

1.	Title of the course	Concrete Technology
2.	Course number	CE309L
3.	Structure of credits	3-0-0-3
4.	Offered to	UG
5.	New course/modification to	Modification To CE3107/8
6.	To be offered by	Department of Civil and Environmental Engineering
7.	To take effect from	July 2022
8.	Prerequisite	Nil
9.	<b>Course Objective(s):</b> The course introduces the fundamental constituents of concrete, their properties, and testing methods. The course would help the student to understand the properties of fresh and hardened concrete and learn the testing procedures to determine them. The course is also designed to give a solid foundation on concrete mix design procedure using codal guidelines.	
10.	<b>Course Content:</b> Cement: Composition; Production; Types; Properties; Testing for fineness, consistency, strength, and soundness; Aggregates: Types; Properties; Testing; Chemical admixtures; Mineral admixtures; Concrete mix proportioning; Special concrete; Behavior of concrete: Properties of fresh concrete; Workability of concrete: Slump test; Flow test; Compacting factor test; Creep and shrinkage; Durability; Testing of hardened concrete: Compression test; Flexure test; Split tensile strength test; Non-destructive testing (NDT) of concrete	
11.	<b>Textbook(s):</b> 1. Neville A M, <i>Properties of concrete</i> , Pearson, England (2011). 2. Shetty M S, <i>Concrete Technology</i> , S. Chand & Company Ltd., New Delhi (2005).	
12.	<b>Reference(s):</b> 1. Mehta 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).	