BM6331

Study program/course: Mechanical engineering

Type and level study: Bachelor academic studies

Course: IC Engines 2

Lecturers: Dragoljub R. Radonjić, Radivoje B. Pešić

Status of course: Elective for module M_3, VI semester

Number of ECTS: 6

Precondition: None

The objective of course

Acquisition of knowledge from the field of IC Engines that related to: kinematics and dynamics of crank gear, engine balancing, non-uniform crankshaft rotation, flywheel calculation, engine characteristics.

The outcome of course

Qualifying for kinematical and dynamical characteristics' calculation of engine crank gear, determining and use of engine characteristics (speed, load, toxic etc.)

Syllabus

Theoretical study:

Basic concepts of IC Engines crank gears. Determining of cinematic and dynamic characteristics. Non-uniform crankshaft rotation and flywheel calculation. Balancing of single and multi cylinder engines. Brake engine characteristics. Toxic and noise engine characteristics. Engine characteristics in variable operating conditions.

Practical classes: Laboratory exercises

Getting acquainted with measuring devices and procedure testing of engine characteristics in laboratory conditions. Engines characteristics testing in laboratory at test bench.

Recommended reading

1. Radonjić D., Pešić R.: Thermal calculation of IC Engines, (in Serbian), Faculty of Mechanical Engineering in Kragujevac, 1996.
2. Živković M.: IC Engines, two part, Engines construction, (in Serbian), Faculty of Mechanical Engineering in Belgrade, 1990.
3. Radonjić D., Pešić R.: IC Engines 2, (in Serbian), Script in preparation 2009.

The number of hours of active teaching:				Other classes:
Theory: 3	Practical classes: 1.6	Other forms of teaching: 0.4	Research study: 0	1

Methods of teaching

Lectures, auditory exercises, laboratory exercises, independent students work.

Evaluation of knowledge

Pre-final exam obligations	points	Final exam	points
Activities during the classes:	**5**	Oral exam (presentation and oral defend of final assignment)	**30**
Practical classes:	**10**		
Colloquiums(s):	**40**		
Seminar(s):	**15**		