Year &	Course	Course Name: Advanced	No. of	L	T&PS	P
Sem:	Code:	Concrete Technology	Credits: 4	2	2	0
	CE4506					

UNIT-I: Fundamentals Of Concrete:

Materials- Cement, Aggregates, mixing water soundness of aggregate- Fresh and hardened concrete: Admixtures- types of admixtures- purposes of using admixtures- chemical composition- effect of admixtures on fresh and hardened concretes- Natural admixtures.

UNIT-II:

Properties of Fresh and hardened concrete and quality control in concrete construction

UNIT-III: Durability of concrete

Alkali aggregate reaction, reinforcement corrosion, freezing and thawing, etc.

UNIT-IV:

Fiber-reinforced concrete- Properties of constituent materials- Mix proportions, mixing and casting methods-Mechanical properties of fiber reinforced concrete- applications of fibre reinforced concretes. Light weight concrete- Introduction- properties of light weight concrete- No fines concrete- design of light weight concrete

UNIT-V:

High strength concrete, Mass concrete, Roller compacted concrete, high early strength, Self-compacting concrete.

UNIT-VI: Nondestructive Testing Evaluation

References/Text Books:

- 1. A M Neville, Properties of concrete, Person India
- 2. Special Structural concrete- RafatSiddique
- 3. Concrete repair and maintenance illustrated- Peter H Emmons
- 4. Concrete technology-M S Shetty
- 5. AR Santha Kumar, Concrete technology, Oxford university Press, India

Lecture Plan: Unit-I & -II syllabus for MID-I, Unit-III & -IV syllabus for MID-II and Unit-V & -VI syllabus for MID-III examinations.

Video Lectures (Web Links):

1. http://nptel.ac.in/syllabus/syllabus.php?subjectId=105104030