MM3481

Study program / course: Mechanical Engineering

Type and level of study: Master academic studies

Course: Traffic and environment

Lecturers: Radivoje B. Pešić, Dragoljub R. Radonjić

Status of course: Elective for modules M_3 and M_8, III term

Number of ECTS: 6

Precondition: none

The objective of course

The objective of the course is to qualify the students for individual scientific-research in the area of complex aspects of motor vehicles' from road traffic influence on the environment throughout the hole life cycle of the vehicle. Through expressively interdisciplinary and multidisciplinary research, the students will be able to analyze and evaluate, from the ecological aspect, the projects connected to the vehicles and traffic.

The outcome of course

After the successful finish of the course, the student will be able to: (1) recognize the influence of vehicle production on the environment, (2) know the influence of vehicle use on the environment, (3) know the importance of on-board vehicle diagnostics of vehicle emissions, (4) know the basics of vehicle recycling, (5) know the basic standards and laws from the area of motor vehicle's ecology.

Syllabus

Natural sources and their reserves. Influence of preparations of materials for vehicle production on the environment. Influence of vehicle production on the environment. Influence of vehicle use on the environment. Vehicle emission. On-board vehicle diagnostics in function of emission reduction. Traffic and vehicle noise. Recycling of motor vehicles. Legal regulations.

Practical Studies:

Independent analysis of vehicle's influence on the environment. Experimental measurements of emission and imissions and doing of seminar paper.

Recommended reading

R. Pešić, S. Petković, S. Veinović: "Motor vehicles – equipment", (in Serbian), Faculties of Mechanical Engineering from Banja Luka and Kragujevac, 2008

R. Pešić, D. Radonjić: Traffic and environment, (in Serbian), Script in preparation

The number of hours of active teaching:				Other classes:
Theory: 3	Practical classes: 1.4	Other forms of teaching: 0.6	Research study: 0	1

Methods of teaching

Teaching will be conducted through lectures, practical studies, visits to companies and doing two seminar papers.

Evaluation of knowledge

Pre-final exam obligations	points	Final exam	points
Activities during the classes:	**10**	Oral Examination	**40**
Practical classes:	**20**		
Colloquiums(s) :			
Seminar(s) :	**15+15**		