DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI

COURSE OUTLINE TEMPLATE			
Course Title	INTRODUCTION TO ELECTRICAL AND ELECTRONICS ENGINEERING		
Course Code	EEIR15	**No. of Credits**	2
Department	EEE	**Faculty**	R. MUHAMMAD EHSAN
Pre-requisites Course Code	-		
Course Coordinator(s) (if, applicable)	NA		
Other Course Teacher(s)/Tutor(s) E-mail	muhammad@bhel.in	**Telephone No.**	8903907680
Course Type	☑**Core course**	☐ **Elective course**	

COURSE OVERVIEW

This course introduces basic topics in electrical and electronics engineering including a range of industrial applications. Topics covered are history of electricity, major inventions, energy resources, energy conversion techniques, electrical utilities, energy audit, energy saving, various components used in domestic and industrial applications etc. with practical examples from industries.
By taking this course, you will gain knowledge about general aspects of electrical and electronic engineering, scope, significance and job opportunities in this field.

COURSE OBJECTIVES

This course facilitates the students to get a comprehensive exposure to electrical and electronics engineering.

COURSE OUTCOMES (CO)	
Course Outcomes	**Aligned Programme Outcomes (PO)**
The students shall develop an insightful knowledge on various fundamental elements of electrical and electronics engineering.	**1,2,8,12**

COURSE TEACHING AND LEARNING ACTIVITIES

S.No.	Week	Topic	Mode of Delivery
	3rd week of January – 2 hrs	History, major inventions in electrical and electronics engineering	PPT / Chalk & Talk
	4th week of January – 2 hrs	Scope, significance and job opportunities in electrical and electronics engineering	Chalk & Talk
	1st week of February – 2 hrs	Brief overview of various energy resources. Basics of energy conversion.	PPT / Chalk & Talk
	2nd week of February – 2 hrs	Cycle Test-1 Power apparatus used in power generation, transmission and distribution	PPT / Chalk & Talk Written exam
	3rd week of February – 2 hrs	Power apparatus used in various industries	PPT / Chalk & Talk.
	4th week of February – 2 hrs	Basic ideas about utility supply, electrical tariff. Simple calculations	PPT / Chalk & Talk
	1st week of March – 2 hrs	Energy audit and importance of energy saving. Practical examples.	PPT / Chalk & Talk
	2nd week of March -2 hrs	Introduction to different types of electrical circuits, house wiring	PPT / Chalk & Talk
	3rd week of March – 2 hrs	Electronic circuits for signal processing Cycle Test-2.	PPT / Chalk & Talk Written exam
	4th week of March – 2 hrs	Specifications of electronic components	PPT / Chalk & Talk
	1st week of April – 2 hrs	Brief overview of curriculum, laboratories and various software packages	PPT / Chalk & Talk
	2nd week of April – 2 hrs	Testing and measuring equipment used in industries.	PPT / Chalk & Talk

	4th week of April – 3 hrs	End semester Exam		Written exam

COURSE ASSESSMENT METHODS

S.No.	Mode of Assessment	Week/Date	Duration	% Weightage
1	I Cycle test (Written examination covering 1st & 2nd Units)	2nd week of February 2020	**1 hr**	**20**
2	II Cycle Test (Written examination covering 3rd & 4th Units)	3rd week of March 2020	**1 hr**	**20**
3	Assignments	During the contact hours	**NA**	**10**
4	End Semester Examination (Written test)	4th week of April 2020	**3 hrs**	**50**

Note:

1. Attending all the assessments are MANDATORY for every student.
2. Relative grading will be based on the clusters (range) of the total marks (cycle tests, assignment and semester examination etc. put together for each student) scored for grading by adopting Gap theory / Normalized curve. Letter grades and the corresponding grade points will be as per institute norms.
3. Every student is expected to score minimum 40% (i.e., 40 marks) to pass the course. Otherwise the student would be declared fail and 'F' grade will be awarded. Supplementary examination will be conducted with 100 % weightage for 'F' grade students.
4. Suggestion (if any) from Class Committee / Office of the Dean (Academic) on the assessment / grading will be honored with intimation to the students.

ESSENTIAL READINGS : Textbooks, reference books Website addresses, journals, etc

1. Clayton Paul, Syed A Nasar and Louis Unnewehr, 'Introduction to Electrical Engineering', 2nd Edition, McGraw-Hill, 1992.
2. Kothari D.P. & Nagrath I.J., 'Basic Electrical Engineering', 2nd Edition, Tata McGraw-Hill, 2001.
3. P.S. Dhogal, 'Basic Electrical Engineering – Vol. I& II', 42nd Reprint, McGraw-Hill, 2012.

COURSE EXIT SURVEY (mention the ways in which the feedback about the course is assessed and indicate the attainment also)

Feedback from the students during class committee meetings
Anonymous feedback through questionnaire

COURSE POLICY (including plagiarism, academic honesty, attendance, etc.)

CORRESPONDENCE

1. All the students are advised to check their NITT WEBMAIL regularly. All the correspondence (schedule of classes/ schedule of assessment/ course material/ any other information regarding this course) will be done through their webmail.
2. Queries (if required) may be emailed to me / contact me during 4.45 pm to 5.10 pm on Tuesday and Thursday with prior intimation for any clarifications.

ATTENDANCE

1. Attendance will be taken by the faculty in all the contact hours. Every student should maintain minimum

75 % physical attendance in these contact hours to attend the end semester examination.
2. Any student, who fails to maintain 75% attendance needs to appear for the compensation assessment (CPA). Student who scores more than 60 % marks in the CPA will be eligible for attending the end semester examination.
3. Students not having 75% minimum attendance at the end of the semester and also fail in CPA (scoring less than 60%) will have to RE DO the 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 for necessary action.

ADDITIONAL COURSE INFORMATION

FOR SENATE'S CONSIDERATION

Course Faculty _____ **CC-Chairperson** _____ **HoD** _____