



NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI

DEPARTMENT OF CIVIL ENGINEERING

COURSE PLAN – PART I			
Name of the programme and specialization	B. Tech – Civil Engineering		
Course Title	Construction Techniques and Equipments		
Course Code	CEPE10	No. of Credits	3
Course Code of Pre-requisite subject(s)	-		
Session	July 2022	Section (if, applicable)	A,B
Name of Faculty	Mr. Krishna Kishore M, Ms Uma Chandru, Mr. Surya Prasanth M	Department	Civil Engineering
Email	403120002@nitt.edu 403121009@nitt.edu 403120003@nitt.edu	Telephone No.	+91 – 9551738940 +91 – 9597231180 +91 – 8500613774
Name of Course Coordinator(s) (if, applicable)			
E-mail		Telephone No.	
Course Type	<input type="checkbox"/> Core course	<input checked="" type="checkbox"/> Elective course	
Syllabus (approved in Senate)			
Principles of construction: Bonding, Reinforced brick work, Stone masonry, Hollow block masonry Composite masonry, Cavity walls, Flooring, Formwork, Centering and Shuttering sheet piles, Slip and moving forms, Roofs and roof covering, Joints in Concrete, Plastering and Pointing, Shoring and Scaffolding, Under pinning, Submerge Structures.			
Prefabricated structures and building services: Prefabricated panels & structures, Production, Transportation and Erection of structures, Sound insulations, Ventilations, Fire resisting construction, Damp proofing, Termite proofing.			
Basics of construction equipment: Factors affecting the selection of equipment, economic life of equipment, cost of equipment, maintenance of equipment.			
Construction equipment and machinery: Earthwork equipment, Hoisting and lifting equipment, Material handling equipment, Concrete equipment, Dewatering equipment.			
Construction automation and robotics - construction equipment: graders, scrapers, rollers, etc.			

COURSE OBJECTIVES	
1. To learn the principles of construction of building components 2. To know about prefabricated construction and building services 3. To study the different repair and rehabilitation technique 4. To understand the planning and operation of various construction equipment	
COURSE OUTCOMES (CO)	
Course Outcomes	Aligned Programme Outcomes (PO)
By the end of this course the students	
1. Supervise and execute all the construction jobs with the knowledge of the different construction techniques	a, b, d
2. Identify the building defects and apply suitable repair techniques to rectify them	a, b, d, f, g
3. Evaluate the costs of equipment and make proper selection of the suitable construction equipment	a, b, d, f, g, j
4. Ensure the proper completion of a construction task using particular construction equipment	a, b, d, f, g, j, k

COURSE PLAN – PART II			
COURSE OVERVIEW			
This course uses different mode of lecture like Power point presentations, Chalk and Talk, Video Lectures, etc., throughout the course work for all the five units.			
COURSE TEACHING AND LEARNING ACTIVITIES			
S.No.	Week/Contact Hours	Topic	Mode of Delivery
1	1 st week – 3 hours	Principles of construction: Bonding , Reinforced brick work, Stone masonry	Power point presentation & Chalk and Talk
2	2 nd week – 3 hours	Hollow block masonry, Composite masonry, Cavity walls, Flooring	Power point presentation & Chalk and Talk
3	3 rd week – 3 hours	Formwork, Centering and Shuttering sheet piles, Slip and moving forms, Roofs and roof covering	Power point presentation & Chalk and Talk
4	4 th week – 3 hours	Joints in Concrete, Plastering and Pointing, Shoring and Scaffolding, Under pinning, Submerge Structures	Power point presentation & Chalk and Talk
5	5 th week – 3 hours	Prefabricated structures and building services: Prefabricated panels & structures,	Power point presentation & Chalk and Talk
6	6 th week – 3 hours	Production, Transportation and Erection of structures	Power point presentation & Chalk and Talk
7	7 th week – 3 hours	Sound insulations, Ventilations, Fire resisting construction,	Power point presentation & Chalk and Talk

8	8 th week – 3 hours	Damp proofing, Termite proofing, Basics of construction equipment.	Power point presentation & Chalk and Talk
9	9 th week – 3 hours	Factors affecting the selection of equipment, Economic life of equipment	Power point presentation & Chalk and Talk
10	10 th week – 3 hours	Cost of equipment, maintenance of equipment.	Power point presentation & Chalk and Talk
11	11 th week – 3 hours	Construction equipment and machinery: Earthwork equipment,	Power point presentation & Chalk and Talk
12	12 th week – 3 hours	Hoisting and lifting equipment, Material handling equipment	Power point presentation & Chalk and Talk
13	13 th week – 3 hours	Concrete equipment, Dewatering equipment.	Power point presentation & Chalk and Talk
14	14 th week – 3 hours	Construction automation and robotics - construction equipment	Power point presentation & Chalk and Talk
15	15 th week – 3 hours	Construction equipment: graders, scrapers, rollers, etc.	Power point presentation & Chalk and Talk

COURSE ASSESSMENT METHODS

S.No.	Mode of Assessment	Week/Date	Duration	% Weightage
1	Cycle Test 1	23/09/2022	1 hour	20
2	Cycle Test 2	20/10/2022	1 hour	20
3	Assignment	-	-	20
CPA	Compensation Assessment	28/11/2022	1 hour	20
5	Final Assessment	12/12/2022	3 hours	40

COURSE EXIT SURVEY (mention the ways in which the feedback about the course shall be assessed)

The student's feedback mechanism will be followed at the end of this course through questionnaire format in MIS portal

COURSE POLICY (preferred mode of correspondence with students, compensation assessment policy to be specified)

MODE OF CORRESPONDENCE (email/ phone etc)

Apart from interactions with the students in the class, the students can also contact the concerned faculty member as given below:

Mr. Krishna Kishore M
403120002@nitt.edu
+91 - 9551738940

Ms. Uma Chandru
403121009@nitt.edu
+91-9597231180

Mr. Surya Prasanth M
403120003@nitt.edu
+91 - 8500613774

COMPENSATION ASSESSMENT POLICY

1. The students have to submit a letter and get it signed by the Head of the Department or the course coordinator/ chairman stating the reason for their absence in the exam. Only genuine cases of absence shall be considered.
2. The student can only write one compensation assessment whether he/she is found to be absent for one or both the internal assessments

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

MINIMUM PASS MARK POLICY

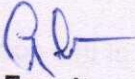
The Passing minimum mark: As per Institute norms.

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 programs.

FOR APPROVAL


Course Faculty

CC-Chairperson


Dr. Sunita V

HOD

