SKILL ENHANCEMENT COURSE

SKILL ENHANCEMENT COURSES (3 Credit Each)

Skill Enhancement Courses

Semester	course no.	Title of the paper	Total Credit	Proposed by Department
First Semester	EC1. SEC1	Elementary Computer Application in Presentation of Data**	3	Economics
Third Semester	EC3.SEC2	Methods of Data Analyses**	3	Economics
Fourth Semester	EC4.SEC3	Computer Application in Data Analyses**	3	Economics

**Students have the option to choose SEC from the common pool of courses across disciplines.

Semester – 1
Elementary Computer Application in Presentation of Data
(SEC-1)

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Course code: EC1.SEC1
Credit: 3

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Course outline:
The course will impart meaningful representation of data in the form of chart and pivot table. Draw analysis on data using spreadsheet and use interpretation to make decision. Understanding the communication protocols, network design, internet architecture for connectivity, and designed to equip students with knowledge and skill required to use social media platform.

Unit – I: MS Office Application

Word processing– Introduction, working with MS- word, formatting text and documents: using of sorting, tables, graphics. MS Excel - introduction and their functions. MS-PowerPoint: creation of PPT with slides, formatting, transition, animation effect, time adjustment. MS-Access: Introduction to Database, DBMS and RDBMS.

Unit – II: Data analysis in spreadsheets

Concept of worksheets and Workbooks, moving, copying, inserting, deleting and saving of worksheet, working with multiple workbooks and worksheets, controlling views, naming cells using name box, Printing and protecting worksheets: Adjusting margins setting page breaks, changing orientation, and printing data. Performing what if analysis: types of what if analysis, data tables, scenario manager, goal seek, types of Diagram, charts and graph ,understanding data points and data series, editing and formatting chart elements, analysing data using pivot tables

Unit – III: Network and social Media

Basic concept of network, types of computer networking, Network topologies, protocols, concept of intranets, extranets and internet, net etiquettes, application and drawback of internet and E-commerce. Introduction to Social Media, types of social media platforms, advantages and disadvantages of using social media, Impact of social media on society.

Theory: 40 %
Practical: 60%

Reading list:

Anita Goel – Computers Fundamental, Pearson Education India, Delhi.

Rajaraman V – Fundamentals of computers, PHI

Arora Ashok : Computer Fundamentals and Applications, VPH, UP.

K.Mohan Kumar & Dr. Raj Kumar: Computer Applications in Business, Tata McGraw Hill, New Delhi.

Agarwala Kamlesh. N. and Agarwala Deeksha: Busniess on the Net- Introduction to E-Commerce.; Macmillan India, New Delhi.

E- Office published by Manipal institute of computer Education, Manipal.

Semester – 3
Methods of Data Analyses
(SEC-2)

Course code: EC3.SEC2
Credit: 3

Course Outline

This course introduces the student to collection and presentation of data. It also focuses on how data can be summarized and analyzed for drawing statistical inferences.

Unit – I: Frequency distribution:

Univariate and bivariate frequency distribution, presentation of data – one dimension, two dimension, three dimension, pictogram, histogram, frequency polygon, line frequency, ogive

Unit-II: Correlation
Meaning, types and uses of correlation, methods of studying correlation, Scatter diagram method, Estimates of Karl Pearson's coefficient of correlation, Spearman's rank correlation.

Unit-III: Regression Analysis
Concept and uses of regression analysis, difference and similarities with correlation, properties of regression coefficients, estimates of regression equation of X on Y and Y on X

Reading list
Karmeland M. Polasek (1978), *Applied Statistics for Economists*, 4th edition, Pitman.
M. R. Spiegel (2003), *Theory and Problems of Probability and Statistics* (Schaum Series).
S.P. Gupta (1993), Statistical Methods, S. Chand & Sons, New Delhi

Computer Application in Data Analysis
(SEC-3)

Course code: EC4.SEC3
Credit: 3

Course outline

This is a course on computer application in Data analysis. The students will be given hands on training on using statistical and computing software to better visualize and understand data concepts. Students will be taught the applications of software to analyse data using various methods.

Unit-I: Introduction and Overview

Meaning, scope of statistics, importance and limitation of statistics collection of data; Classification of data: Meaning, methods of classification, Tabulation of data: meaning, role, parts of a table, General rules of tabulation.

Unit-2: Data management with Ms-excel

Excel basics, cell referencing (relative, absolute, mixed), Consolidating data, Cell formatting. Functions in excel (SU, AVERAGE, COUNT, MAX, MIN, IF), sorting data, filtering data (auto and advanced), hyper linking. Measures of central tendency: Mean, Median and Mode, geometric, moments, Skewness and kurtosis: Partition values; software application in MS-EXCEL.

Unit-3: Correlation and linear Regression Model

Correlation analysis: meaning, types of correlation, methods of studying correlation. Scatter diagram method, Karl Pearson's coefficient of correlation, Spearman's rank method, Testing the significance of the correlation coefficient; Method of least squares: Introduction, estimation, the standard error of estimate, the coefficient of determination, properties of the OLS estimator.

Theory: 40 %

Practical: 60%

Reading list:

Dr. Larry Stephens, Statistics Demystified, McGraw Hill Professional, USA.
Anderson, D.R., Sweeney, D. J., William, T.A., Camm, J. D., & Cochran, J. J. (2014). *Essentials of Statistics for Business and Economics.* Boston: Cengage Learning.
J. Holton Wilson, Barry P. Keating, Marry Beal-Hodges; Regression Analysis: Understanding and Building Business and Economic Models using Excel, BEP, New York.
Priscilla Chaffe- Stengel, Donald N. Stengel; Working with Excel: Refreshing Math Skills for Management, Business Expert Press, New York
Englewood Cliffs, N. J., Techniques and Application, Prentice Hall.