



COURSE PLAN – PART I			
Name of the programme and specialization	B. Tech – Civil Engineering		
Course Title	Surveying	Course type	Core Course
Course Code	CEPC13	No. of Credits	3
Session	July 2023	Section	B
Name of Faculty	Dr. J. Sevugan Rajkannu	Email & Telephone	sevugan@nitt.edu +91 - 9629609803
Name of Course Coordinator(s)	Dr. Nisha Radhakrishnan	Email & Telephone	nisha@nitt.edu 0431 2503165

Syllabus (approved in Senate)

Introduction and Principles of surveying – Classification – Brief introduction to chain surveying – Compass surveying – Bearing of survey lines – systems and conversions – Local attraction – Latitude and departure – Traverse adjustment of closing errors

Plane Table surveying – instruments and accessories – methods of plane tabling - Levelling – Levelling instruments – Temporary and permanent adjustments – Booking – Reduction to levels – Correction for Curvature and refraction

Theodolite surveying – Vernier theodolite – Temporary and permanent adjustments – Measurement of horizontal and vertical angles –Tacheometric surveying – Stadia system –Fixed and Movable hair methods –Subtense bar – Tangential method

Geodetic surveying - Triangulation – different networks – orders and accuracies – intervisibility and height of stations – Trigonometrical levelling – Observations for heights and distances – Geodetic observations

Application of surveying - Curve setting – Types – Setting out of buildings, culverts, tunnels - Introduction to Advanced Surveying equipments - EDM – Total station - Remote Sensing – GPS.

COURSE OBJECTIVES

1. To understand the importance of surveying in the field of civil engineering
2. To get introduced to different plane and geodetic surveying applications such as chain, compass, plane table, leveling, triangulation, trigonometric leveling etc .
3. To understand the significance of each method in civil engineering and master the skill to carry out proper surveying method on the field.
4. To design numerical solutions for carrying out surveying in civil engineering field.
5. To get introduced to modern advanced surveying techniques involved such as remote sensing, Total station, GPS etc.

COURSE OUTCOMES (CO)

Course Outcomes	Aligned Programme Outcomes (PO)
By the end of this course the students	
1. Test all the concrete materials as per IS code	1 2 3
2. Design the concrete mix using ACI and IS code methods	1 2 3 4 6
3. Determine the properties of fresh and hardened of concrete	1 2 3 4 7 11
4. Ensure quality control while testing/ sampling and acceptance criteria	1 2 3 4 6 7 8 9
5. Design special concretes and their specific applications	1 2 4 7 9 10 11 12

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	Introduction – Principles of surveying- Classification	PPT & Chalk & Talk
2	2 nd week – 3 hours	Chain surveying- Methods and Errors.	
3	3 rd week – 3 hours	Compass surveying, Bearings. Local attractions.	
4	4 th week – 3 hours	Local attraction, Magnetic declination. Tutorial.	
5	5 th week – 3 hours	Plane Table surveying.	
6	6 th week – 3 hours	Two point problem, Three point problem	
7	7 th week – 3 hours	Levelling, Rise-fall method, Height of collimation method. Contours	
8	8 th week – 3 hours	Theodolite surveying, stadia hair constants.	
9	9 th week – 0 hours	Academic break (including Festember)	
10	10 th week – 2 hours	Theodolite single plane method and double plane method	
11	11 th week – 3 hours	Tacheometric surveying	
12	12 th week – 3 hours	Geodetic surveying	
13	13 th week – 2 hours	Curve setting, correction for curve	
14	14 th week – 3 hours	Setting out of buildings.	
15	15 th week – 3 hours	Modern surveying techniques	
16	16 th week – 3 hours	Total station, Remote sensing, GPS	

COURSE ASSESSMENT METHODS

S.No.	Mode of Assessment	Week/Date	Duration	% Weightage
1	Assignments	Anytime during the semester		20
3	Cycle test 1	As per the institute calender	1 hour	20
4	Cycle test 2	As per the institute calender	1 hour	20
5	Final Assessment	As per the institute calender	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:

Dr. J. Sevugan Rajkannu

Email: sevugan@nitt.edu

Mob: +91 9629609803

COMPENSATION ASSESSMENT POLICY

- 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.

- 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.

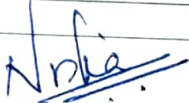
ACADEMIC DISHONESTY & PLAGIARISM


- 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


Dr. J. Sevugan Rajkannu
Course Faculty


Dr. Nisha Radhakrishnan
CC-Chairperson


Dr. S. T. Ramesh
Head of the Department