

COURSE GUIDE – short form

Academic year 2014-2015

Course name ¹	Compressors and Refrigeration machines					Course code	IM.315.DO.DS-2		
Course type ²	DS	Category ³	DO	Year of study	III	Semester	6	Number of credit points	5

Faculty	Of Mechanical Engineering	Number of teaching and learning hours ⁴							
Field	Mechanical Engineering	Total	L	T	LB	P	IS		
Specialization	Mechanical Engineering	140	42	-	28	-	70		

Pre-requisites from the curriculum ⁵	Compulsory	-
	Recommended	-

General objective ⁶	The discipline's main objective is to make students acquire a good knowledge about the main types of positive displacement compressors and refrigeration machines and understanding their operating principles. Formation of basic skills (cognitive and experimental) about the functioning of positive displacement compressors and refrigeration machines.
Specific objectives ⁷	1) knowledge about the main types of positive displacement compressors and refrigeration machines; 2) training of basic skills (cognitive and experimental) on the functioning positive displacement compressors and refrigeration machines; 3) provide students with a thorough knowledge about: - the constructive principles and mechanical and thermal schemes of the main types positive displacement compressors and refrigeration machines; - processes that occur in positive displacement compressors and refrigeration machines; - knowledge of the main characteristics of positive displacement compressors and refrigerators; 4) laboratory classes aim to acquire experimental knowledge of some aspects of the operation of positive displacement compressors and refrigerators, including the measurement of some parameters.
Course description ⁸	- turbomachinery, steam turbine, nozzle, blades, expansion, nozzle and blade losses - dynamic compressor, centrifugal stage, axial stage, percentage of reaction - thermodynamic cycle, suction, compression, discharge, efficiency, work, speed triangle - positive displacement compressors and refrigerators, reciprocating movement compressor, sliding vane compressor - refrigeration machines, refrigerators, thermodynamic cycle, suction, compression, discharge, expansion, isothermal efficiency, compression work, evaporator, condenser, expansion valve

Assessment			Schedule ⁹	Percentage of the final grade (minimum grade) ¹⁰
Continuous assessment	Class tests along the semester		-	- %
	Activity during tutorials/laboratory works/projects/practical work		S14	40 % (5)
	Assignments		-	- %
Final assessment	Final assessment form ¹¹	Exam	exam period	60 % (5)
	Examination procedures and conditions: 1. subject nr. 1; tasks: to solve; working conditions: T; percent 40 %; 2. subject nr. 2; tasks: to solve; working conditions: T; percent 30 %; 3. subject nr. 3; tasks: to solve; working conditions: T; percent 30 %			

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Teaching assistants	ș.I.dr.ing. Vlad Mario HOMUTESCU	

¹ Course name from the curriculum

² DF – fundamental, DID – in the field, DS – specialty, DC – complementary (from the curriculum)

³ DI – imposed, DO –optional, DL – facultative (from the curriculum)

⁴ Points 3.8, 3.5, 3.6a,b,c, 3.7 from the Course guide – extended form (L-lecture, T-tutorial, LB-laboratory works, P-project, IS-individual study)

⁵ According to 4.1 – Pre-requisites - from the Course guide – extended form

⁶ According to 7.1 from the Course guide – extended form

⁷ According to 7.2 from the Course guide – extended form

⁸ Short description of the course, according to point 8 from the Course guide – extended form

⁹ For continuous assessment: weeks 1 – 14, for final assessment – colloquium: week 14, for final assessment-exam: exam period

¹⁰ A minimum grade might be imposed for some assessment stages

¹¹ Exam or colloquium