



DEPARTMENT OF CIVIL ENGINEERING

COURSE PLAN – PART I			
Name of the programme and specialization	B. Tech, Computer Science Engineering		
Course Title	BASICS OF CIVIL ENGINEERING		
Course Code	CEIR11	No. of Credits	2
Course Code of Pre-requisite subject(s)	NIL		
Session	July 2022	Section (if, applicable)	B
Name of Faculty	Dr. MAKENDRAN C	Department	Civil Engineering
Official Email	makendran@nitt.edu	Telephone No.	9080126710
Name of Course Coordinator(s) (if, applicable)	NA		
Official E-mail	-	Telephone No.	-
Course Type (please tick appropriately)	<input checked="" type="checkbox"/> Core course	<input type="checkbox"/> Elective course	
<b>Syllabus (approved in BoS)</b>			
<p>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.</p>			
<b>References</b>			
<p>1. Punmia, B.C, Ashok Kumar Jain, Arun Kumar Jain, Basic Civil Engineering, Lakshmi Publishers, 2012.            2. Satheesh Gopi, Basic Civil Engineering, Pearson Publishers, 2009.            3. Rangwala, S.C, Building materials, Charotar Publishing House, Pvt. Limited, Edition 27, 2009.            4. Palanichamy,M.S, Basic Civil Engineering, Tata McGraw Hill, 2000.            5. Lecture notes prepared by Department of Civil Engineering, NITT</p>			
<b>COURSE OBJECTIVES</b>			
<p>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.</p>			



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<b>MAPPING OF COs with POs</b>			
<b>Course Outcomes</b> At the end of the course, the students will be able to			<b>Programme Outcomes (PO)</b> (Enter Numbers only)
Acquire knowledge on construction materials in civil Engineering			1, 7,8,9
Get familiarize with various building components and their functions.			1,6,8,9,10
Identify different pavement materials, road markings, traffic signs and safety.			1,7,8,12
Recognize various types of surveying and survey equipment.			1,2,5,9
Outline water, wastewater quality and their treatments.			1,6,7,8,12
<b>COURSE PLAN – PART II</b>			
<b>COURSE OVERVIEW</b>			
<b>COURSE TEACHING AND LEARNING ACTIVITIES</b> ( Add more rows)			
S.No.	Week/Contact Hours	Topic	Mode of Delivery
1.	3rd week of November 2022 (2 Contact Hours)	Introduction to Civil Engineering Introduction of Road and Transportation, Different Mode of Transportation	Open Discussion
2.	4th week of November 2022 (2 Contact Hours)	Characteristics of Road Transportation, Road-Pavement - Highway Development in India, Roman Road, Tresagust- telford and macadam- Roads.	Power point presentation/Chalk and Board
3	1st week of December 2022 (2 Contact Hours)	Classification of roads- Road development plan- rural road and urban road-Road patterns. Pavement Materials: Subgrade soil, road aggregates and bituminous materials.	Power point presentation/Chalk and Board
4	2nd week of December 2022 (2 Contact Hours)	Comparison of flexible and rigid pavements Traffic signs and road marking objectives, classification and uses. Building materials: Classification and requirements of good bricks.	Power point presentation/Chalk and Board
5	3rd week of December 2022 (2 Contact Hours)	Classification of brick, manufacturing of bricks and uses of bricks. Stones and steel types and its components. <b>Cycle Test I</b>	Power point presentation/Chalk and Board
6	4th week of December 2022 (2 Contact Hours)	High grade cements, Advances in manufacture of cement, Concrete Mix ratio, Manufacture ang Grade concrete and steel.	Power point presentation/Chalk and Board
7	5th week of December 2022 (2 Contact Hours)	Site selection for buildings- Component of building - Foundation- Shallow and deep foundations.	Power point presentation/Chalk and Board



8	1st week of January 2023 (2 Contact Hours)	Brick and stone masonry- Definitions, Bonds, Comparison. Class Test II	Power point presentation/Chalk and Board
9	2 <sup>nd</sup> week of January 2023 (2 Contact Hours)	Plastering - Lintels, beams and columns - Roofs. Importance of surveying in the field of civil engineering	Power point presentation/Chalk and Board
10	3 <sup>rd</sup> week of January 2023 (2 Contact Hours)	Principles of surveying-Classification -Chain Survey-Ranging- Compass Survey -Exhibition of different survey equipment- Plane Table surveying and Levelling, Geodetic surveying, Triangulation. Sources of Water – Dams.	Power point presentation/Chalk and Board
11	4th week of January 2023 (1 Contact Hours)	<b>Cycle Test II</b>	Power point presentation/Chalk and Board
12	1st week of February 2023 (2 Contact Hours)	Water Supply, Quality of Water- Characteristics of water, Water demand Various water treatment units such as sedimentation, Coagulation, Filtration,	Power point presentation/Chalk and Board
13	2nd week of February 2023 (2 Contact Hours)	Wastewater Treatment, Sea Water Intrusion, Recharge of Ground Water	Power point presentation/Chalk and Board

**COURSE ASSESSMENT METHODS** (shall range from 4 to 6)

S.No.	Mode of Assessment	Week/Date	Duration	% Weightage
1	Cycle Test I	2 <sup>nd</sup> week of December 2022	60 Minutes	20%
2	Cycle Test II	5 <sup>th</sup> week of January 2023	60 Minutes	20%
3	Quiz	During the Session	-	10%
4	Assignment 1	During the Session	-	10%
CPA	Compensation Assessment*			20%
5	End Assessment	As per academic Calendar	150 Minutes	40%

\*mandatory; refer to guidelines on page 4



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

The purpose of this survey is to find out from you about your learning experiences and your thoughts about the course. Your replies are very important to assist us in better serving our graduate students. Be assured that your comments will remain confidential, and I will not be able to identify you from other participants.

- 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 through questionnaire

### **COURSE POLICY** (including compensation assessment to be specified)

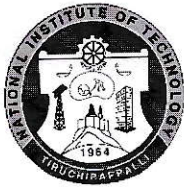
1. Attending all the assessments is **MANDATORY** for every student.
2. If any student is not able to attend Assessment-1/Assessment-2 due to genuine reason, student is permitted to attend the respective assessment as compensation assessment (CPA) with the same weightage.
3. At any case, CPA will not be considered as an improvement test.
4. The passing minimum for the course shall be 35% or Class Average/2, whichever is maximum.
5. The award of "S" grade in the course restricted to a maximum of 10% of the total number of students appeared for the theory courses.

### **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.

### **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.



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## ADDITIONAL INFORMATION, IF ANY

The Course faculty would be available for Queries / Clarifications / Discussions (if required) may be e-mailed to me / contact me during office hours

## FOR APPROVAL

*C. Makendran C*  
Dr. MAKENDRAN C  
Course Faculty \_\_\_\_\_

CC- Chairperson *[Signature]*  
7/12/2022

HOD *[Signature]*



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### Guidelines

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

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