

DISCIPLINE SPECIFIC CORE COURSE – 6 (DSC-6): STATISTICAL METHODS IN GEOGRAPHY

Credit distribution, Eligibility and Pre-requisites of the Course

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
STATISTICAL METHODS IN GEOGRAPHY (PRACTICAL)	4	-	-	8		

Learning Objectives

The Learning Objectives of this course are as follows:

- The concept of quantitative information in general and Geographical data in particular. The importance of data analytics. The ways data is collected, or data is taken from different sources. The sampling methods' application for data collection purposes.
- To understand the ways to handle the collected data through classification, tabulation and stigmatization.
- To compute relations and impacts among the data series.

Learning outcomes

The Learning Outcomes of this course are as follows:

- To differentiate between qualitative and quantitative information.
- To know the nature of various data, different sources and methods of data collection.
- To present data through graphical and diagrammatic formats.
- To analyse the variations in spatial and non-spatial data.

SYLLABUS OF DSC-6

UNIT – I (3 Weeks)

Data in Geography: Sources of Data, Scales of Measurements in Geography, Tabulation, Frequency Distribution, Geographical Data Matrix.

UNIT – II (5 Weeks)

Descriptive Statistics: Central Tendencies – Mean, Median, Mode; Measures of Partitions - Quartile, Decile, Percentile; Measures of Dispersion- Standard Deviation and Coefficient of Variation; Spatial Centro-graphic Techniques – Mean Centre, Median Centre.

UNIT – III (3 Weeks)

Sampling Methods: Sampling (Simple Random, Systematic, and Stratified); and Non-probability sampling.

UNIT – IV (3 Weeks)

Theoretical Distribution: Concept of Probability Distribution (Theoretical only), Normal Distribution – Characteristics, Area under Normal Curve.

UNIT – V (3 Weeks)

Relationship Analysis: Correlation - Spearman's and Karl Pearson's coefficient of correlation; Simple Regression.

Practical component (if any) – Practical File*

Suggestive readings

1. Alvi Z. (1995). Statistical Geography: Methods and Applications. Rawat Publications, Jaipur.
2. Mahmood A. (1999). Statistical Methods in Geographical Studies. Rajesh Publications, New Delhi.
3. Pal S. K. (1998). Statistics for Geoscientists. Tata McGraw Hill, New Delhi.
4. Rogerson P.A. (2014). Statistical Methods for Geography: A Student's Guide. Sage, New Delhi.
5. Singh D. (2018). प्रारंभिकसांख्यिकीविधियाँ. New Delhi. R K Books, New Delhi.
6. Ebdon D. (1977). Statistics in Geography: A Practical Approach. Oxford, UK. Blackwell.
7. Singh D. (2018). Elementary Statistical Methods. R K Books, New Delhi.
8. Sinha, I. (2007). सांख्यिकीभूगोल. Discovery Publishing House, New Delhi.
9. Walford N. (2011). Practical Statistics for Geographers and Earth Scientists. Wiley-Blackwell, West Sussex, United Kingdom.
10. SPSS (Statistical Package for Social Sciences)
11. Tableau Desktop software/R.

Note:

- *1. Students should construct/collect data matrix (75X5) with each row 75 representing an aerial unit (district/village/town) and 5 columns of relevant attributes of areal units.**
- 2. All the exercises will be based on the data matrix collected by the students.**
- 3. Simple calculator is allowed in the examination.**