

Department	Economics	Class	II – M.A.		Semester	III
Course Title	Computer Applications in Economics	Hours	Credit	CIA	External	Total
Course Code	18P3VMC13	75	4	25	75	100

Objectives

1. To understand the applications of computers
2. To obtain knowledge and skill on computer applications in economics
3. To enrich and apply the learned aspects

Learning Outcome

Develops the applications skills through MS-Office and SPSS

Unit I Computer Fundamentals, Software and Operating System (15 hours)

Basic architecture of CPU and its functions – Input device and output device – Primary and secondary memory – Software: Application, System and Utility – Booting process – Machine language and assembly language – Components of OS – OS: DOS, Windows and UNIX – Applications of computer in Economic and other fields.

Unit II Data Communication and Computer Network (15 hours)

Need of data communications – Network concepts – Network types: LAN, MAN and WAN – Network topology – Network Protocol – Network terminologies – Types of signals and transmission – Modem and Multiplexor.

Unit III MS-Word, PowerPoint and Access Applications (15 hours)

MS-Word: Word basics, creation of document, editing, formatting and printing documents MS-PowerPoint: Features, Creation of Slide, Types of view, Slide master, Templates and Slide transition – MS-Access: Data Field, Record, Database file, Types of files, Types of records, Data type, Database evolution.

Unit IV MS-Excel Applications (15 hours)

Basics of worksheet – Data entering in Worksheet – Basic calculations: Sum, Sqrt, Max, Min, Count, Averages, Rank – Conditional and logical functions: IF, AND, OR – Estimation of correlation and regression – Hypothesis testing: t-test, F-test and Z-test - Drawing charts: Area, Bar, Column, Line, Pie, Drought, Scatter, Radar and 3D Charts.

Unit V SPSS Applications (15 hours)

Entering data, data and variable view, create work file, column settings, data editor, data file, save data file and output window – Measures of central tendency: Mean, median and mode – Measures of variability: Range, standard deviation and variance – Procedures of One Way ANOVA – Correlation: Pearson's coefficient correlation, Spearman's Rank Correlation and Partial correlation – Regression: Simple linear regression, Least squares estimates, Multiple regression - Interpretation of output.

Text Books

1. Gupta, C.P. (2010), Computer Applications in Management, Lakshmi Naryan Agarwal Publishers, Agra.
2. Dhanasekaran, K. (2010), “Computer Applications in Economics”, Vrinda Publications, Delhi.

References

1. Ajai S.Gaur and Sanjaya S.Gaur (2008), “Statistical Methods for Practice and Research”, Response Books-Sage Publications Pvt. Ltd., New Delhi.
2. Ravichandran, D. (2001), “Introduction to Computers and Communication”, Tata Mc Graw Hill Publishing Company Ltd., New Delhi.
3. Kanter (2000), “Introduction to Computers – Management Information Systems”, Prentice Hall of India Ltd., New Delhi.

Websites / e-books

1. Frank C.Woykoff, Computer Applications Economics: Online and Interactive, <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1465-7295.1989.tb02023.x>
2. John M.Sumansky, Computer Applications in Pre-College Economics, https://www.jstor.org/stable/1805575?seq=1#page_scan_tab_contents