INDIAN INSTITUTE OF TECHNOLOGY TIRUPATI
PROFORMA FOR NEW COURSE

1.	Title of the Course	Fixed Point Theory
2.	Course Number	MA6102
3.	Status of the Course	Elective
4.	Structure of Credits	3-0-0-3
5.	Offered to	PG
6.	New Course/ Modification to	New Course
7.	To be offered by	Dr. S. Rajesh Department of Mathematics
8.	To take effect from	January 2018
9.	Prerequisite	Functional Analysis
10.	Whether approved by the Program	Yes
11.	Course Objective: (Max 70 words) To learn some of the classical fixed point theorems and its applications.	
12.	Course Content: (Max 100 words) Contraction Principle, and its variants and applications; Fixed points of nonexpansive maps and set valued maps, Brouwer -Schauder fixed point theorems, Ky Fan Best Approximation Theorem, Principle and Applications of KKM -maps, their variants and applications. Fixed Point Theorems in partially ordered spaces and other abstract spaces. Application of fixed point theory to Game theory and Mathematical Economics.	
13.	Text Book: 1. M.A.Khamsi and W.A.Kirk, An introduction to Metric Spaces and Fixed Point Theory, Wiley - Inter Sci., New York, 2001.	
14.	References: 1. W. A. Kirk and B. Sims, Hand Book of Metric Fixed Point Theory, Springer, Netherlands, 2001. 2. K. C. Border, Fixed point theorems with applications to economics and game theory, Cambridge University Press, Cambridge, 1985. 3. S. Singh, B. Watson and P. Srivastava, Fixed Point Theory and Best Approximation: The KKM - map Principle, Kluwer Academic Publishers, Dordrecht, 1997.	