

<b>Course Title: Construction Management and Entrepreneurship</b> As per Choice Based Credit System (CBCS) scheme] SEMESTER:VI			
Subject Code	15CV61	IA Marks	20
Number of Lecture Hours/Week	04	Exam Marks	80
Total Number of Lecture Hours	50	Exam Hours	03
<b>CREDITS –04</b>		<b>Total Marks - 100</b>	
<b>Course Objectives:</b> This course will enable students to 1. Understand the concept of planning, scheduling, cost and quality control, safety during construction, organization and use of project information necessary for construction project. 2. Inculcate Human values to grow as responsible human beings with proper personality. 3. Keep up ethical conduct and discharge professional duties.			
Modules		Teaching Hours	Revised Bloom's Taxonomy (RBT) Level
<b>Module -1</b>			
<b>Management:</b> Characteristics of management, functions of management, importance and purpose of planning process, types of plans <b>Construction Project Formulation:</b> Introduction to construction management, project organization, management functions, management styles <b>Construction Planning and Scheduling:</b> Introduction, types of project plans, work breakdown structure, Grant Chart, preparation of network diagram- event and activity based and its critical path-critical path method, concept of activity on arrow and activity on node.		10 hours	L1,L2,L3
<b>Module -2</b>			
<b>Resource Management:</b> Basic concepts of resource management, class of labour, Wages & statutory requirement, Labour Production rate or Productivity, Factors affecting labour output or productivity. <b>Construction Equipments:</b> classification of construction equipment, estimation of productivity for: excavator, dozer, compactors, graders and dumpers. Estimation of ownership cost, operational and maintenance cost of construction equipments. Selection of construction equipment and basic concept on equipment maintenance <b>Materials:</b> material management functions, inventory management.		10 Hours	L1,L2,L3
<b>Module -3</b>			
<b>Construction Quality , safety and Human Values:</b> Construction quality process, inspection, quality control and quality assurance, cost of quality, ISO standards. Introduction to concept of Total Quality Management <b>HSE:</b> Introduction to concepts of HSE as applicable to Construction. Importance of safety in construction , Safety measures to be taken during Excavation , Explosives , drilling and blasting , hot bituminous works , scaffolds / platforms / ladder , form work and equipment operation. Storage of materials. Safety through legislation, safety campaign. Insurances. <b>Ethics :</b> Morals, values and ethics, integrity, trustworthiness , work ethics, need of engineering ethics, Professional Duties, Professional and Individual Rights, Confidential and Proprietary Information, Conflict of Interest Confidentiality, Gifts and Bribes, Price Fixing, Whistle Blowing.		10 Hours	L1,L2,L3
<b>Module -4</b>			
<b>Introduction to engineering economy :</b> Principles of engineering economics, concept on Micro and macro analysis, problem solving and decision making. <b>Interest and time value of money:</b> concept of simple and compound interest, interest formula for: single payment, equal payment and uniform gradient series. Nominal and effective interest rates, deferred annuities, capitalized cost. <b>Comparison of alternatives :</b> Present worth, annual equivalent , capitalized and rate of return methods , Minimum Cost analysis and break even analysis		10 Hours	L1,L2,L3

<b>Module -5</b>		
<p><b>Entrepreneurship:</b> Evolution of the concept, functions of an entrepreneur, concepts of entrepreneurship, stages in entrepreneurial process, different sources of finance for entrepreneur, central and state level financial institutions.</p> <p><b>Micro, Small &amp; Medium Enterprises (MSME):</b> definition, characteristics, objectives, scope, role of MSME in economic development, advantages of MSME, Introduction to different schemes: TECKSOK, KIADB, KSSIDC, DIC, Single Window Agency: SISI, NSIC, SIDBI, KSFC</p> <p><b>Business Planning Process:</b> Business planning process, marketing plan, financial plan, project report and feasibility study, guidelines for preparation of model project report for starting a new venture. Introduction to international entrepreneurship opportunities , entry into international business , exporting , direct foreign investment , venture capital</p>	10 Hours	L1,L2,L3
<p><b>Course Outcomes:</b> After studying this course, students will be able to:</p> <ol style="list-style-type: none"> <li>1. Understand the construction management process.</li> <li>2. Understand and solve variety of issues that are encountered by every professional in discharging professional duties.</li> <li>3. Fulfill the professional obligations effectively with global outlook</li> </ol>		
<p><b>Program Objectives:</b></p> <ul style="list-style-type: none"> <li>• Engineering knowledge</li> <li>• Problem analysis</li> <li>• Interpretation of data</li> </ul>		
<p><b>Question Paper Pattern:</b></p> <ul style="list-style-type: none"> <li>• The question paper will have 5 modules comprising of ten questions. Each full question carrying 16 marks</li> <li>• There will be two full questions (with a maximum of three subdivisions, if necessary) from each module.</li> <li>• Each full question shall cover the topics as a module</li> <li>• The students shall answer five full questions, selecting one full question from each module. If more than one question is answered in modules, best answer will be considered for the award of marks limiting one full question answer in each module.</li> </ul>		
<p><b>Text Books:</b></p> <ol style="list-style-type: none"> <li>1. P C Tripathi and P N Reddy, “Principles of Management”, Tata McGraw-Hill Education</li> <li>2. Chitkara, K.K, “Construction Project Management: Planning Scheduling and Control”, Tata McGraw-Hill Publishing Company, New Delhi.</li> <li>3. Poornima M. Charantimath , “Entrepreneurship Development and Small Business Enterprise”, Dorling Kindersley (India) Pvt. Ltd., Licensees of Pearson Education</li> <li>4. Dr. U.K. Shrivastava “Construction Planning and Management”, Galgotia publications Pvt. Ltd. New Delhi.</li> <li>5. Bureau of Indian standards – IS 7272 (Part-1)- 1974 : Recommendations for labour output constant for building works :</li> </ol>		
<p><b>Reference Books:</b></p> <ol style="list-style-type: none"> <li>1. Robert L Peurifoy, Clifford J. Schexnayder, Aviad Shapira, Robert Schmitt, “Construction Planning, Equipment, and Methods (Civil Engineering), McGraw-Hill Education</li> <li>2. Harold Koontz, Heinz Weihrich, “Essentials of Management: An International, Innovation, and Leadership perspective”, T.M.H. Edition, New Delhi</li> <li>3. Frank Harris, Ronald McCaffer with Francis Edum-Fotwe, “ Modern Construction Management”, Wiley-Blackwell</li> <li>4. Mike Martin, Roland Schinzinger, “Ethics in Engineering”, McGraw-Hill Education</li> <li>5. Chris Hendrickson and Tung Au, “Project Management for Construction - Fundamentals Concepts for Owners, Engineers, Architects and Builders”, Prentice Hall, Pittsburgh</li> <li>6. James L.Riggs , David D. Bedworth , Sabah U. Randhawa “ Engineering Economics” 4 ed tata Mc Graw hill.</li> <li>7. S.C Sharma –“Construction Equipments and its management” – Khanna publishers</li> </ol>		