



**NATIONAL INSTITUTE OF TECHNOLOGY,
TIRUCHIRAPPALLI**

DEPARTMENT OF CIVIL ENGINEERING

COURSE PLAN – PART I			
Name of the programme and specialization	M.Tech – Construction Techniques and Management		
Course Title	CONSTRUCTION ECONOMICS AND FINANCE		
Course Code	CE753	No. of Credits	3
Course Code of Pre-requisite subject(s)	NIL	Semester	I
Session	July 2021	Section (if, applicable)	NA
Name of Faculty	Dr.K.NANDHINI	Department	CIVIL ENGINEERING
Official Email	knandhini@nitt.edu	Telephone No.	9597975215
Name of Course Coordinator(s) (if, applicable)	-		
Official E-mail	-	Telephone No.	-
Course Type (please tick appropriately)	<input checked="" type="checkbox"/> Core course <input type="checkbox"/> Elective course		
Syllabus (approved in Senate)			
<p>Construction economics - Overview of construction economics - time value of money - cash flow diagram - Single payment now compared to a single payment in future (F/P) -Future payment compared to a uniform series of payments (F/A) - one present payment compared to a uniform series of payments (A/P) - arithmetic Gradient G, Geometric gradient.</p> <p>Financial Returns analysis - Comparing Alternatives - Present Worth Method-Annual payments method- Future worth methods, Rate of Return (ROR), Incremental Rate of Return (IROR), Break even analysis , Marginal costing, Cost Benefit analysis.</p> <p>Accounting methods - Depreciation accounting, income tax accounting, inflation, replacement analysis.</p> <p>Construction costing - Methods of construction costing- percentage completion method – Fixed contract Pricing- cost plus pricing- Escalation clause- Sources of Finance, Infrastructure financing; Life-cycle costing, Construction cost control; Personnel costs; Equipment costs, Job in directs and markup.</p> <p>Financial Statement Analysis - Balance sheet and Profit and Loss accounts – ratios analysis, Fund flow statement, Cash flow statement, Working Capital Management, Financial Control - Management accounting</p>			



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COURSE OBJECTIVES				
1. To learn the principles of construction economics 2. To know about financial analysis of the construction industry 3. To study the different methods of accounting 4. To understand the various methods of costing in construction activities				
COURSE PLAN – PART II				
COURSE OVERVIEW				
This course entails the students to learn about the fundamentals of construction economics and the different construction finance in the industry by handling the cost of flow, payment, balancing the credit and debits taking place due to the construction activities.				
COURSE TEACHING AND LEARNING ACTIVITIES				
S.No.	Schedule (3 Hours/Week)	Topic	Mode of Delivery	
1	Sep 2nd Week	Overview of construction economics - time value of money	Lecture by PPT	
2	Sep 3rd Week	Cash flow diagram, types of costs		
3	Sep 4th Week	Single payment now compared to a single payment in future (F/P)		
4	Sep 5th Week	Future payment compared to a uniform series of payments (F/A), one present payment compared to a uniform series of payments (A/P), arithmetic Gradient G, Geometric gradient.		
5	Oct 1st Week	Comparing Alternatives, Present Worth Method, Annual payments method		
6	Oct 2nd Week	Rate of Return, Incremental Rate of Return, Break even analysis		
7	Oct 3rd Week	Marginal costing, Cost Benefit analysis, Depreciation accounting, income tax accounting, inflation		
8	Oct 4th week	Sources of Finance, Infrastructure financing, Life-cycle costing		
9	Nov 1st Week	Construction cost control, Personnel costs		
10	Nov 2nd Week	Equipment costs, Job in directs and markup.		Lecture by PPT
11	Nov 3rd Week	Factors affecting the selection of equipment, economic life of equipment		
12	Nov 4th Week	Balance sheet and Profit and Loss accounts, ratios Analysis.		



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13	Dec 1st Week	Fund flow statement, Cash flow statement	
14	Dec 2nd Week	Working Capital Management, Financial Control - Management accounting	
15	Dec 3rd Week	Clear doubts and tutorials	

COURSE ASSESSMENT METHODS

S.No.	Mode of Assessment	Duration	% Weightage
1	Assessment -1	1 hr 30 min	25
2	Assessment -2	1 hr 30 min	25
3	Assignments	-	20
CPA	Compensation Assessment*		
4	Final Assessment	2 hr	30

COURSE EXIT SURVEY

- Direct feedback from the students by face-to-face meeting individually and as the class as a whole.
- Feedback from the students during class committee meetings
- Exit survey from the students at the end of the session

COURSE POLICY

- Attending all the assessments (Assessment 1 to 5) is MANDATORY for every student.
- If any student is not able to attend Assessment-1 / Assessment-2 due to genuine reason, student is permitted to attend the respective assessment as compensation assessment (CPA) with the same weightage. Prior permission and required document must be submitted for absence.
- At any case, CPA will not be considered as an improvement test. A minimum of 30% should be scored in the end assessment for a pass.
- Every student is expected to score minimum 35% or class average/2 (whichever is greater) to pass the course. Otherwise the student would be declared fail and 'F' grade will be awarded

ATTENDANCE POLICY (A uniform attendance policy as specified below shall be followed)

- At least 75% attendance in each course is mandatory.
- A maximum of 10% shall be allowed under On Duty (OD) category.



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- Students with less than 65% of attendance shall be prevented from writing the final assessment and shall be awarded 'V' grade.

ACADEMIC DISHONESTY & PLAGIARISM

- Possessing a mobile phone, carrying bits of paper, talking to other students, copying from others during an assessment will be treated as punishable dishonesty.
- Zero mark to be awarded for the offenders. For copying from another student, both students get the same penalty of zero mark.
- The departmental disciplinary committee including the course faculty member, PAC chairperson and the HoD, as members shall verify the facts of the malpractice and award the punishment if the student is found guilty. The report shall be submitted to the Academic office.
- The above policy against academic dishonesty shall be applicable for all the programmes.

ADDITIONAL INFORMATION, IF ANY

FOR APPROVAL

Course Faculty X. Nandhini

CC- Chairperson

Nisha

HOD

G. R.
Head
Department of Civil Engineering
National Institute of Technology
Tiruchirappalli - 620 015.