No	Information on Every Subject	
1.	Unit Name : Construction Engineering Management I	
2.	Unit Code : CE 51012	
3.	Classification : Engineering Subject	
4.	Credit Hours : 2	
	2 for lecture : (2 hours x 15 weeks)	
5.	Trimester/Year Offered : 1/3	
6.	Pre-requisite (if any) : None	
7.	Mode of Delivery : Lecture, Tutorial and Assignment	
8.	Assessment System and Breakdown of Marks ::	
	Coursework / Tutorial	20%
	Assignment	10%
	Examination	70%
	Total	100%
9.	Academic Staff Teaching Unit :	
10.	Objective of Unit: The objective of this course is to get knowledge about Construction Engineering Technology, Engineering Economics and Fundamental of Construction Management.	
11.	Learning Outcomes of Unit: (a) To explain construction process and technology in Civil Engineering (b) To describe construction engineering economics (c) To recognize fundamental elements of construction management.	
12.	Synopsis of Unit: The unit is intended to understand Construction Technology, Engineering Economics and Fundamental of Construction Management.	
13.	**Topic 1:Introduction** • Introduction to Construction Industry • Construction Process, Delivery Methods and Participants • Codes and Regulations • Construction Management Elements • Construction Trends and Prospects **Topic 2: Construction Economics** • Time Value of Money • Discounted Present Worth Analysis • Rate of Return Analysis	

	• Construction Economics • Equipment Cost • Financial Management of Construction **Topic 3: Foundation** • Foundation • Type of Foundation (Spread footing, Piles and Piers) • Stability of Excavations • Protecting Excavations and Workers • Dewatering Excavations • Pressure Grouting **Topic 4: Wood Construction** • Wood Materials and Properties • Frame Construction • Timber Construction • Fastenings, Connections and Notching **Topic 5:** Concrete Construction • Construction Applications of Concrete • Concrete Construction Practices • Hot-weather Concreting and Cold-weather Concreting • Concrete Formwork • Formwork safety • Reinforcing Steel • Quality Control • Inspection and Testing **Topic 6:** Concrete Form Design • Concrete Form Design • Design Loads and Lateral Loads • Slab Form Design

	• Wall and Column Form Design • Design of Lateral Bracing (Wall, Column and Slab Forms) **Topic 7: Masonry Construction** • Brick Masonry • Concrete Masonry • Other Masonry Materials • Estimating Quantity of Masonry • Construction Practices in Masonry Construction **Topic 8: Steel Construction** • Elements of Steel Construction • Structural Steel (Types of Steel, Standard Rolled Shapes, Built-up members) • Steel Erection • Field Connections • Safety (Protective Equipment and Site Hazards) **Topic 9: Planning and Scheduling** • Introduction to Planning and Scheduling • Bar Graph Method • CPM-Critical Path Method • Scheduling and Resource Assignment Using CPM • Linear Scheduling Methods **Topic 10: Managing Quality and Safety** • Developing Quality Management Plan • QA/QC • Safety as a component of quality • Developing the Safety Management Plan • The Economics of quality and safety **Topic 11: Construction Safety and Health and Equipment Maintenance** • Importance of Safety • OSHA

	• Safety Programs and Procedures • Environmental Health in Construction
14.	Main References: 1. Construction Management JumpStart, Barbara J.Jackson, 2nd Edition 2.Construction Methods and Management,S.W.Nunally, 7th Edition.