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| **Program: Bachelor of Commerce (Economics and Analytics)** | | | | | | **Semester: II** | |
| **Course: Advanced Excel**  **AY: 2023-24** | | | | |  | **Code:** | |
| **Teaching Scheme** | | | | **Evaluation Scheme** | | | |
| **Lectures** | **Practicals** | **Tutorials** | **Credits** | **Internal Continuous Assessment (ICA)**  **(weightage)** | | | **Term End Examinations (TEE)**  **(weightage)** |
| **45** | **Nil** | **Nil** | **03** | **40** | | | **60** |
| **Learning Objectives :**   1. To learn templates, charts creation using Excel 2. To learn Data Analytics using Excel 3. To learn Simulations using Excel | | | | | | | |
| **Learning Outcomes :**   1. Learner would be able to present data in the form of Visuals, Charts and Simulations 2. Decision Making, Risk Analysis using Excel | | | | | | | |
| **Pedagogy:** Lecture, PowerPoint Presentations,Video Clips,Case Studies, Role Plays, Group Discussion | | | | | | | |
| **Detailed Syllabus: ( per session plan )**  **Session Outline for : Advanced Excel**  **Each lecture session would be of one hour duration (45 sessions)** | | | | | | | |

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| **Module** | **Module Content** | **Module Wise Pedagogy Used** | **Module Wise**  **Duration** |
| I | UNIT-I: FUNCTIONS AND FORMULAS: Understanding Screen Layout - Creating Auto List & Custom List - Entering, Selecting and Editing Data - Understanding References (Relative, Absolute & Mixed) - Working on Various Functions & Formulas - Common Basic Functions - Logical Functions - Text Functions - Date & Time Functions - Lookup & Reference Functions - Mathematical Functions - Conditional Functions - Referring Data from Different Worksheet & Workbook Formula–Auditing -Various Calculation Techniques - Working on Ranges | Lecture, Case Study , video clips and discussion | 9 Lectures |
| II | UNIT-II: PRESENTATION OF DATA: Sorting Techniques - Various Data Filtering Techniques - Formatting Techniques - Conditional Formatting - Number Formatting - Table Formatting - Protecting Sheets & Files - Understanding Various Excel Window Techniques - Viewing Excel Spreadsheet in various Layouts - Advanced Printing Techniques - Templates - Themes | Lecture , Case Studies | 9 Lectures |
| III | UNIT-III: DATA ANALYSIS TOOLS: Data Consolidation - Text to Columns - Flash Fill - Remove Duplicates - Advanced Data Validation Techniques - What-if Analysis - Goal Seek - Data Table - Solver – Scenarios; Working with Tables - Creating Charts - Understanding Sparklines (Line, Column, Win/Loss) - Pivot Tables & Pivot Charts. | Lecture and Case Studies, Group Discussion | 9 Lectures |
| IV | SIMULATION – 1: Simulations, Decision Trees and Forecasting, when should we use simulation, simulation modeling cycle. Introduction to Monte Carlo Simulation, generating random values, discrete and continuous functions, Excel for simple simulation. | Lecture and Case Studies | 9 Lectures |
| V | UNIT – V: SIMULATION – II: Managerial applications of risk analysis, performing a simulation using @Risk, analyzing the simulation output, generating various plots. Simulation in forecasting, Advanced simulation techniques, simulations for: stocks, financial statements, games, taxes (Any two). | Case Study and Group Discussion | 9 Lectures |

**Reference Books**

SUGGESTED READINGS:

1. Excel 2013 Bible: John Walkenbach, Wiley.

2. Excel Data Analysis - Modeling and Simulation: Hector Guerrero, Springer.

3. Excel Functions and Formulas: Bernd Held,BPB Publications.

4. Microsoft Excel 2013: Data Analysis and Business Modeling: Winston, PHI

5. Financial Analysis and Modeling using Excel and VBA: Chandan Sengupta, Wiley

**Evaluation Pattern:**

The performance of the learner will be evaluated for 100 marks in two components. The first component will be a Continuous Assessment with a weightage of 40% of total marks per course. The second component will be a Semester end Examination with a weightage of 60% of the total marks per course. The allocation of marks for the Continuous Assessment and Semester end Examinations is as shown below:

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| --- | --- | --- | --- | --- |
| **Total Marks** | **External Component** | **Internal Component[ICA]** | **ICA Component** | |
| **Internal test** | **Assignment** |
| 100 | 60 | 40 | 20 | 20 |
| 1]For 100 Marks-ICA Test Component-3 test of 10 marks each, Best 2 to be considered.  2] Duration;60 marks- 3 hours , 10 marks-20 Minutes 3] ICA Test-Offline | | | | |
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1. **Internal exam:**
2. **Class Test Paper Pattern: (Pen Paper based): 3 tests of 10 marks each. Best of two will be considered as final marks. Duration for 10 marks test: 20 minutes**

Que 1 Fill in the Blanks

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| Que 1 | Fill in the Blanks |  |
|  |  | (04) |
| Que 2 | Descriptive Question | (03) |
| Que 3 | Descriptive Question | (03) |

1. **20 Marks Assignments / Case study / Mini Project**
2. **End term exam paper pattern:**

**Total marks : 60 Duration: 3 hours**

1. Note: Examination shall be conducted in machine test form in Batches (Max Batch-size 30) in computer lab.
2. One External examiner is required along with internal examiner for conduct of examination.
3. Question paper should have maximum number of distinct sets, kept faced down on table, from which student will pick up one question paper.
4. Duration of the examination is 3 Hours
5. Marks distribution as given below

|  |  |  |
| --- | --- | --- |
| Que 1 | Practical Question 1 | (15) |
| Que 2 | Practical Question 2 | (15) |
| Que 3 | Practical Question 3 | (15) |
| Que 4 | Viva Voice | (10) |
| Que 5 | Journal | (05) |

Evaluation shall be done by examiners on machine in computer lab.

Answer sheet/Print out of Code is required.