

Course Title	Surveying		
Course Code	CEPC14	No. of Credits	3
Department	CIVIL ENGINEERING	Faculty	Dr. KAVITHA B
Pre-requisites Course Code	NONE		
Course Type	Core course		

COURSE OVERVIEW

The students will be imparted awareness about the art of Surveying, its importance and training in the art of field measurements using different survey instruments.

COURSE OBJECTIVE

The students will be able to gain knowledge on Chain, Compass, Plane table and Theodolite surveying, Levelling, Engineering surveys. Skill to carry and to decide appropriate type of execution in construction works. Numerical solutions for carrying out surveying in Civil Engineering field. Also training will be imparted in using Advanced surveying equipments.

COURSE OUTCOMES (CO)

1. Students will gain knowledge in linear and angular measurements, preparation of in-situ maps using plane table surveying.
2. Students will be imparted knowledge of transferring points from paper to ground and vice-versa.
3. Training imparted in Levelling and in-situ correction of erroneous instruments.
4. The students will know about Theodolite, its usage and significance. Numerical solutions for field problems.
5. The students will know about geodetic observations and significance of Total station.
6. The students will learn about GPS and advanced surveying techniques using sophisticated equipment.

COURSE TEACHING AND LEARNING ACTIVITIES

S.No	Week	Topic	Mode of Delivery
1	Week 1	Introduction, Principles of Surveying, Classification	Chalk and Board
2	Week 2	Introduction to Chain Surveying, Compass Surveying, Bearings, Systems and Conversions	Chalk and Board
3	Week 3	Local Attraction, Latitude and Departure, Traverse adjustment of closing errors	Chalk and Board
4	Week 4	Plane table surveying- Instruments and Accessories, Methods of Plane tabling	Chalk and Board
5	Week 5	Levelling-Levelling instruments, Temporary adjustments	Chalk and Board
6	Week 6	Booking and Reduced levels, Correction for curvature & Refraction	Chalk and Board
7	Week 7	I st Assessment	
8	Week 8	Theodolite surveying-Vernier Theodolite, Temporary & Permanent adjustments, Measurement of Hori. & Ver. angles	Chalk and Board
9	Week 9	Tacheometric surveying – Stadia system, Fixed & Movable hair method, Subtense method, Tangential method	Chalk and Board
10	Week 10	Geodetic Surveying, Triangulation-Different networks	Chalk and Board
11	Week 11	Orders & Accuracies, Intervisibility & Height of stations	Chalk and Board
12	Week 12	Trigonometrical Levelling, Observations for heights & Distances	Chalk and Board
13	Week 13	Geodetic observations	Chalk and Board
14	Week 14	II nd Assessment	
15	Week 15	Application of surveying – Curve setting, types, Setting out of Building, Culverts, Tunnels	PPT& Black board
16	Week 16	Introduction to advanced surveying equipments, EDM-Total station	PPT& Black board
17	Week 17	Remote sensing, GPS	PPT& Black board
18	Week 18	Semester Examination	

COURSE ASSESSMENT METHODS

S.No	Mode of Assessment	Week	Duration	% Weightage
1	Assessment 1	Week 7	1 hour	20 marks
2	Assessment 2	Week 14	1 hour	20 marks
3	Tutorials	Week 8 and 15	1 week	10 marks
4	Final Examination	Week 18	3 hour	50 marks
5	Total			100 marks

ESSENTIAL READINGS : Textbooks, reference books Website addresses, journals, etc**Text Books:**

1. Duggal, S.K. Surveying Vol. I and II, Tata McGraw Hill, 2004.
2. Punmia, B.C. Surveying Vol.I and II, Standard Publishers, 1994.
3. Arora, K. R. Surveying Vol. I and II, Standard Book House, 1996.
4. SatheeshGopi. Advanced Surveying, Pearson Education, 2007.

COURSE EXIT SURVEY

1. Class committee meetings
2. Feedback forms will be collected from students

COURSE POLICY (including plagiarism, academic honesty, attendance, etc.)

- Min percentage of 75% attendance is compulsory for attending final examination.
- Attendance during assessments is mandatory.
- The grading policy is same as the NITT regulations.

ADDITIONAL COURSE INFORMATION

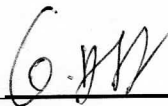
- The Course handling Faculty is available for consultation during office hours (Room No. C16, Civil Engineering Department).
- Queries, if any, can also be emailed to the Faculty directly at bkavitha@nitt.edu

FOR SENATE'S CONSIDERATION

Course Faculty



CC-Chairperson



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