

INDIAN INSTITUTE OF TECHNOLOGY TIRUPATI
PROFORMA FOR NEW COURSE

1.	Title of the Course	Power Systems
2.	Course Number	EE3202
3.	Status of the Course	Core
4.	Structure of Credits	3-1-0-4
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	EE3103: Electrical Machines
10.	Whether approved by the Department	Yes
11.	Course Objective: To introduce modeling of different components of power systems and several tools for analyzing the system.	
12.	Course Content: Introduction; Structure of power systems; Major components; Per unit representation; Transmission line parameters: resistance, inductance and capacitance; Transmission line modelling for steady state operation of power systems; Network modelling: bus admittance matrix; Power flow solution methods; Symmetrical faults; Symmetrical components; Unsymmetrical faults; Power system protection; Economic operation of power system; Basics of power system stability.	
13.	Text book(s): 1. Grainger J J and Stevenson W D, <i>Power System Analysis</i> , McGraw Hill (1994).	
14.	Reference(s): 1. Bergen A R and Vittal V, <i>Power System Analysis</i> , Pearson Education (2009). 2. Glover J D, Sarma M S and Overbye T J, <i>Power System Analysis and Design</i> , Cengage Learning India (2012). 3. Saadat H, <i>Power System Analysis</i> , McGraw Hill (2002). 4. Wadhwa C L, <i>Electrical Power Systems</i> , New Age International (2009).	