

INDIAN INSTITUTE OF TECHNOLOGY TIRUPATI
PROFORMA FOR NEW COURSE

1.	Title of the Course	Electric Circuits and Networks
2.	Course Number	EE2202
3.	Status of the Course	Core
4.	Structure of Credits	3-0-0-3
5.	Offered To	UG
6.	New Course/Modification to	New
7.	To be Offered by	Department of Electrical Engineering
8.	To take effect from	July 2018
9.	Prerequisite	Nil
10.	Whether approved by the Department	Yes
11.	Course Objective: To introduce the methods required for the analysis of electrical circuits and networks. Methods for the steady-state and transient analysis of DC circuits, AC circuits will be taught in this course, Advanced circuit analysis methods like Laplace transform will also be taught.	
12.	Course Content: DC circuits: basic concepts, basic laws, methods of analysis, circuit theorems, capacitors and inductors, first order circuits, second order circuits; AC circuits: sinusoids and phasors, sinusoidal steady state analysis, AC power analysis, 3-phase circuits, magnetically coupled circuits, frequency response; Advanced circuit analysis: introduction to the Laplace transform, application of the Laplace transform, two-port networks.	
13.	Text book(s): 1. Alexander C K and Sadiku M N O, <i>Fundamentals of Electric Circuits</i> , McGraw Hill Education (2013).	
14.	Reference(s): 1. Hayt W H, Kemmerly J and Durbin S M, <i>Engineering Circuit Analysis</i> , McGraw Hill Education (2013). 2. Kuo F F, <i>Network Analysis and Synthesis</i> , Wiley (2006). 3. Valkenburg V M E, <i>Network Analysis</i> , Prentice Hall India Learning Private Limited (1980).	