

# COURSE GUIDE – short form

Academic year 2014-2015

Course name	<b>DEFECTOSCOPY</b>				Course code		MDET.DI.DS.208		
Course type	DID	Category	DI	Year of study	2	Semester	1	Number of credit points	6

Faculty	Mechanics	Number of teaching and learning hours							
Field	Mechanical Engineering	Total	L	T	LB	P	IS		
Specialization	<b>Master - Diagnosis and technical expertise</b>	42	28		14		112		

Pre-requisites from the curriculum	Compulsory	Study of materials, Strength of Materials
	Recommended	Fracture mechanics, Fatigue

General objective	Discipline presents a set of procedures for the examination of materials, parts, joints, steel construction in order to highlight their flaws. The course aims at getting students theoretical and experimental knowledge on methods, tools, equipment and working techniques used in order to increase the safety of the machine
Specific objectives	<ul style="list-style-type: none"> <li>• NDT to detect faults;</li> <li>• control penetrate, magnetic particle, eddy current, ultrasonic,</li> <li>• critical defects and can their spread;</li> <li>• regulations regarding NDT;</li> <li>• quality assurance through NDT;</li> <li>• IN-SERVICE inspection;</li> <li>• risk management nondestructive examinations;</li> <li>• probability of crack detection;</li> </ul> conditional probabilities in the NDE
Course description	Defect as deviation from the quality requirements; Classification of defects; Destructive fault detection methods; Quality assurance in NDT Visual examination Control penetrated Magnetic methods of control Examination by means of eddy current Flaw radiographically Ultrasonic testing The reliability of non-destructive examination

Assessment			Schedule	Percentage of the final grade (minimum grade)
Continuous assessment	Class tests along the semester		Week 9	15%
	Activity during tutorials/laboratory works/projects/practical work		Continuous	20%
	Assignments		Weeks 12-13	15%
Final assessment	Final assessment form	Exam.	Session	50%
	Examination procedures and conditions: Paper 50 %			

Course organizer	Prof. univ. dr. ing. Viorel Goanță	
Teaching assistants	Prof. univ. dr. ing. Viorel Goanță	