Progressive Education Society's

Modern College of Arts, Science and Commerce,

Shivajinagar, Pune - 5

M.Com. (semester IV)

(2023 Course under NEP 2020)

Course Code: 23CoStaP407 **Course Name: Business statistics -II**

Teaching Scheme: 4 Hours/Week **Credit: 04**

Examination Scheme: CIA: 50 Marks **End-Sem : 50 Marks**

Prerequisite Courses:

- Basic concept of mathematics and statistics.

Course Objectives:

On completion of the course, student will be able to–

1. Understand and measure the various official statistics.
2. Learn decision making in various situation using statistical technique.
3. Understand various life insurance products.
4. Distinguish between simple interest and compound interest policy
5. Apply various econometric methods for business data.
6. Understand transshipment model
7. Apply inventory model to decide inventory in stock management

Course Contents

Unit 1	Indian official statistics	12
	• Trade statistics , agricultural statistics, Labour and industrial statistics, Educational statistics • National Income statistics	
Unit 2	**Actuarial Statistics**	**13**
	• Review of terminologies involved in construction of life table • Future life time random variable (remaining life time random variable) • Curtate future life time random variable • Acturial survival models: Geompertz and Makeham's	

	model • Introduction to interest rate • Introduction to life insurance policies : Term insurance, endowment insurance and whole life insurance,	
Unit 3	**Methods in Econometrics**	**15**
	• Introduction of econometrics, Interpolation • Classical linear regression model(CRLM) • CRLM with Multiple Regressor and statistical inferences, • Non linear regression model and Generalized linear model(logistic model)	
Unit 4	**Queuing Theory**	**8**
	• Meaning, calling population, queue discipline, inter arrival rate, service rate, traffic intensity. • single channel Poisson arrival with exponential service rate, average waiting time in i)queue and ii)system, average length of i)queue and ii)system. • Examples and problem. (using Excel)	
Unit 5	**Inventory Control**	**12**
	• Meaning of inventory control, Factors involved in inventory problem analysis, • EOQ model with constant rate of Demand, • EOQ model with different rates of demand, EOQ model with constant demand and variable order cycle time	

Recommended Books :

1. Operations Research : An introduction ,eight edition Prentice Hall of India, New Delhi by H. A. Taha (2007)
2. Operations Research, S. Chand and Sons. New Delhi.by Kapoor, V. K.(2006).
3. Indian statistics, Continental prakashan by Dr. A. B. Rao
4. Actuarial Statistics, Universities Press, Dr. S. R. Deshmukh
5. Essential Statistics, Regression, and Econometrics, Academic press, Gray smith.
6. Probability, statistics and econometric, Nikki Levy, Oliver Linton.