#### Course Number and Name

BCE201 - BASIC CIVIL ENGINEERING

### **Credits and Contact Hours**

2 & 30

#### **Course Coordinator's Name**

Ms Saritha

# Text Books and References

## **TEXT BOOKS**:

1. Raju.K.V.B, Ravichandran .P.T, "Basics of Civil Engineering", Ayyappa Publications, Chennai, 2012.

2. SeetharamanS., "Basic Civil Engineering", Anuradha Agencies, (1<sup>st</sup> ed. 2005).

3. Dr.M.SPalanisamy, "Basic Civil Engineering" (3<sup>rd</sup>ed. 2000), TUG Publishers, New Delhi/Tata McGrawHill Publication Co., New Delhi

# **REFERENCES:**

1. Rangwala .S.C," Engineering Materials", Charotar Publishing House, Anand, 41<sup>st</sup> Edition: 2014.

2. National Building Code of India, Part V, "Building Materials", 2005

3. Ramesh Babu"A Textbook on Basic Civil Engineering" (1998). Anuradha Agencies, Kumbakonam.

4. RamamruthamS., "Basic Civil Engineering", DhanpatRai Publishing Co. (P) Ltd. (1999).

# **Course Description**

It improves the ability to apply principles of engineering, basic science, and mathematics to design and realize physical systems, components, or processes.

Prerequisites							Co-requisites							
+2 Mathematics & Physical Science							NIL							
Required, elective, or Selected elective (as per Table 5-1)														
	Required													
Course Outcomes (COs)														
CO1: Will gain knowledge in Design, concept preparation														
CO2: Loading calculation														
CO3: Structural component design														
CO4: Drawing and chart preparation														
CO5: Will understand the components of buildings.														
CO6: Will learn the engineering aspects to dams , water supply and sewage disposal.														
Student Outcomes (SOs) from Criterion 3 covered by this Course														
	cos/sos	А	b	С	d	е	f	g	h	i	j	k		
	CO1	Н	Н			Н		L						
	CO2					Н	Н							
	CO3							Н	L					
	CO4									L				
	CO5										Н	L		
	CO6													

#### UNIT-I **CIVIL ENGINEERING MATERIALS** 8 Introduction - Civil Engineering - Materials - Stones - Bricks - Sand - Cement -Plain Reinforced Cement Concrete - Steel Sections - Timber - Plywood - Paints -Concrete -Varnishes (simple examples only) UNIT-II **SURVEYING** 5 Surveying – objectives – classification – principles of survey-Measurement of distances – Chain survey – Determination of areas – Use of compass – Use of leveling Instrument – (simple examples only) **UNIT- III FOUNDATION FOR BUILDING** 5 Bearing Capacity of Soil – Foundation – Functions – Requirement of good foundations – Types of foundations – Merits & Demerits. **UNIT-IV SUPERSTRUCTURE** 7 Stone Masonry - Brick Masonry - Columns - Lintels - Beams - Roofing - Flooring - Plastering-White Washing (Simple examples only) **UNIT- V MISCELLANEOUS TOPICS** 5 Types of Bridges – Dam- purpose – selection of site - Types of Dams – Water Treatment & Supply sources – standards of drinking- distribution system. – Sewage Treatment (simple examples only)