

**UNIVERSITY OF DELHI  
DELHI SCHOOL OF ECONOMICS  
DEPARTMENT OF ECONOMICS**

**Minutes of the meeting for B.A. (Hons) Economics, Third Semester (CBCS) Course:  
Statistical Methods for Economics (HC33) (Core Course - (CC) Credit: 6)**

**Date: 26th July, 2021**

**Convener: Prof. Rohini Somanathan**

The meeting was held online. The following teachers attended:

<b>S. No.</b>	<b>Name of Teacher</b>	<b>College</b>
1	Pooja Sharma	Daulat Ram College
2	Dr. Apra Sinha	ARSD College
3	Deepika Goel	Aryabhatta College
4	Sanjay Kumar	Dyal Singh College (M)
5	Ankur	Satyawati (D)
6	Sonia Goel	Ramjas College
7	Priyanka Bhatia	SRCC
8	Jasneet Wadhwa	SGTB Khalsa College
9	Deepak Manchanda	JDMC
10	Sumeet Raheja	Shivaji College
11	Rakesh Kumar	Dyal Singh (M)
12	Namita Mathur	Indraprastha College for Women
13	Pallavi Manchanda	SPM
14	Jasmin	JMC
15	Anita	Kalindi
16	Neha Verma	KMC
17	Reshmi Ganguly	LSR College
18	Yogita Yadav	Sri Venkateswara College
19	Tanushree Dash	Kamala Nehru College
20	Smita Gupta	JMC
21	Bhawana Pareek	Shaheed Bhagat Singh College
22	Surbhi Badhwar	Shyam Lal College (Evening)
23	Gurpinder Kaur	Shaheed Bhagat Singh College
24	Chaitanya Garia	Dyal Singh (M)
25.	Neetu Chopra	Miranda House

The discussion and decisions taken are summarized below.

1. It was agreed in the meeting that in case of an online examination questions should be designed to prevent students from adopting unfair practices.
2. The group inquired of additional resources for teachers that could help them to improve their teaching skills. Prof Somanathan suggested a book by Gelman, A., & Nolan, D. (2017). Teaching statistics: A bag of tricks. Oxford University Press. This book has been suggested as a reference for teachers.
3. The syllabus and readings are otherwise unchanged from last year. These are appended below for easy reference:

## **Course Description**

The course teaches students the basics of probability theory and statistical inference. It sets a necessary foundation for the econometrics courses within the Honours programme. The familiarity with probability theory will also be valuable for courses in advanced microeconomic theory.

### **Unit 1**

Introduction and overview; The distinction between populations and samples and between population parameters and sample statistics

**Devore: Ch 1.1**

### **Unit 2**

Elementary probability theory Sample spaces and events; probability axioms and properties; counting techniques; conditional probability and Bayes' rule; independence

**Devore: Ch 2**

### **Unit 3**

Random variables and probability distributions Defining random variables; probability distributions; expected values and functions of random variables; properties of commonly used discrete and continuous distributions (uniform, binomial, exponential, Poisson, hypergeometric and Normal random variables)

**Devore: Ch3 (except Negative Binomial Distribution), Ch 4.1-4.3 and pgs. 165-166**

### **Unit 4**

Random sampling and jointly distributed random variables; Density and distribution functions for jointly distributed random variables; computing expected values of jointly distributed random variables; covariance and correlation coefficients

**Devore: Ch 5.1-5.3 (except pgs 200-202), 5.4, 5.5**

### **Unit 5**

Point and interval estimation, estimation of population parameters using methods of moments and maximum likelihood procedures; properties of estimators; confidence intervals for population parameters

**Devore: Ch 6 (except pages 249-250), Ch7 (till page 289)**

### **Unit 6**

Hypothesis testing Defining statistical hypotheses; distributions of test statistics; testing hypotheses related to population parameters; Type I and Type II errors; power of a test; tests for comparing parameters from two samples

**Devore: Ch8 (except  $\beta$  and sample size determination in each case)**

#### References

1. Devore, J. (2012). Probability and statistics for engineers, 8th ed. Cengage Learning.
2. Larsen, R., Marx, M. (2011). An introduction to mathematical statistics and its applications. Prentice Hall.
3. Miller, I., Miller, M. (2017). J. Freund's mathematical statistics with applications, 8th ed. Pearson.

#### References for Teachers

1. Gelman, A., & Nolan, D. (2017). Teaching statistics: A bag of tricks. Oxford University Press.

#### **Assessment:**

This course carries 100 marks of which the end semester examination is 75 marks and internal assessment is worth 25 marks as per the following norms: Two class tests/assignment of 10 marks each and 5 marks for attendance.