



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	Geotechnical Engineering Laboratory		
Course Code	CELR 14	No. of Credits	2
Course Code of Pre-requisite subject(s)	CEPC19		
Session	July/2019	Section (if, applicable)	A
Name of Faculty	Dr. Jeevan Joseph	Department	Civil Engineering
Official Email	jeevan@nitt.edu	Telephone No.	9619474630
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 BoS)			
<ol style="list-style-type: none">1. Grain Size analysis.2. Consistency limits3. Specific gravity.4. Permeability tests5. Unconfined compression test.6. Direct shear test.7. Core cutter and sand replacement8. Compaction test9. California bearing ratio test10. Vane shear test.11. Tri-axial test12. Consolidation tes			
COURSE OBJECTIVES			
<ol style="list-style-type: none">1. To estimate index properties of soils (coarse and fine)2. To estimate consistency limit of fine grained soils3. To estimate shear strength of soils by direct shear test, triaxial shear test, vane shear test & unconfined compressive test4. To estimate the engineering properties of the soils by density test, CBR test permeability test and consolidation test			
Course Outcomes			

Upon completion of this course, the students will be able to

- Classify the soils based on their index properties
- Differentiate fine grained and coarse grained soils
- Determine shear strength parameter of soil for foundation design
- Estimate the infiltration capacity and compressibility of soils for predicting settlement

COURSE PLAN – PART II

COURSE OVERVIEW

To train to perform various laboratory tests to determine the physical properties and engineering characteristics of soil in accordance with IS specifications

COURSE TEACHING AND LEARNING ACTIVITIES

(Add more rows)

S.No	Topic	Mode of Delivery
1	Grain Size Analysis & Hydrometer	Explanation and Practice
2	Specific Gravity	Explanation and Practice
3	Consistency Limits	Demo and Practice
4	Permeability Test- Constant Head Method & Falling Head Method	Demo and Practice
5	Unconfined Compression Test	Demo and Practice
6	Compaction Test	Explanation and Practice
7	Core Cutter Method	Explanation and Practice



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8	Sand Replacement Method	Explanation and Practice
9	Direct Shear Test	Demo and Practice
10	Vane Shear Test	Demonstration
11	California Bearing Test	Demonstration
12	Triaxial Test	Demonstration
13	Consolidation Test	Demonstration

COURSE ASSESSMENT METHODS (shall range from 4 to 6)

S.No.	Mode of Assessment	Week/Date	Duration (Hrs)	% Weightage
1	Each experiment carries 10 mark finally totaled to 40 marks	Monday (AN)	02:30	40
2	Viva	Monday (AN)	00:15	25
3	Record	Weekly	-	10
4	End Semester	1 st week of Dec	03:00	25
CLS	Compensatory Lab Sessions*	2 nd week of Nov		

*mandatory; refer to guidelines on page 4

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

1. Class committee meetings.
2. Online - Feedback forms submission through MIS.

COURSE POLICY (including compensation assessment to be specified)



Compensatory lab sessions will be provided for students in the 2nd week of Nov. However, these sessions will be made available, only for those who have taken prior permission for leave, stating genuine reasons for their absentia.

Minimum 75% attendance is compulsory for attending the final examination.

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.

ADDITIONAL INFORMATION, IF ANY

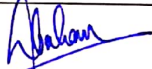
The Course Faculty Details: Room No.:18 (Civil-Department)

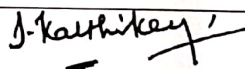
Timings: 09:00-5:00 P.M.

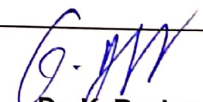
Email ID: jeevan@nitt.edu

Telephone No.: 9619474630

FOR APPROVAL


Dr. Jeevan Joseph
Course Faculty:


Dr. J. Karthikeyan
CC- Chairperson


Dr. K. Baskar
HOD