DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI

COURSE OUTLINE TEMPLATE							
Course Title	BASICS OF ELECTRICAL AND ELECTRONICS ENGINEERING						
Course Code	EEIR11 (For I st year Chemical Engineering)		02				
Department	EEE	EEE Faculty		Dr. Sishaj P Simon			
Pre-requisites Course Code							
Course Coordinator(s) (if, applicable)	Dr. Sishaj P Simon						
Other Course Teacher(s)/Tutor(s) E-mail		Telephone	No.	0431-2503265			
Course Type	✓ Core course						
		The same	The				
COURSE OVERVIEW							
Students get exposure to the fundamental of electrical devices and circuits. Students will be taught about the principle of operation and applications of several electrical machines. Students will understand the house wiring and electrical safety techniques and have an opportunity to make a practical attempt on house wiring. Further they will be exposed to basics of analog and digital electronic devices, circuits and simple applications.							
COURSE OBJECTIVES							
This course aims to equip the students with a basic understanding of Electrical circuits and machines for specific types of applications. The course gives a comprehensive exposure to house wiring. This course also equips students with an ability to understand basics of analog and digital electronics.							
COURSE OUTCOMES (CO)			Aligned Programme Outcomes (PO)				
The students shall develop an intuitive understanding of the circuit analysis, basic concepts of electrical machines, house wiring and basics of electronics and be able to apply them in practical situation.							

S.No.	Week	Top	Mode of Delivery		
1	Weeks 1 to 3 (5 contact hours) Basics of dc and ac circuits - Concepts			Lecture C&T/ PPT or any suitable mode	
2	Week 3 (1 contact hours) numerical examples/ problem solvin			Group work (exercise)	
3	Weeks 4 to 6 (5 contact hours)	Lecture C&T/ PPT or any suitable mode			
4	Week 6 (1 contact hours)	applications. numerical examples	Group work (exercise)		
5	Weeks 7 to 8 (4 contact hours)	Lecture			
6	Weeks 9 to 11 (6 contact hours)	Analog Electronics Devices, Operatio Introduction to UPS	C&T/ PPT or any suitable mode		
7	Weeks 12 to 14 (5 contact hours)	Digital Electronics : N Systems, Boolean L with Logic Gates	MASYO SHALL		
8	Week 14 (1 contact hours)	numerical example	Group work (exercise)		
COUR	SE ASSESSMENT METHO	DS			
S.No.	Mode of Assessment	Week/Date	Duration	% Weightage	
1	1 st Cycle Test Examination (Written test) (1 st and 2 nd Units)	6 th Week	60 Minutes	20	
2	2 nd Cycle Test Examination (Written test) (3rd and 4 th Units)	11 th Week	60 Minutes	20	
3	Take Home / Team Task	3 rd to 12 th week	Work will be carried out along with the course	10	
4	Retest (Written Test) (1 st to 4 th Unit)	13 th week	3 th week 60 Minutes		
5	End Semester Examination (Written test)	15 th week	15 th week 180 Minutes		

Note:

- Attending all the assessments (Assessment 1-3 and 5) are MANDATORY for every student.
- 2. If any student is not able to attend Assessment-1 (1st Cycle Test) / Assessment-2 (2nd Cycle Test) due to genuine reason, student is permitted to attend the Assessment-4 (retest) with 20% weightage (20 marks).
- 3. In any case, retest will not be considered as an improvement test.

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

Text Books:

Hughes revised by Mckenzie Smith with John Hilcy and Keith Brown, 'Electrical and Electronics Technology', 8th Edition, Pearson, 2012.

Reference Books:

R.J. Smith, R.C. Dorf, 'Circuits Devices and Systems', 5th Edition, John Wiley and sons, 2001. P. S. Dhogal, 'Basic Electrical Engineering – Vol. I & II', 42nd Reprint, Mc Graw Hill, 2012. Malvino, A. P., Leach D. P. and Gowtham Sha, 'Digital Principles and Applications', 6th Edition, Tata Mc Graw Hill, 2007.

Vincent Del Toro, 'Electrical Engineering Fundamental', Prentice Hall India, 2002.

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

Shall be obtained at the end of the course

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

ATTENDANCE

FOR APPROVAL

- 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 need to appear for the retest. Student who scores more than 50 % marks in the retest 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 retest (scoring less than 50%) will have to RE-DO the course.

ACADEMIC HONESTY & PLAGIARISM

1. Copying in any form during assessments is considered as academic dishonesty and will attract suitable penalty.

FOR APPROVAL	•				
Course Faculty _	318/2016	CC-Chairperson _	818/2016.	HOD_	Roll.
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