercises. For teaching presentation a modern teaching facilities-video presentations are used. For each teaching filed a variety of different industrial field examples are taken in consideration through different case studies. In this way students are capable to obtain a very wide range of practical techno-management knowledge (metrics of effectiveness and energetic efficiency of technical systems, maintenance methods and technologies, planning, organization and maintaining system management, etc.).

Evaluation of knowledge

Pre-final exam obligations	**points**	**Final exam**	**points**
Activities during the classes:	**10**		
Practical classes:	**10**	Verbal exam	**30**
Colloquiums(s) :	**35**		
Seminar(s) :	**10**		