INDIAN INSTITUTE OF TECHNOLOGY TIRUPATI
PROFORMA FOR MODIFIED COURSE

1.	Title of the Course	Performance Evaluation of Computer Systems
2.	Course Number	CS5026
3.	Status of the Course	Elective
4.	Structure of Credits	3-0-0-3
5.	Offered To	PG
6.	New Course/Modification to	Modification to CS3820
7.	To be Offered by	Dr. V. Mahendran
8.	To take effect from	January 2019
9.	Prerequisite	CoT
10.	Whether approved by the Department	Yes
11.	**Course Objective:** To understand the various performance evaluation techniques in three broad categories of analysis, simulation, and experiment design. To apply the techniques to systematically evaluate the performance of computer sub-systems.	
12.	**Course Content:** Covers different performance evaluation techniques in the broad categories of analytical modelling such as Markov chains, queueing models including network of queues, simulation techniques such as discrete event simulation modelling, and experimental design methodologies. Study the different stages of performance evaluation methodology such as workload characterisation, measurement of performance metrics, analysis, interpretation, and presentation of results. Apply the techniques to evaluate the performance of various computer subsystems.	
13.	Text book(s): 1. Raj Jain, *The Art of Computer System Performance Analysis: Techniques for Experimental Design Measurements Simulation and Modeling,* Wiley, (2015). 2. Mor Harchol-Balter, *Performance Modling and Design of Computer Systems,* Cambridge, (2013).	
14.	Reference(s): 1. Peter G. Harrison, Naresh M. Patel, *Performance Modeling of Communication Networks and Computer Architectures,* Addison-Wesley Longman , (1993). 2. K. S. Trivedi, *Probability and Statistics with Reliability Queueing and Computer Science Applications,* Wiley , (2001).	