

Foundational Statistics and Computer (Bridge Course)

Contact Classes [Module: 6 Hours]

1. **Introduction to Statistics:** Concept of Statistics, Importance and Limitations of Statistics. Data: quantitative and qualitative, attributes, variables, tabular representation of data. [1 Hour]
2. **Diagrammatic Representation of Data:** Line diagrams, Bar diagrams, Histogram, Pie diagrams, Frequency Polygon. [1 Hour]
3. **Measures of Central Tendency:** Mean, Median & Mode for different types of data. [1 Hour]
4. **Set Theory:** Representation of sets, Subsets and supersets, Universal and Null sets, Basic operations on sets, Venn Diagrams. [1 Hour]
5. **Permutation and Combination:** Fundamental principle of counting, Factorial notation, Permutation: Permutation of n different things, Combination: different formulas on combination. [1 Hour]
6. **Statistical Packages:** Common pictorial representation of data using Excel. [1 Hour]

Spot Assessment & Remedial

Reference Books:

1. N.G. Das: Statistical Methods (Volume I): Tata McGraw-Hill.
2. A.M. Goon, M.K. Gupta & B. Dasgupta: Fundamentals of Statistics, Vol. I & II, 8th Edn. The World Press, Kolkata.
3. G. C. Beri: Statistics for Management: Tata McGraw- Hill.
4. B. Jhunjhunwala: Business Statistics, S. Chand Publishing.
5. V.K. Kapoor & S.C. Gupta: Fundamentals of Mathematical Statistics, Sultan Chand & Sons.
6. I. Miller & M. Miller: John E. Freund's Mathematical Statistics with Applications, (7th Edn.), Pearson Education, Asia.
7. M. Sharma & A. Gupta: The Practice of Business Statistics, Khanna Publishing House, New Delhi.

Self-Placed Learning [Min. 20 hours Module]

Through Massive Open Online Courses (MOOCs): **[20 Hours]**

Online Resources

1. <https://www.youtube.com/watch?v=uqEKroQ0UpY> (Meaning, Scope and Importance of Statistics, 25 Mins.)
 2. <https://www.youtube.com/watch?v=7sQmD5Vzo3U> (Types of Data, 12 Mins.)
 3. <https://www.youtube.com/watch?v=GqYK9o6QjU4> (Frequency distribution of data, 19 Mins.)
 4. <https://www.youtube.com/watch?v=KqBO4dsnRIQ> (Graphical Representation of Data, 5 Hours 33 Mins.)
 5. <https://www.youtube.com/watch?v=34Yfd40xbZU> (Meaning of Measure of Central Tendency, 41 Mins.)
 6. <https://youtu.be/-b-zg-ZCYJc> (Arithmetic Mean, 33 Mins.)
 7. https://youtu.be/f57yZNTH_ZQ (Median, Mode: 2 Hours 19 Mins.)
 8. <https://youtu.be/XbCBbJncfGE> (Representation & Types of Sets, 1 Hours 04 Mins.)
 9. <https://www.youtube.com/watch?v=i03KGyeyrY> (Subsets, Power Sets, 56 Mins.)
 10. <https://youtu.be/PjVCenWEfv4> (Basic operations on sets, 52 Mins.)
 11. https://youtu.be/6_ht9tp33CM (Fundamental Principle of Counting, 13 Mins.)
 12. <https://www.youtube.com/live/THHeijYTfKs?feature=share> (Permutation & Combination, 6 Hours 38 Mins.)
 13. <https://youtu.be/Z2gzLYaQatQ> (Graphical representation of Data using Excel, 9 Mins.)
 14. <https://youtu.be/3IANIzzdBHI> (MS Excel Charts & Graphs, 7 Mins.)
- COMMON Academic Orientation and Doubt Clearing Session **[4 hours]**