

Course Number and Name												
BCE065 - CONSTRUCTION EQUIPMENT AND MANAGEMENT												
Credits and Contact Hours												
3 & 45												
Course Coordinator's Name												
Mr.S.Vinothkumar												
Text Books and References												
REFERENCES:												
<ul style="list-style-type: none"> • Peurifoy, R.L., Ledbetter, W.B. and Schexnayder, C., Construction Planning, Equipment and Methods, McGraw Hill, Singapore, 2006. • Sharma S.C. Construction Equipment and Management, Khanna Publishers, New Delhi, 1988. • Deodhar, S.V. Construction Equipment and Job Planning, Khanna Publishers, New Delhi, 1988. • Dr.Mahesh Varma, Construction Equipment and its planning and Application, Metropolitan Book Company, New Delhi. 1983. 												
Course Description												
<ul style="list-style-type: none"> • To introduce various construction equipment and study the efficient utilization of the same using scientific principles 												
Prerequisites						Co-requisites						
Building Construction Technology						NIL						
required, elective, or selected elective (as per Table 5-1)												
Course Outcomes (COs)												
CO1	Manage the equipment, cost control and maintenance of a project.											
CO2	Identify and understand the working principle of earthwork equipments.											
CO3	Identify and understand the working of various equipments for different construction process											
CO4	Identify and understand the working principle of material handling equipments.											
CO5	Understand the working of aggregate production and concreting equipments.											
Student Outcomes (SOs) from Criterion 3 covered by this Course												
	COs/SOs	a	b	c	d	e	f	g	h	i	j	k
	CO1	M		M		H				L		
	CO2	M		M		H						
	CO3	M		M		H						
	CO4	M		M		H		L				
	CO5	M		M		H						
List of Topics Covered												
UNIT I CONSTRUCTION EQUIPMENT MANAGEMENT											10	
Identification – Planning - Equipment Management in Projects - Maintenance Management – Replacement												

- Cost Control of Equipment - Depreciation Analysis – Safety Management.

UNIT II EQUIPMENT FOR EARTHWORK 10

Fundamentals of Earth Work Operations - Earth Moving Operations - Types of Earth Work Equipment - Tractors, Motor Graders, Scrapers, Front end Loaders, Earth Movers.

UNIT III OTHER CONSTRUCTION EQUIPMENTS 10

Equipment for Dredging, Trenching, Tunneling, Drilling, Blasting - Equipment for Compaction - Erection Equipment - Types of pumps used in Construction - Equipment for Dewatering and Grouting – Foundation and Pile Driving Equipment – Equipment for Demolition.

UNIT IV MATERIALS HANDLING EQUIPMENT 5

Forklifts and related equipment - Portable Material Bins – Conveyors – Hauling Equipment.

UNIT V EQUIPMENT FOR PRODUCTION OF AGGREGATE AND CONCRETING 10

Crushers – Feeders - Screening Equipment - Handling Equipment - Batching and Mixing Equipment - Hauling, Pouring and Pumping Equipment – Transporters.