

INDIAN INSTITUTE OF TECHNOLOGY TIRUPATI

PROFORMA FOR NEW COURSE

1.	Title of the Course	Concrete Technology
2.	Course Number	CE3111
3.	Status of the Course	Elective
4.	Structure of Credits	3-0-0-3
5.	Offered to	UG
6.	New Course/ Modification to	New Course
7.	To be offered by	Dr. Shihabudheen M. Maliyekkal & Dr. B. Radhika
8.	To take effect from	July 2018
9.	Prerequisite	NIL
10.	Whether approved by the Program	Yes
11.	<p>Course Objective (Max 70 words):</p> <ol style="list-style-type: none"> 1. To introduce the basic constituents of concrete, understand their properties and study the testing methods 2. To know the properties of fresh and hardened concrete and learn the testing procedures to determine them 3. To learn the concrete mix design procedure using codal guidelines. 	
12.	<p>Course Content (Max 100 words):</p> <p>Concrete composition: Cement – composition, production, types, and properties - testing for fineness, consistency, strength, and soundness; Aggregates – types, properties and testing, Admixtures – chemical and mineral; Concrete mix proportioning – special concrete.</p> <p>Behavior of concrete: Fresh concrete – properties – workability – slump test, flow test, compacting factor test – Creep and shrinkage – Durability – Testing of hardened concrete – compression test, flexure test, split tensile strength, NDT</p>	
13.	<p>Text Book(s):</p> <ol style="list-style-type: none"> 1. Neville, A. M., <i>Properties of concrete</i>, Vol. 4, London: Longman, 1995. 2. Shetty, M.S., <i>Concrete technology</i>, S. Chand & Company Ltd., New Delhi, 2005 	
14.	<p>Reference(s):</p> <ol style="list-style-type: none"> 1. Mehta, P.K., and Monteiro, P.J.M., <i>Concrete: Microstructure, properties and materials</i>, McGraw Hill, New Delhi, 2014. 2. Malhotra, V.M., and Mehta, P.K., <i>Pozzolanic and Cementitious Materials</i>, Gordon and Breach Publishers, 1996. 	