

**DEPARTMENT OF PRODUCTION ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI-620015.**

COURSE OUTLINE			
Course Title	Thermal Engineering Lab		
Course Code	MELR12	No. of Credits	02
Department	Mechanical Engineering IV SEM SECTION A & B	Faculty	S.VENKATACHELAPATHY/ S. Kathiravan
Pre-requisites Course Code	-		
E-mail	svc@nitt.edu/kathiravan@nitt.edu	Contact No.	9443514038/9597031252
Course Type	Core course	Elective course	

Course overview

- This lab makes the student understand about the principles of various engine components.
- This lab comprises of the performance tests on various engines and study of properties of Fuels
- This lab makes the student understand the performance test of reciprocating compressor
- This lab promotes the ability to select the appropriate strategy and equipment needed to perform a repair task.

Course objectives

- To provide knowledge on testing of properties of fuels and lubricating oils
- To demonstrate and conduct experiments, interpret and analyze data and report the results of IC Engine testing.

COURSE TEACHING AND LEARNING ACTIVITIES

S. No	Week	Date	Topic	Mode of Delivery
1.	1 st Week	-	Performance Test on single cylinder four stroke Diesel Engine	Practical
2.	2 nd Week	-	Heat Balance Test on single cylinder four stroke Diesel Engine	
3.	3 rd Week	-	Performance Test on Reciprocating compressor	

4.	4 th Week	-	Flash fire point test by cleaveland open cup Apparatus
5.	5 th Week	-	Measurement of viscosity using Saybolt universal viscometer
6.	6 th Week	-	Port timing diagram of single cylinder two stroke SI Engine & Valve timing diagram of Four stroke Diesel Engine
7.	7 th Week	-	Performance of two stroke petrol engine
8.	8 th Week	-	Morse test on Multi Cylinder Petrol Engine

COURSE ASSESSMENT METHODS				
S.No.	Mode of Assessment	Syllabus	Duration	% Weightage
1	Regular practical lab	-	*150 Minutes	75
2	End Practical Examinations	-	180 Minutes	25
Total Assessment			23 Hrs	100

*150 minutes for one experiment (Total – 8 Expt.)

ASSESSMENT

1. Attending all the assessments is MANDATORY for every student.
2. If any student is not able to attend any of the Lab section due to genuine reason, student is permitted to attend the compensation Lab at the end of the semester
3. Finally, every student is expected to score minimum one third of the maximum mark or half of the class average mark (whichever is minimum) in the total assessment (internal and external) to pass the course. Otherwise the student would be declared fail and 'F' grade will be awarded. Further he can take up only re-do or summer term course.

ACADEMIC HONESTY & PLAGIARISM

1. All the students are expected to be genuine during the course work. Taking of information by means of copying simulations, assignments, looking or attempting to look at another student's paper or bringing and using study material in any form for copying during any assessments is considered dishonest.
2. Tendering of information such as giving one's program, simulation work, assignments to another student to use or copy is also considered dishonest.
3. Preventing or hampering other students from pursuing their academic activities is also considered as academic dishonesty.
4. Any evidence of such academic dishonesty will result in the loss of marks on that assessment. Additionally, the names of those students so penalized will be reported to the class committee chairperson and HoD of the concerned department.
5. Students who honestly producing ORIGINAL and OUTSTANDING WORK will be REWARDED.

ADDITIONAL COURSE INFORMATION

The faculty is available for consultation at times as per the intimation given by the faculty.

FOR APPROVAL

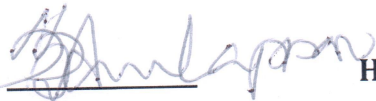
Course Faculty



Course Faculty



CC-Chairperson



HOD

