# LESSON PLAN FOR SUMMER SESSION (2022-23)

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| Discipline: Civil Engineering | Semester-4th | Name of Teaching Faculty: Subrat Kumar Panigrahi |
| Subject: Land Surveying Practice-I | No. of days per week class alloted: 7P/W | Semester From date- 14.02.2023<br>To date- 23.05.2023<br>No. of weeks- 14<br>Total Perios-98 P |

| WEEK | PERIODS | UNITS | TOPICS |
|---|---|---|---|
| Feb 3rd Week | 4 | 1 | Testing and adjusting of a metric chain Measurement of distance between two points (more than 2 chain lengths apart) with chain including direct ranging |
| | 3 | 1 | Setting out different types of triangles, given the lengths of sides with chain and tape |
| Feb 4th Week | 4 | 1 | Setting out different types of triangles, given the lengths of sides with chain and tape |
| | 3 | 1 | Measurement of distance by chaining across a obstacles on the chain line i) a pond ii)a building iii) a stream/ river (in the event of non-availability of stream / river, a pond or lake may be taken, considering that chaining around the same is not possible. |
| Mar 1st Week | 4 | 1 | Setting perpendicular offsets to various objects (at least 3) from a chain line using (1) tape, (2) cross-staff, (3) optical square and comparing the accuracy of the 3 methods |
| | 3 | 2 | Setting oblique offsets to objects (at least 3) from a chain using tape |
| Mar 2nd Week | 4 | 2 | Testing and adjustment of Prismatic compass and Surveyor's compass. |
| | 3 | 2 | Measurement of bearings of lines (at least 3 lines) and determination of included angles using Prismatic compass and Surveyor's compass. |
| Mar 3rd Week | 4 | 2 | Setting out triangles (at least 2) with compass, given the length and bearing of one side and included angles. |
| | 3 | 2 | Setting out a closed traverse of 5 sides, using prismatic compass, given bearing of one line and included angles and lengths of sides. |
| Mar 4th Week | 4 | 2 | Conducting chain and compass traverse surveying in a given plot of area (2plots) and recording data in the field book. (5 to 6 students/groups) |
| | 3 | 3 | Setting up of Plane Table and Plotting five points by radiation method and five inaccessible points by intersection method. |
| Apr. 1st Week | 4 | 4 | Conducting Plane Table surveying in a given plot of area by traversing (Atleast a 5 sided traverse and locating the objects) |
| | 3 | 4 | Plane table surveying by Resection method (two point &three point problem method) |
| Apr. 2nd | 4 | 5 | Measurement of horizontal angles (3nos.) by repetition and reiteration method and compare two methods |
| | 3 | 5 | Measurement of horizontal angles (3nos.) by repetition and reiteration method and compare two methods |
| Apr 3rd | 4 | 5 | Determination of magnetic bearing of 3 given straight lines |
| | 3 | 5 | Plotting the traverse from exercise 4.3 and checking the error of closure |
| Apr 4th | 4 | 6 | Making temporary adjustments of Levels |
| | 3 | 6 | Determining Reduced Levels of five given points taking staff readings with Levels. |
| Apr 5th week | 4 | 6 | Determining the difference of levels between two points (3 pairs of points / group) by taking staff readings form single set up of level, recording the readings in level book and application of Arithmetic check. (At least 3 change points must be covered) |
| | 3 | 6 | Conduct Fly Leveling (Compound) between two distant points with respect to R.L. of a given B.M. and reduction of levels by both height of collimation and rise & fall method and applying Arithmetic check. (At least 3 change points must be covered) |
| May 1st Week | 4 | 6 | Conduct profile leveling along the given alignment for a road / canal for 150m length, taking L. S. at every 15m and C. S. at 1m & 3m apart on both sides at every 30m interval and recording the data in level book and applying arithmetical check. |
| | 3 | 6 | Locating contour points in the given area by direct method / indirect method |
| May 2nd | 4 | 7 | Basics of Aerial Photography: Film, Focal Length, Scale, Types of arial photograph |
| | 3 | 7 | Map reading Cadastral Maps & Nomenclature |
| May 3rd week | 4 | 8 | Photogrammetry,Classification of Photogrammetry,Aerial Photogrammetry, Terrestrial Photogrammetry |
| | 3 | 8 | Photogrammetry Process: |

Concern faculty 13.2.23

HOD 13.2.23
Civil engineering

Academic Coordinator 13/02/23
GP Nabarangpur

Principal 13.2.23
GP Nabarangpur