

## PROJECT PLANNING AND DEVELOPMENT LABORATORY

<b>VII Semester: CE</b>								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
ACE114	Core	L	T	P	C	CIA	SEE	Total
		-	-	3	2	30	70	100
<b>Contact Classes: Nil</b>	<b>Tutorial Classes: Nil</b>	<b>Practical Classes: 36</b>			<b>Total Classes: 36</b>			
<p><b>COURSE OBJECTIVES:</b></p> <p><b>The course should enable the students to:</b></p> <ol style="list-style-type: none"> <li>Enrich the concepts of the construction techniques, equipment, project feasibility and project planning through site visits.</li> <li>Design dewatering systems to prevent significant groundwater seepage into the excavation and to ensure stability of excavation side slopes.</li> <li>Generate time and motion study, work measurement and prepare models for various construction techniques, equipment.</li> <li>Apply the process of tendering and bidding for a project and its valuation.</li> </ol> <p><b>COURSE LEARNING OUTCOMES (CLOs):</b></p> <ol style="list-style-type: none"> <li>Have an overview of the project planning and development process.</li> <li>Identify stage includes a needs assessment process to determine the needs, problems in a construction project.</li> <li>Prepare the techno- commercial information on the new construction materials.</li> <li>Perform, report daily progress motion study work measurement of any one construction activity.</li> <li>Estimate the quantities and bulk purchases of construction materials.</li> <li>Prepare, crashing and updating of precedence network for a major construction work.</li> <li>Exercise cash flow analysis.</li> <li>Prepare the models and charts related to various construction techniques, equipment, organizational structures of existing companies.</li> <li>Study the feasibility aspects, tendering procedures, accounting system of civil structures.</li> <li>Understand the fund raising and other financial aspects, billing procedures.</li> <li>Study of tender notices, tender documents of contract document.</li> <li>Understand the Valuation of land and building using various methods like Rental Method of Valuation, Direct Comparisons of the capital value.</li> </ol>								
<b>LIST OF EXPERIMENTS</b>								
<b>Week-1</b>	<b>SITE VISIT-I</b>							
Site visit to study the construction techniques and use of major construction equipment associated with the ongoing work. Report on the site visit to be submitted.								
<b>Week-2</b>	<b>SITE VISIT-II</b>							
Site visit to study the construction techniques and use of major construction equipment associated with the ongoing work. Report on the site visit to be submitted.								

<b>Week-3</b>	<b>NEW ADVANCES IN CONSTRUCTION</b>
Collection of techno- commercial information on the new construction materials, methods and construction equipment available in the market.	
<b>Week-4</b>	<b>WORK FLOW OF CONSTRUCTION ACTIVITIES</b>
Performing and reporting of time and motion study work measurement of any one construction activity.	
<b>Week-5</b>	<b>QUANTITY ESTIMATION AND PURCHASE</b>
Field exercise on estimation of quantities and bulk purchases.	
<b>Week-6</b>	<b>PRECEDENCE NETWORK</b>
Preparation, crashing and updating of precedence network for a major construction work.	
<b>Week-7</b>	<b>CASH FLOW ANALYSIS</b>
Exercise on cash flow analysis	
<b>Week-8</b>	<b>MODEL PREPARATION</b>
Preparation of models and charts related to various construction techniques, equipment, organizational structures of existing companies. This is a group activity to generate interest and explore creativity.	
<b>Week-9</b>	<b>SITE VISIT-III</b>
Study of feasibility aspects, tendering procedures, accounting system, fund raising and other financial aspects, billing procedures etc associated with on-going major construction work. Visit report is to be submitted.	
<b>Week-10</b>	<b>SITE VISIT-IV</b>
Study of feasibility aspects, tendering procedures, accounting system, fund raising and other financial aspects, billing procedures etc associated with on-going major construction work. Visit report is to be submitted.	
<b>Week-11</b>	<b>TENDERING</b>
Collection and study of tender notices, tender documents of contract document associated with civil engineering works.	
<b>Week-12</b>	<b>VALUATION</b>
Valuation of land and building using various methods. A report to be submitted on the same.	
Reference Books:	
<ol style="list-style-type: none"> <li>1. K.S.Menon, —Purchasing and Inventory Control, Wheeler Publication, 1996.</li> <li>2. Peurifoy, —Construction Planning, Equipment and Method, Tata McGraw-Hill, 2010.</li> <li>3. Dr. MaheshVarma, —Construction Equipment Planning and Applications, Metropolitan Book Co., 1975.</li> <li>4. Bohlander and Shnell, —Managing Human Resources, Paperback, 2012.</li> <li>5. Biswajeet Pattanayak, —Human Resource Management, PHI Learning, 3rd Edition, 2010.</li> </ol>	

Web References:

1. <https://nptel.ac.in/courses/105103093/>
2. <https://nptel.ac.in/courses/105104161/14>
3. <https://nptel.ac.in/courses/105104161/15>