

CLUSTER UNIVERSITY SRINAGAR

SYLLABUS (FYUP UNDER NEP 2020)

Offered By Department Of STATISTICS

Semester 1st Skill Enhancement Course (SEC)

Course Title: Statistical Methods-I

Course Code: UGSTA22S101 Max. Marks 100

Credits: 4 (Theory: 1, Practical: 3) Theory External: 15; Min Marks: 06

Contact Hrs: 105 (Theory: 15, Practical: 90) Theory Internal (Continuous Assessment): 10 Marks, Min Marks: 04

Practical Experimental Basis= 45 Marks, Min. Marks: 18

Practical Internal (Continuous Assessment): 30 Marks, Min. Marks: 12

Course Objective:

• To handle various types of data and their graphical representation using excel or any other software. To use the data for further analysis using measures of central tendency using excel.

• To find the summary measures, viz. measure of dispersion of data using excel or any other statistical software.

Course Outcome:

After completing the course, a student will be able to compute manually as well as using excel or any other software:

- The methods for presenting data sets, including common graphical tools (such as histograms, frequency polygon, frequency curve, ogive).
- The data with measures of central tendency and measures of dispersion.

Students will be given hands-on training in collecting and analysing the data. Using excel or any other statistical software will gain additional knowledge.

I THEORY

Concept of raw data, Discrete series, Continuous frequency distributions, Concept of Diagrammatic and graphical representation of non-frequency data. Concept of measures of central tendency .Concept of Dispersion, Concept of moments.

II COMPUTATIONAL TECHNIQUES

Transformation of raw data into discrete series and continuous frequency distribution, Diagrammatic and graphical representation of non-frequency data. Frequency distribution, cumulative frequency distribution and their graphical representation - histogram, frequency polygon and Ogive curves.

Computation of measures of central tendency or location (Arithmetic mean, median, mode, geometric mean and harmonic mean). Relation between various measures of locations for given data set.

Computation of Dispersion: Relative and absolute measures, Range, Quartile Deviation, Mean Deviation and Standard Deviation, Variance and coefficient of variation for a given data set. Measures of moments for a given data set.

REFERENCES

- 1. Gupta S.C, Fundamentals of Statistics, Himalaya Publishing House, Bombay.
- 2. Mukhopadhaya, P. Applied Statistics, New Central Book Agency (P) Ltd., Calcutta.
- 3. Gupta, S.C. and Kapoor, V.K. (2000). Fundamentals of Mathematical Statistics (10th ed.), Sultan Chand and Sons.
- 4. Goon, A.M., Gupta, M.K. and Dasgupta, B. (2013). Fundamental of Statistics, Vol I, World Press, Kolkata.
- 5. Goon, A.M., Gupta, M.K. and Dasgupta, B. (2011). Fundamental of Statistics, Vol II, World Press, Kolkata.
- 6. Hangal, D.D. (2009), Introduction o Applied Statistics: A Non-Calculus Based Approach. Narosa Publishing Comp. New Delhi.
- 7. Miller, I. and Miller, M. (2006). John E. Fruend'd Mathematical Statistics with Applications, (7 th Edn.), Pearson Education Asia.
- 8. Mood, A.M. Graybill, F.A and Boes, D.C. (2011). Introduction to the Theory of Statistics, 3 rd Edn., Tata McGraw-Hill Pub. Co.Ltd.
- 9. Bhat B. R, Srivenkataramana T and Rao Madhava K. S (1997): Statistics: A Beginner's Text, Vol 1, New Age International (P) Ltd.

- 10. Gupta, S.C. and Kapoor, V.K. (2000). Fundamentals of Mathematical Statistics (10th ed.), Sultan Chand and Sons.
- 11. Das N,G. Statistical Methods Vol I, McGraw Hill Education India.
- 12. Croxton F. E., Cowden D.J and Kelin S (1973): Applied General Statistics, Prentice Hall of India
- 13. Fruend J.E (2001): Mathematical Statistics, Prentice Hall of India.
- 14. Croxton F. E. Cowden D.J and Kelin S (1973): Applied General Statistics, Prentice Hall of India
- 15. Spiegal, M.R (1967): Thepry and Problems of Statistics, Schaum's Publishing Series.