

NAME OF THE COURSE		Introduction to Thermodynamics						
Code	PMT153	Year of study			1.			
Course teacher	Hrvoje Turić, prof.	Credits (ECTS)			4,0			
Associate teachers		Type of instruction (number of hours)			L	S	E	F
					30		15	
Status of the course	Compulsory	Percentage of application of e-learning						
COURSE DESCRIPTION								
Course objectives	Adopting knowledge of basic thermodynamic laws, principles and phenomena and their engineering application. To gain knowledge and skills to solve simple thermodynamic processes.							
Course enrolment requirements and entry competences required for the course	None							
Learning outcomes expected at the level of the course (4 to 10 learning outcomes)	1. Calculate simple thermal problems. 2. Define measurement units of thermodynamic 3. Explain the legality of the areas of the first and second law of thermodynamics. 4. Explain the thermodynamic state changes of ideal gases 5. Explain the processes of expansion and compression 6. Analyze the processes in thermodynamic systems 7. Comparable kind of circular process 8. Use tables and diagrams							
Course content broken down in detail by weekly class schedule (syllabus)	1. Introduction to the course and basic concepts 2. Thermodynamic state variables 3. Thermal expansion of solids and liquids 4. The internal energy 5. First law of thermodynamics 6. Ideal gases 7. Heat and specific heat 8. (Colloquium) 9. Mixtures of gases 10. State changes of an ideal gas 11. Second law of thermodynamics 12. Thermodynamics of crystalline states 13. Heat engines 14. Thermodynamic properties of steam 15. (Colloquium)							
Format of instruction	<input checked="" type="checkbox"/> lectures <input type="checkbox"/> seminars and workshops <input checked="" type="checkbox"/> exercises <input type="checkbox"/> <i>on line</i> in entirety <input type="checkbox"/> partial e-learning <input type="checkbox"/> field work			<input checked="" type="checkbox"/> independent assignments <input checked="" type="checkbox"/> multimedia <input type="checkbox"/> laboratory <input type="checkbox"/> work with mentor <input type="checkbox"/> (other)				
Student responsibilities	Class attendance, homework (programs), independent study and literature reading, accessing colloquium and/or written and oral examination.							
Screening student work (name the proportion of ECTS credits for each activity so that the total number of ECTS credits is equal to the ECTS value of the course)	Class attendance	1,5	Research		Practical training			
	Experimental work		Report		Colloquium	0,5		
	Essay		Seminar essay		(Other)			
	Tests		Oral exam	1	(Other)			
	Written exam	1	Project		(Other)			
Grading and evaluating student work in class and at the final exam	Class attendance is registered, but not included in the evaluation. Exam and partial exam consists of a theoretical part and assignments. - Theoretical exam (50%) - Assignments (50%) Passing threshold is 50%.							
Required literature (available in the library and via other media)	Title				Number of copies in the library	Availability via other media		
	G. Fučko, Uvod u nauku o toplini – predavanja (interna skripta)							
	Deželić R, osnove konstrukcijskih materijala, Fesb, Split							

Optional literature (at the time of submission of study programme proposal)	A. Kostelić, Nauka o toplini, Školska knjiga, Zagreb, 1988.		
Quality assurance methods that ensure the acquisition of exit competences	Conducting an anonymous student surveys, talk with students, analyses the success of students on tests and exams, self-assessment.		
Other (as the proposer wishes to add)			