<p style="text-align:center">Skill Enhancement Course:</p>

Subject: Geography

Semester: II

Course Name: **Data Collection, Analysis and Mapping**

Course Code: SEC0200103

Course Level: Foundation & Introductory

Part I: Theory (2 Credits, 30 classes of one-hour duration)

Part II: Practical (1 Credit, 15 classes of two-hours duration)

75 Marks (Theory =30 Marks, Practical=25 Marks, Internal Assessment = 20 Marks)

Course Outcomes:

Understand the fundamental principles of data collection, processing and visualization Acquire practical skills in collecting spatial and non-spatial data using various methods and technologies.

Develop proficiency in statistical analysis of various data

Apply data representation and mapping skills to real-world phenomena.

Unit 1

1. Nature and types of data and data collection: Spatial and non-spatial data; Qualitative and Quantitative data; Primary and Secondary data; Sampling techniques in data collection: simple random, stratified and purposive sampling. (10 classes)

Unit 2

1. Data processing and analysis: primary data processing and tabulation; data grouping; application of summary measures (Central tendency and dispersion) in data analysis (Ungrouped and grouped data)

Unit 3

1. Representation of spatial and non-spatial data: Graphical representation of data (Bar, Line and Circle); Concept of map and map scale; Thematic mapping of spatial data (Choropleth and Isopleth)

Practical

Unit I: To attempt 2 questions in total 8 marks each (16 Marks)

1. Tabulation/Grouping of spatial and non-spatial data for making frequency distribution table; Preparation of Histogram, Frequency Polygon and Frequency Curve. (3 assignment)
2. Computation of mean, median and mode for ungrouped and grouped data; and Determination of median and mode using graphical methods. (3 assignments)
3. Computation of standard deviation and coefficient of variation of ungrouped and grouped data relating to various phenomena (rainfall, landholding, income, production, etc.) for comparison of distribution patterns. (3 Assignments)

4. Representation of spatial (Physical and human) data through Choropleth and Isopleth mapping and Pie cartogram. (3 Assignments)
5. Processing and tabulation of excel data and preparation of frequency distribution table using filtering method (For attributes like age structure, sex composition, caste composition, education and occupation, production, etc.). (3 assignments)
6. Preparation of Bar Diagram (Simple and Composite) for representation of (State/District level) population and production of food grains in India or any state. (2 assignments)
7. Preparation of Pie Diagram for representation of Land use or Population composition in Assam /N.E. India. (1 Assignments)
8. Preparation of a Power Point presentation of the above mentioned assignments (At least 5) using MS office package. (1 Assignments)

Unit II: Practical Note-Book and Viva-voce (9 Marks)
1. Evaluation of Practical Note-Book (5 Marks)
2. Viva-voce (4 Marks)

Suggested readings:

1. Aslam Mahmood - *Statistical Methods in Geographical Studies*. Rajesh Publications.
2. R.L. Singh – *Elements of Practical Geography.* Kalyani Publishers.
3. Majid Husain – *Models in Geography,* Rawat Publications.
4. S.P. Gupta – *Statistical Methods,* Sultan Chand & Sons.
5. L.R. Singh – *Fundamentals of Practical Geography,* Sharda Pustak Bhawan.
6. Swapan Kumar Maity – *Essential Graphical Techniques in Geography*, Springer.
7. Joan Lambert – *Microsoft Office 2019 Step by Step,* Microsoft Press.
8. R. Parameswaran – *Computer Applications in Business*, S. Chand Publishing.
9. Jinjer Simon – *Excel Data Analysis: Your visual blueprint for analyzing data, charts and PivotTables,* Wiley India.
10. A. Sarma & G. Sharma – *Computer Applications in Geography*, Rajesh Publications.