Date: 16-01-2016

In addition to part -I (General Handout for all courses appended to the time table) this portion gives further specific details regarding the course.

Course No. : **CE G527**
Course Title : **Construction Management**

Instructor- in - charge : RAJIV GUPTA

1. Scope and Objective of the Course:

The basic objective of the course is to expose the students to complete sequence of execution of construction. CM is overall planning, coordination, and control of a project from beginning to completion. CM is aimed at meeting a client's requirement in order to produce a functionally and financially viable project. For an effective management process start from identifying the parties, making the contracts specifications, costing and estimations, inviting the tenders, pre-bidding meet, bidding/ evaluation of biddings, awarding the work, material, manpower, money, equipments planning, scheduling of activities, resource and time management. The students will undergo to some real life case studies and execute the actual projects. The course will cover extensively the modern construction management technique BIM.

2. Text Books:

T1. Construction Management Fundamentals (McGraw-Hill Series in Civil Engineering) Knutson, Kraig

T2. Professional Construction Management Barrie, Donald S., & B.C. Paulson, MGHISE, 3er ed., 1992

T3 Construction Planning & Technology, Gupta R., CBS Publishers, New Delhi. 2013

Reference Books:

Relevant I.S Codes and SP-7, National Building code of India, 2005, CPWD Works Manual

3. Course Plan:

No. of Lecture	Learning Objective	Topics to be covered	Reference Chap./Book
3	Networking techniques for construction planning	Bar Chart, CPM and PERT, AON, LoB, Optimal scheduling	T3

2	Planning & control techniques	Single and multi- Resource allocation and leveling	T3
2	Cash Flow	Storage non storage resources, cost, value, planned actual cash flow, projects overrun	T3
6	Contract management, estimation & costing	Contracts, tender, quantity estimation & costing, rate analysis	T1
3	Bidding/ evaluation of biddings	Decision making models	T1
2	Functional requirement, Classifications & types of buildings	Definition, classification & general requirements of building components	T2 & R
3	Making the contracts specifications	Conditions, special conditions, tender documents, Material specifications, pre tender estimations	T2 & R
4	Accounting	Finance and accounts manual, variance analysis and management actions	T2 & R
4	Construction Management	Quality, Safety, Claims, Disputes	T1 & R
6	BIM	Plan, elevation – 3D, Walk through; Scheduling, Costing & Estimation; Cash Flow, Solar and Wind Analysis, Mech., Elec. And Plumbing, Facility Management,	Class notes/ Handouts
2	Case studies 1	Legal issues	Handouts
3	Case studies 2	International Construction Contracts	Handouts

4. **Reading Assignments:** Will be given as & when necessary.

5. **Evaluation Scheme:**

Component	Duration	Weightage	Date & Time	Remarks
Mid-semester test	90 min	30	17/3 11:00 - 12:30 PM	O.B.
Surprise quizzes	50 min	(3/ 4) x5= 15		C.B.
Project	-	20	-	-
Comprehensive	3 hrs	35	10/5 AN	C.B.

O.B. – Open Book, C.B. - Closed Book

6. **Mid-semester grading:** It will be announced normally in the month of March. It is done in the same manner as that of the final grading
7. **Chamber Consultation Hour**: To be announced in the class.
8. **Notice:** Notice concerning this course will be displayed on the Notice Board of Civil Engineering Group.

Instructor-in-charge