


NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI
DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

COURSE PLAN – PART I			
Name of the programme and specialization	B. Tech. / Metallurgical and Materials Engineering		
Course Title	PHYSICS LAB		
Course Code	PHIR12	No. of Credits	2
Course Code of Pre-requisite subject(s)	NIL	-	-
Session	July/ Jan. 2022	Section (if, applicable)	-
Name of Faculty	Dr. R. SANKARANARAYANAN / Dr. N. BASKARAN	Department	PHYSICS
Official Email	sankar@nitt.edu / nbaski@nitt.edu	Telephone No.	0431 - 2503609/06
Name of Course Coordinator(s) (if, applicable)	Dr. R. Sankaranarayanan		
Official E-mail	sankar@nitt.edu	Telephone No.	0431-2503609
Course Type	Core / Elective		
SYLLABUS (as approved in Senate)			
<p><i>Experiments:</i></p> <ol style="list-style-type: none"> 1. Torsional pendulum with ring 2. Numerical aperture of an optical fiber 3. Calibration of voltmeter – Potentiometer 4. Field along the axis of a circular coil 5. Wavelength of laser using diffraction grating 6. Dispersive power of a prism – spectrometer 7. Wavelength of mercury spectrum – Spectrometer 8. Radius of curvature of lens – Newton's rings <p><i>Reference:</i> Physics Laboratory Manual, Department of Physics, NITT.</p>			
COURSE OBJECTIVES			
<ul style="list-style-type: none"> • To teach some basics of mechanics, optics, electricity and magnetism through experiments. • To have hands on experience with basic instruments and measurements. 			
Mapping of COs with POs			
Course Outcomes (CO)			Programme Outcomes (PO)
In addition to witnessing some physical phenomena in laboratory, students will learn to handle instruments like spectrometer, microscope etc.			PO1, PO2

COURSE PLAN – PART II

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COURSE OVERVIEW				
Same as course objectives				
COURSE TEACHING AND LEARNING ACTIVITIES				
S. No.	Week/Contact Hours	Topic	Mode of Delivery	
1	Week 1	Introduction	PPT/Video	
2	Week 2	Experiment 1	PPT/Video	
3	Week 3	Experiment 2	PPT/video	
4	Week 4	Experiment 3	PPT/Video	
5	Week 5	Experiment 4	PPT/Video	
6	Week 6 & 7	Assessment	Online	
7	Week 8	Experiment 5	PPT/Video	
8	Week 9	Experiment 6	PPT/Video	
9	Week 10	Experiment 7	PPT/video	
10	Week 11	Experiment 8	PPT/Video	
11	Week 12 & 13	Assessment	Online	
COURSE ASSESSMENT METHODS (shall range from 4 to 6)				
S. No.	Mode of Assessment	Week/Date	Duration	% Weightage
1	Assessment 1 (Viva)	6 th & 7 th Week	30 Minutes	25
2	Assessment 2 (Viva)	12 th & 13 th week	30 Minutes	25
3	Compensation Assessment*	14 th Week	30 Minutes	25
3	Assessment 3 (Quiz)	14 th week	1 Hour	20
4	Final Assessment * (Lab Report on <u>any 5</u> Experiments)	15 th week	3 Hours	30
*mandatory; refer to guidelines in the bottom				
COURSE EXIT SURVEY (mention the ways in which the feedback about the course shall be assessed)				
Feedback will be conducted through online (MIS) for self-assessment.				
COURSE POLICY (including compensation assessment to be specified)				
Students who are absent in Assessment 1 or/and 2 on genuine grounds, are permitted to appear for one compensation assessment with prior permission from faculty member.				

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

- At least 75% attendance in the course is mandatory.
- A maximum of 10% shall be allowed under On Duty (OD) category.
- Students with less than 65% of attendance shall be prevented from writing the final assessment and shall be awarded 'V' grade.

ACADEMIC DISHONESTY & PLAGIARISM

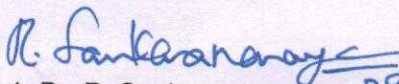
- Possessing a mobile phone, carrying bits of paper, talking to other students, copying from others during an assessment will be treated as punishable dishonesty.
- Zero mark to be awarded for the offenders. For copying from another student, both students get the same penalty of zero mark.
- The departmental 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.

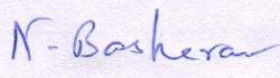
ADDITIONAL INFORMATION (if any)


Students are encouraged to meet faculty for academic discussion at any time.

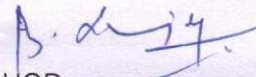
FOR APPROVAL

Course Faculty


1. Dr. R. Sankaranarayanan 29/4/21


2. Dr. N. Baskaran


CC-Chairperson:


HOD:

Guidelines

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