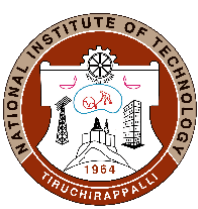


NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI

DEPARTMENT OF MECHANICAL ENGINEERING

COURSE PLAN – PART I			
Name of the programme and specialization	B. Tech, Electronics and Communication Engineering		
Course Title	BASICS OF MECHANICAL ENGINEERING		
Course Code	MEIR11	No. of Credits	2
Course Code of Pre-requisite subject(s)	NIL		
Session	December 2021 - March 2022	Section (if, applicable)	A & B
Name of Faculty	Dr. G. Rajasekaran	Department	Mechanical
Official Email	graja@nitt.edu	Telephone No.	+91 7060334070
Name of Course Coordinator(s) (if, applicable)			
Official E-mail		Telephone No.	
Course Type (please tick appropriately)	<input checked="" type="checkbox"/> Core course	<input type="checkbox"/> Elective course	
Syllabus (approved in BoS)			
Introduction to Mechanical Engineering, Thermal Engineering, Design, manufacturing Engineering.			
IC Engines – 2 Stroke and 4 stroke systems in IC Engines. Automobiles - Transmission systems, Suspension system, E-Vehicles.			
Energy Systems - Power plants, Types, Gas Turbines, Steam Turbines, Utility boilers, R & A/C system- Green Energy production and Devices.			
Engineering materials, Machine elements, Transmission, Fasteners, Support systems.			
Manufacturing, Classification, Metal forming, Casting, Lathe, Drilling machines, Milling machines, Metal joining.			
COURSE OBJECTIVES			
1. To introduce and define the basics concept of mechanical engineering.			
2. To familiarize the working principles of IC engines and automobile systems.			
3. To enable the students to understand the details about the energy systems and its components.			
4. To demonstrate the various machine elements, materials and its function.			



NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI

5. To help the students acquire knowledge about the various manufacturing process.

MAPPING OF COs with POs

Course Outcomes	Programme Outcomes (PO)
1. To identify the basic concept and fundamentals of mechanical engineering.	
2. To understand the working principle of IC engines and Energy systems.	
3. To appreciate the process and materials involved in the manufacture of various machine element components.	

COURSE PLAN – PART II

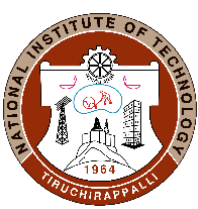
COURSE OVERVIEW

Basic Mechanical Engineering covers the creation, design, and analysis of many types of systems, technologies, and materials. This course will introduce students to the fundamentals of Mechanical Engineering, It is evident from the diverse needs of mankind shows the importance of interdisciplinary knowledge, furthermore with that knowledge engineers develop new technologies

COURSE TEACHING AND LEARNING ACTIVITIES

(Add more rows)

S.No.	Week/Contact Hours	Topic	Mode of Delivery
1	1st week	Introduction to Mechanical Engineering, Thermal Engineering, Design, manufacturing Engineering.	Online (MS Teams)
2	2 nd – 3 rd week	IC Engines – 2 Stroke and 4 stroke systems in IC Engines	Online (MS Teams)
3	4 th – 5 th week	Automobiles - Transmission systems, Suspension system	Online (MS Teams)
4	6 th – 7 th week	Boilers, Refrigeration & air Conditioning	Online (MS Teams)
5	8 th week	Green Energy production and Devices	Online (MS Teams)
6	9 th -11 th week	Engineering materials, Machine elements, Transmission, Fasteners, Support systems	Online (MS Teams)



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7	12 th – 13 th week	Manufacturing, Classification, Metal forming, Casting properties.	Online (MS Teams)
8	14 th week	Lathe, Drilling machines, Milling machines, Metal joining	Online (MS Teams)

COURSE ASSESSMENT METHODS (shall range from 4 to 6)

S.No.	Mode of Assessment	Week	Duration	% Weightage
1	CT1	6 th	60 min	30
2	Assignment 1	-		5
3	CT2	11 th	60 min	30
4	Assignment 2	-		5
CPA	Compensation Assessment*	As per the academic schedule		20
6	Final Assessment *			30

***mandatory; refer to guidelines on page 4**

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

Feedback about the course shall be collected from the students during the last week of the period

COURSE POLICY (including compensation assessment to be specified)

MODE OF CORRESPONDENCE

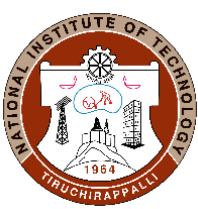
Email: graja@nitt.edu, Mobile: +91 7060334070

COMPENSATION ASSESSMENT POLICY

One compensation assessment in the form of viva voce shall be conducted for the students failed in appearing for assessment I, II or both I & II.

ATTENDANCE POLICY (A uniform attendance policy as specified below shall be followed)

- At least 75% attendance in each course is mandatory.
- A maximum of 10% shall be allowed under On Duty (OD) category.



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- Students with less than 65% of attendance shall be prevented from writing the final assessment and shall be awarded 'V' grade.

ACADEMIC DISHONESTY & PLAGIARISM

- Possessing a mobile phone, carrying bits of paper, talking to other students, copying from others during an assessment will be treated as punishable dishonesty.
- Zero mark to be awarded for the offenders. For copying from another student, both students get the same penalty of zero mark.
- The departmental disciplinary committee including the course faculty member, PAC chairperson and the HoD, as members shall verify the facts of the malpractice and award the punishment if the student is found guilty. The report shall be submitted to the Academic office.
- The above policy against academic dishonesty shall be applicable for all the programmes.

ADDITIONAL INFORMATION, IF ANY

FOR APPROVAL


Course Faculty _____

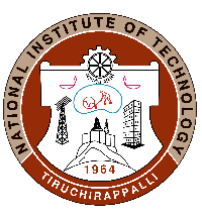

CC- Chairperson _____


HOD _____

Guidelines

- The number of assessments for any theory course shall range from 4 to 6.
- Every theory course shall have a final assessment on the entire syllabus with at least 30% weightage.
- One compensation assessment for absentees in assessments (other than final assessment) is mandatory. Only genuine cases of absence shall be considered.
- The passing minimum shall be as per the regulations.

B.Tech. Admitted in				P.G.
2018	2017	2016	2015	
35% or (Class average/2) whichever is greater.		(Peak/3) or (Class Average/2) whichever is lower		40%



NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI

- e) Attendance policy and the policy on academic dishonesty & plagiarism by students are uniform for all the courses.
- f) Absolute grading policy shall be incorporated if the number of students per course is less than 10.
- g) Necessary care shall be taken to ensure that the course plan is reasonable and is objective.