



# NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI

## DEPARTMENT OF CIVIL ENGINEERING

COURSE PLAN – PART I			
Name of the programme and specialization	B. Tech – Electrical and Electronics Engineering (Section A)		
Course Title	Basics of Civil Engineering		
Course Code	CEIR 11	No. of Credits	2
Course Code of Pre-requisite subject(s)	NIL		
Session	July 2023	Section (if applicable)	Section A
Name of Faculty	Kiran Prakash K	Department	Civil Engineering
Official Email	<a href="mailto:403120007@nitt.edu">403120007@nitt.edu</a>	Telephone No.	+91 7034632460
Name of Course Coordinator(s) (if, applicable)	Dr. K. Muthukkumaran		
Official Email	<a href="mailto:kmk@nitt.edu">kmk@nitt.edu</a>	Telephone No.	+91 9443651836
Course Type (please tick appropriately)	<input checked="" type="checkbox"/> Core course	<input type="checkbox"/> Elective course	
<b>Syllabus (approved in BoS)</b>			
Properties and uses of construction materials - stones, bricks, cement, concrete and steel. Site selection for buildings - Component of building - Foundation- Shallow and deep foundations - Brick and stone masonry - Plastering - Lintels, beams and columns - Roofs. Roads-Classification of Rural and urban Roads- Pavement Materials-Traffic signs and road Marking-Traffic Signals. Surveying - Classification-Chain Survey-Ranging-Compass Survey-exhibition of different survey equipment. Sources of Water - Dams- Water Supply-Quality of Water-Wastewater Treatment – Sea Water Intrusion – Recharge of Ground Water.			
<b>COURSE OBJECTIVES</b>			
1. To give an overview of the fundamentals of the Civil Engineering fields to the students of all branches of Engineering 2. To realize the importance of the Civil Engineering Profession in fulfilling societal needs			
<b>MAPPING OF COs with POs</b>			
Course Outcomes	Programme Outcomes (PO) (Enter Numbers only)		



# NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI

## DEPARTMENT OF CIVIL ENGINEERING

On completion of the course, the students will be able to:	
1. The students will gain knowledge on site selection.	1, 3, 4, 8
2. The students will gain knowledge of construction materials.	1, 3, 4, 8, 10
3. The students will gain knowledge of the components of buildings.	1, 3, 4, 8, 9
4. The students will gain knowledge on roads and water resources.	1, 3, 4, 8, 9, 10
5. A basic appreciation of multidisciplinary approach when involved in Civil Related Projects.	1, 4, 8, 9, 10

### COURSE PLAN – PART II

#### COURSE OVERVIEW

The students gain basic knowledge on civil engineering specializations such as construction materials, techniques, transportation, water resources and surveying.

#### COURSE TEACHING AND LEARNING ACTIVITIES

( Add more rows)

S.No.	Week/Contact Hours	Topic	Mode of Delivery
1.	Week 1	Properties and uses of construction materials – stones, bricks	PowerPoint presentation & Chalk and Talk
2.	Week 2	Properties and uses of construction materials – cement, steel	PowerPoint presentation & Chalk and Talk
3.	Week 3	Properties and uses of construction materials – concrete	PowerPoint presentation & Chalk and Talk
4.	Week 4	Site selection for buildings – (Classification and Planning of buildings), Components of building Class Test - I	PowerPoint presentation & Chalk and Talk
5.	Week 5	Foundation- Shallow and deep foundations – (Function, Loads, Bearing Capacity of Soil, Types, Causes of failure of foundation)	PowerPoint presentation & Chalk and Talk
6.	Week 6	Brick and stone masonry – (Definitions, Bonds, Comparison, Points to be observed in construction, Plastering Lintels, beams and columns – Roofs – (Requirements, Classification, Types, roof coverings)	PowerPoint presentation & Chalk and Talk
7.	Week 7	Roads-Classification of Rural and urban Roads, Pavement Materials	PowerPoint presentation & Chalk and Talk
8.	Week 8	Traffic signs and road marking-Traffic Signals (Mid Sem)	PowerPoint presentation & Chalk and Talk
9.	Week 9	Application of Communication and Sensor in Civil Engg	PowerPoint presentation & Chalk and Talk
10.	Week 10	Surveying - Classification- Chain Survey	PowerPoint presentation & Chalk and Talk





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## DEPARTMENT OF CIVIL ENGINEERING

11.	Week 11	Compass Survey (Methods of using, Bearing, Local attraction), Lab Visit	PowerPoint presentation & Chalk and Talk
12.	Week 12	Sources of Water – Dams, Water Supply, Quality of Water	PowerPoint presentation & Chalk and Talk
13.	Week 13	Wastewater Treatment	PowerPoint presentation & Chalk and Talk
14.	Week 14	Sea Water Intrusion	PowerPoint presentation & Chalk and Talk
15.	Week 15	Recharge of Ground Water	PowerPoint presentation & Chalk and Talk
16.	Week 16	<b>Final Assessment</b>	

### COURSE OBJECTIVES

1. To give an overview of the fundamentals of the Civil Engineering fields to the students of all branches of Engineering
2. To realize the importance of the Civil Engineering Profession in fulfilling societal needs

### COURSE OUTCOMES (CO)

Course Outcomes	Aligned Programme Outcomes (PO)												Program me Specific Outcom es (PSO)			
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
Upon completion of the course, the students will																
1. The student will gain knowledge on site selection	H		L	M				L								M
2. The student will gain knowledge of construction materials	H		L	M				L		M						M
3. The students will gain knowledge of the components of buildings	H		L	M				L	M							L
4. The student will gain knowledge on roads and water resources	H		L	M				L	M	M					M	
5. A basic appreciation of multidisciplinary approach when involved in civil related projects	H			M				L	M	M						M



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## DEPARTMENT OF CIVIL ENGINEERING

<b>COURSE ASSESSMENT METHODS</b> (shall range from 4 to 6)				
S.No.	Mode of Assessment	Week/Date	Duration	% Weightage
1	Class test (Quiz)	Week 4	30 min	15 %
2	Assignment	Week 6	1-week time	15 %
3	Mid-Sem	Week 8	90 min	30 %
CPA	Compensation Assessment*		60 min	30 %
4	Final Assessment *	End of Dec 2023	3 hrs	40 %
<p><b>COURSE EXIT SURVEY</b> (mention the ways in which the feedback about the course shall be assessed)</p> <p>It is proposed to take feedback from the students at the end of the semester to evaluate the execution of the course.</p>				
<p><b>COURSE POLICY</b> (including compensation assessment to be specified)</p> <p>a) Students who have missed the CT1 or, CT2, or CT3 can register for the Compensation Assessment, which shall be conducted soon after completing all portions. Other students were strictly NOT allowed to register for the Compensation Assessment. Only one compensation is allowed.</p> <p>b) Students need to submit a valid explanation of their absence in their internal assessment.</p> <p><b>MODE OF CORRESPONDENCE (email/ phone etc)</b>            Mode of Correspondence would only be through phone/Email to the Class Representatives and Vice Versa.</p>				
<p><b>ATTENDANCE POLICY</b> (A uniform attendance policy as specified below shall be followed)</p> <ul style="list-style-type: none"> <li>➤ At least 75% attendance in each course is mandatory.</li> <li>➤ A maximum of 10% shall be allowed under On Duty (OD) category.</li> <li>➤ Students with less than 65% of attendance shall be prevented from writing the final assessment and shall be awarded 'V' grade.</li> </ul>				
<p><b>MINIMUM PASS MARK POLICY</b></p> <p>The passing minimum mark: As per Institute norms</p>				
<p><b>ACADEMIC DISHONESTY &amp; PLAGIARISM</b></p> <ul style="list-style-type: none"> <li>➤ Possessing a mobile phone, carrying bits of paper, talking to other students, and copying from others during an assessment will be treated as punishable dishonesty.</li> </ul>				



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## DEPARTMENT OF CIVIL ENGINEERING

- Zero marks are to be awarded for the offenders. For copying from another student, both students get the same penalty of zero marks.
- 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 to all the programmes.

### ADDITIONAL INFORMATION, IF ANY

The Course Coordinator is available for consultation during office hours.

Dr. K. Muthukkumaran, C08 (First Floor), Department of Civil Engineering.

Queries, if any, can also be emailed to the Course Coordinator directly at [kmk@nitt.edu](mailto:kmk@nitt.edu)

### FOR APPROVAL

Course Faculty 

  
CC- Chairperson \_\_\_\_\_

HOD   
12/09/23





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## DEPARTMENT OF CIVIL ENGINEERING

### Guidelines

- The number of assessments for any theory course shall range from 4 to 6.
- Every theory course shall have a final assessment on the entire syllabus with at least 30% weightage.
- One compensation assessment for absentees in assessments (other than the final assessment) is mandatory. Only genuine cases of absence shall be considered.
- The passing minimum shall be as per the regulations.

B.Tech. Admitted in				P.G.
2018	2017	2016	2015	
35% or (Class average/2) whichever is greater.		(Peak/3) or (Class Average/2) whichever is lower		40%

- Attendance policy and the policy on academic dishonesty & plagiarism by students are uniform for all the courses.
- Absolute grading policy shall be incorporated if the number of students per course is less than 10.
- Necessary care shall be taken to ensure that the course plan is reasonable and is objective.