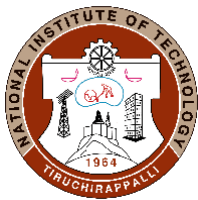




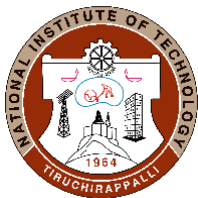
DEPARTMENT OF PHYSICS

COURSE PLAN – PART I			
Name of the programme and specialization	I SEMESTER - B.Tech. COMPUTER SCIENCE & ENGINEERING		
Course Title	PHYSICS – II		
Course Code	PHIR12	No. of Credits	2
Course Code of Pre-requisite subject(s)	NIL		
Session	July 2019	Section (if, applicable)	B
Name of Faculty	Dr. M. DHAVAMURTHY	Department	PHYSICS
Official Email	dhavam@nitt.edu	Telephone No.	NIL
Name of Course Coordinator(s) (if, applicable)	K. Viswanathan Iyer		
Official E-mail	kvi@nitt.edu	Telephone No.	-Nil-
Course Type (please tick appropriately)	<input checked="" type="checkbox"/> Core course	<input type="checkbox"/> Elective course	
Syllabus (approved in BoS)			
<ol style="list-style-type: none"> Determination of rigidity modulus of a metallic wire Wavelength of laser using diffraction grating Dispersive power of a prism – Spectrometer. Radius of curvature of Lens-Newton's Rings Numerical aperture of an optical fiber Field along the axis of a Circular coil Wavelengths of white light – Spectrometer Calibration of Voltmeter – Potentiometer 			
COURSE OBJECTIVES			
<ol style="list-style-type: none"> To introduce the spirit of experiments to verify physics concepts such as reflection, refraction, diffraction and interference on light matter interaction. To perform experiments to estimate the materials properties and to check their suitability in science and engineering. To familiarize physics concepts and to design instruments and experimental set up for better and accurate measurements. To teach and apply knowledge to measure and verify the values of certain constants in physics. 			



MAPPING OF COs with POs	
Course Outcomes On completion of this course, the students will be able to,	Programme Outcomes (PO) (Enter Numbers only)
1. Know how to calibrate a galvanometer and convert it into a current and voltmeters.	2, 3
2. to make experimental setup to verify certain physics concepts of wave and particle nature of light.	2, 3, 8
3. understand the light propagation in fibers, light matter interaction and use of lasers in science and engineering.	2, 3
4. acquire knowledge, estimate and suggest materials for engineering applications.	2, 3, 8

COURSE PLAN – PART II			
COURSE OVERVIEW			
<ul style="list-style-type: none"> - The Physics-II (Code: PHIR12), a laboratory course is offered in the first semester to part of the engineering branches. - The course paper has 2 credit. 			
COURSE TEACHING AND LEARNING ACTIVITIES			(Add more rows)
S.No.	Week/Contact Hours	Topic	Mode of Delivery
1.	21 st Aug. 2019	<ul style="list-style-type: none"> - Dispersive power of a prism – Spectrometer. - Wavelength of laser using diffraction grating. - Radius of curvature of Lens-Newton’s Rings - Wavelengths of white light – Spectrometer. 	Demonstration and Hands-on training
2.	28 th Aug. 2019	Experiment – 1	Assessments and Hands-on training
3.	04 th Sep.2019	Experiment – 2	Assessments and Hands-on training
4.	18 th Sep. 2019	Experiment – 3	Assessments and Hands-on training
5.	25 th Sep.2019	Experiment – 4	Assessments and Hands-on training
6.	09 th Oct. 2019	<ul style="list-style-type: none"> - Determination of rigidity modulus of a metallic wire - Numerical aperture of an optical fiber - Field along the axis of a Circular coil 	Demonstration and Hands-on training



		- Calibration of Voltmeter – Potentiometer	
7.	16 th Oct. 2019	Experiment – 5	Assessments and Hands-on training
8.	23 rd Oct. 2019	Experiment – 6	Assessments and Hands-on training
9.	30 th Oct. 2019	Experiment – 7	Assessments and Hands-on training
10.	06 th Nov.2019	Experiment – 8	Assessments and Hands-on training
11.	13 th Nov.2019	Compensation Practical	Assessments and Hands-on training

COURSE ASSESSMENT METHODS (shall range from 4 to 6)

S.No.	Mode of Assessment	Week/Date	Duration	% Weightage
1	Assessment – I	04 th Sep.2019	4 Hrs.	15
2	Assessment – II	25 th Sep.2019	4 Hrs.	15
3	Assessment – III	23 rd Oct.2019	4 Hrs.	15
4	Assessment – IV	06 th Nov.2019	4 Hrs.	15
CPA	Compensation Assessment*	13 th Nov.2019	4 Hrs.	15
5	Final Assesment	20 th Nov.2019	4 Hrs.	40

***Mandatory; refer to guidelines on page 5**

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

- Conduct the viva of each practical class at the end of the session.
- Performance in the assessment methods.
Questionnaire about the effectiveness of the delivery method, topics and the knowledge gained.
- Final assessment could be an experiment followed by viva-voce, viva-voce on the theory and principle of any experiments etc.

COURSE POLICY (including compensation assessment to be specified)

MODE OF CORRESPONDENCE (email/ phone etc)

- Both e-mail and phone



COMPENSATION ASSESSMENT POLICY

- It is a test with duration of 04 Hrs. Appropriate weightage will be calculated.

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.
- 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 programs.

ADDITIONAL INFORMATION, IF ANY

Books for References

1. Physics Laboratory Manual, Department of Physics, National Institute of Technology Tiruchirappalli (2018).
2. Practical Physics, R.K. Shukla, Anchal Srivastava, New age international (2011).
3. B.Sc. Practical Physics, C.L Arora, S. Chand & Co. (2012).

FOR APPROVAL

Course Faculty ____ (DS) ____ CC- Chairperson ____ (DS) ____ HOD ____ (DS) ____



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.

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%

- 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.