

COURSE TITLE	ENGINE THERMAL LOADING		
Faculty	Faculty of Mechanical Engineering Institut of Cars and IC Engines		
Duration	1 semestr		
ECTS credits	15		
Course description	<p>How is mechanical engineering and engineering technology responding to the needs of of economical , enviromental and energy related problem.Students papers and posters through research and instructional programs in mechanical engineering –IC engine theoretical and designe problems. The studies are works on the heat transfer processes which take place in IC engines. It process which includes most research data related flame radiation. The calculation methods are ilustrated by finite elements method-FEM. The thermal conditions in piston and combustion chamber as well as the heat transfer conditions of the finned surfaces and radiators are analysed in detail. The programme treats the questions of thermal loading in the various component parts and also the modern constructional solutions.</p>		
Program of studies		Hours	ECTS
	Knowledge engineering IC engine	5	5
	Head transfer and thermo load of piston	5	5
	Modeling and calculation by FEM		
	temperature field of piston	3	3
	Modern designe of Diesel engine piston	2	2
Literature:	G.Sitkei,1974.Heat tranfer and thermal loading in IC engines J.Jaskólski,B.Bożek,K.Holly,1993.Variance methods for thermo load of elements of IC engine CIMAC London D-74		
Course type:	Lectures,test stand and computers laboratory		
Assessment method:	Final test		
Prerequisites:	Mechanical Engineering-IC Engines		
Primary target group:	3-rd year Mechanical Engeering students		
Lecturer:	Jerzy Jaskólski,DSC,PhD phone# +48 12 628 3684 e-mail: <a href="mailto:jaskolsk@usk.pk.edu.pl">jaskolsk@usk.pk.edu.pl</a>		
Deadline for application:	June 30 or November 30		