DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI

COURSE PLAN – PART I			
Course Title	Non Destructive Testing Laboratory		
Course Code	MTLR21	No. of Credits	01
Course Code of Pre-requisite subject(s)	Nil		
Session	Jan. 2018	Section (if applicable)	NA
Name of Faculty	Mr. TEJAS R	Department	MME
Email	tejas@nitt.edu	Telephone No.	8608361648
Name of Course Coordinator(s)	-		
E-mail	-	Telephone No.	-
Course Type	■ Laboratory course		

Syllabus (approved in BoS)

Visual examination
Liquid penetrant testing
Magnetic particle testing
Ultrasonic testing – Coating estimation
Ultrasonic testing – Wear estimation
The student will be examined in the backdrop of various courses studied from earlier semesters in the context.

COURSE OBJECTIVES

To provide knowledge and enrich ideas about the NDT techniques and develop a strong hands on experience for inspecting and evaluating components in accordance with industry specifications.

COURSE OUTCOMES (CO)

Course Outcomes	Aligned Programme Outcomes (PO)
After completing this laboratory the students will be able to	
1. Have comprehensive knowledge of various courses related to the MME curriculum	1, 11
2. Perform well in competitive technical exams such as the Graduate Aptitude Test in Engineering (GATE) and Indian Engineering Sciences (IES)	9
3. Review important aspects of Metallurgical and Materials processing activities and become useful in manufacturing environment	9, 10, 12

COURSE PLAN – PART II

COURSE OVERVIEW

This course will introduce the students to various non-destructive testing techniques, their merits and demerits, and their applications in context with their earlier learning.

COURSE TEACHING AND LEARNING ACTIVITIES

S. No.	Week/Contact Hours	Topic	Mode of Delivery
1	Week #1	Introduction to the laboratory course and aspects of NDT	PPT
2	Week #2	Visual Examination	LAB
3	Week #3	Liquid penetrant testing	LAB
4	Week #4	Magnetic particle testing	LAB
5	Week #5	Ultrasonic testing – Coating estimation	LAB
6	Week #6	Ultrasonic testing – Wear estimation	LAB
7	Week #7	Practical with defect samples	LAB

COURSE ASSESSMENT METHODS (shall range from 4 to 6)

S.No.	Mode of Assessment	Week/Date	Duration	% Weightage
1	LAB Work	Each session	-	40%
2	Record	11th Week	-	10%
3	Lab Test (Written)	12th Week	60 mins	30%
4	Viva Voce	10th to 13th Week	15 min	20%

COURSE EXIT SURVEY (mention the ways in which the feedback about the course shall be assessed)

Feedback (anonymous) will be collected towards the end of semester through the class representative.

COURSE POLICY

MODE OF CORRESPONDENCE (email/ phone etc)

Lab related details and exact date-time for the assessments will be intimated to the students at appropriate time via webmail through class representatives.

Students can send any queries directly to the faculty/tutor at any stage in the course duration via email (tejas@nitt.edu) ONLY. Face to face discussions by appointment (via email) ONLY.

ATTENDANCE

Students are required to have a minimum of 70% attendance to be eligible to write the final assessment, without which they will have to redo the course.

COMPENSATION ASSESSMENT

Students who have missed any of the lab sessions will be provided an opportunity towards the end of the semester as per schedule which will be intimated via class representatives. Students who have missed lab test will be provided one chance for reassessment as per discretion of faculty member.

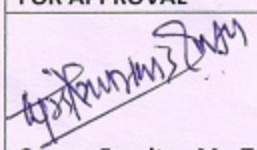
ACADEMIC HONESTY & PLAGIARISM

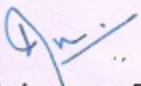
Students are expected to use fair means during assessments, and plagiarism will not be tolerated.

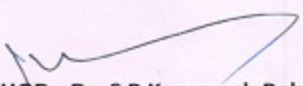
ADDITIONAL INFORMATION

Students are advised to regularly check their webmail, and also contact their class representatives for information and updates regarding the course.

FOR APPROVAL







Course Faculty - Mr. Tejas R CC-Chairperson - Dr. S Jerome HOD - Dr. S P Kumaresh Babu