A. To ensure in-depth understanding and skill development in the chosen domain, students must continue with the same domain electives in both the V and VI Semesters.

SEMESTER-I

COURSE 1: BUSINESS ORGANIZATION AND MANAGEMENT

Theory **Credits: 4** **4 hrs/week**

Course Objectives

This course is designed to:

- Acquire conceptual knowledge of business and the formation of various business organizations;
- Provide insights into mergers, acquisitions, CSR practices and quality management concepts ;
- Develop understanding of key management functions;
- Understand motivation and leadership theories; and
- Understand line and staff relationships and gain insights into the control process.

Course Outcomes (COs)

Upon successful completion of this course, students will be able to:

CO1: Identify and differentiate various forms of business organisations including P4 models and franchising systems.
CO2: Analyse the impact of business environment factors like mergers, acquisitions, and CSR on organisational sustainability.
CO3: Demonstrate knowledge of key managerial functions including planning, delegation, decision-making, and organisational structure.
CO4: Apply motivation and leadership theories to workplace scenarios and assess their implications on employee performance.
CO5: Develop foundational skills in business analysis using tools such as SWOT, TQM, and quality circles.

SYLLABUS

Unit I: Business: Forms of Business Organization - Sole Proprietorship, Partnership, Joint Stock Companies & Co-operatives and their Characteristics, relative merits and demerits, Difference between Private and Public Company, Concept of One Person Company, Public-Private- People-Partnership Model (P4), Franchising, Business Chains.

Unit II: Business Environment:
Mergers and Acquisitions- Business Takeovers- Corporate Social Responsibility (CSR)- examples with reference to AP state, Concept of Quality- Total Quality Management (TQM)- 6 Sigma. Kizen, Quality Circles.

Unit III: Management:
Functions of Management- planning- SWOT analysis – Short-term & Long-term Planning- Decision Making- Delegation of authority- Decentralisation- Departmentation.

Unit IV: Motivation:
Maslow's Need Hierarchy Theory- Theory X and Theory Y -McClelland's Need for Achievement Theory– Leadership concept- Styles of Leadership -Theories of leadership: Traits theory, Behavioural Leadership Theory, **Situational Leadership Theory**.

Unit V: Staffing
Line and staff relationship - Control: meaning and importance- process of control-control techniques- budgetary control.

Activities:

- Assignment on business organizations and modern business.
- Group Discussion on factors that influence plantlocation
- Seminars on different topics related to Business organization
- Case studies of successful corporate/business heroes.

Reference Books:

1. Gupta, C. B. (2014). *Business organisation*. Mayur Publication.
2. Singh, B. P., & Chhabra, T. N. (2014). *An introduction to business organisation & management*. Kitab Mahal.
3. Sherlekar, S. A., & Sherlekar, V. S. (2000). *Modern business organization & management: Systems approach*. Himalaya Publishing House.
4. Bhushan, Y. K. (Year Unknown). *Business organization*. Sultan Chand & Sons. *(Please insert the year if available.)*
5. Prakash, J. (Year Unknown). *Business organisation and management* (Hindi and English ed.). Kitab Mahal Publishers

SEMESTER-I

COURSE 2: Fundamentals of Information Technology & Office Automation

Theory **Credits: 3** **3 hrs/week**

Course Objectives:

1. **Understand foundational computing concepts** including number systems, evolution of computers, and architectural components.
2. **Explore basic computer organization and network fundamentals**, recognizing device functions, system types, and internet components.
3. **Demonstrate proficiency in word processing and presentation tools**, applying formatting techniques and design elements for professional outputs.
4. **Develop competency in spreadsheet operations**, employing formulas, charts, and data-handling techniques.
5. **Apply advanced data modeling and productivity features** to analyze and visualize data efficiently using modern tools.

Course Outcomes:

Learners will be able to:

1. **Convert between binary, decimal, octal, and hexadecimal systems**, and explain computer evolution and generations with examples.
2. Learners will demonstrate **basic blocks of a computer and fundamental networking knowledge.**
3. Create professional-level documents and **design visually appealing presentations** using word processing software and presentation software.
4. Manipulate data within spreadsheets, apply formulas, and **generate accurate summaries and visualizations.**
5. Apply data modelling techniques to **analyze, organize, and represent data effectively** in various scenarios.

Unit-I Number Systems, Evolution , Block Diagram and Generations

Number Systems: Binary, Decimal, Octal, Hexadecimal; conversions between number systems.

Evolution of Computers: History from early mechanical devices to modern-day systems.

Block Diagram of a Computer: Input Unit, Central Processing Unit, Memory Unit, Output Unit.

Generations of Computers: First to Fifth Generation – Technologies, Characteristics, Examples.

Unit-II Basic Organization and Network Fundamentals

Computer Organization: Functional components: Input/Output devices, Storage types, Memory Hierarchy.

Types of Computers: Micro, Mini, Mainframe, and Supercomputers.

Networking Fundamentals: Definition, Need for Networks, **Key Components:** Nodes, Links, Protocols, Networking Devices. **Types of Computer Networks** : LAN, WAN, MAN.

Network Topologies: Bus. Ring, Star, Mesh..

Internet Basics: History, IP Address, URL, WWW, Web browsers, Search engines, E-mail, Internet Security.

Unit-III Word Processing and Presentations

Word Processing Basics: Definition, Using Microsoft Word / Google Docs. Templates for resumes, letters, reports. **Basic text editing and formatting -** Typing and editing text, Font styles, sizes, colors, and effects, Paragraph alignment, indentation, and spacing, Bullets, numbering, and text highlighting, Templates for resumes, letters and reports. **Working with Tables and Graphics -** Inserting and formatting tables, Adding images, shapes, icons, and SmartArt, Text wrapping and positioning graphics.

Document Layout and Design - Page setup, Headers, footers, and page numbering, Section breaks and columns, Applying themes and styles. **Advanced Features -** Spell check and grammar tools, Thesaurus, and Mail merge. **References and Citations** Footnotes, endnotes, and captions, Bibliography and citation tools, Table of contents and index creation.

Presentation Tools: Using PowerPoint/Google Slides – Creating, Saving and Opening presentations, Adding, deleting, and rearranging slides, Slide layouts and design themes, Using templates and master slides, Slide sorter and outline view, Applying transitions and Animations, Design and Layout.

Applications: Creating resumes, Reports, Brochures, and Presentations.

Unit-IV Spread sheet Basics

Spreadsheet Concepts: Understanding rows, columns, cells in tools like MS Excel/Google Sheets, Workbook, Worksheet, **Cell referencing**- Relative, Absolute, Mixed.

Functions and Formulae: Mathematical, Statistical, Logical, Text, Date and Time, Financial.

Lookup and Reference : VLOOKUP, HLOOKUP, XLOOKUP, INDEX, MATCH

Visual representations: Creating a chart, common chart types, Column Chart, Bar Chart, Line Chart, Pie Chart, Scatter Chart, Histogram.

Data Handling: Sorting data, Filtering data, Grouping Data, **Conditional formatting:** Data Bars, Color Scales, Icon Sets, Custom Formulas.

Unit-V Data Modelling

Data Analysis Tools: Pivot Tables and Pivot Charts, Data Validation (Drop-downs, Input Messages, Error Alerts), **What-If Analysis**: Goal Seek, Scenario Manager, Data Tables

Charts and Dashboards: Creating Interactive Dashboards, Using slicers with Pivot Tables ,Combo Charts and Sparklines.

Productivity Tips: Using Named Ranges, Freeze Panes, Split View.

Text Books:

1. **Thareja, R.** (Second Edition). *Fundamentals of Computers*. Oxford University Press.
2. **Rajaraman, V.** (n.d.). *Fundamentals of Computers*. PHI Learning.
3. **Norton, P.** (2017). *Introduction to Computers* (7th ed.). McGraw Hill Education.
4. **Nordell, R., Stewart, K., Easton, A., Graves, P. R., & Triad Interactive, Inc.** (2022). *Microsoft Office 365: In Practice* (1st ed.). New York: McGraw Hill Education.

References Books:

1. **Alexander, M., & Kusleika, R.** (2022). *Microsoft Excel 365 Bible* (2nd ed.). Wiley.
2. **Lowe, D.** (2021). *Networking All-in-One For Dummies* (8th ed.). Wiley.
3. **Microsoft Official Docs and Training**: https://learn.microsoft.com
4. **Google Workspace Learning Center**: https://support.google.com/a/users/

Activities:

Unit 1: Number Systems & Computer Evolution

Outcome: At the End of the Course, The Students will be able to **explain different number systems**, the historical evolution of computers, and identify key components in a block diagram.

Activity: Create a digital poster or infographic comparing number systems (binary, decimal, octal, hexadecimal) and illustrating the timeline of computer generations with key innovations.

Evaluation Method: Rubric-based assessment of the poster presentation on a 10-point scale focusing on:

- Accuracy of number system conversions
- Correct identification of block diagram components
- Visual organization and creativity

Unit 2: Computer Architecture & Networking Basics

Outcome: Learners will demonstrate **basic blocks of a computer and fundamental networking knowledge.**

Activity: Design a concept map showing the internal architecture of a computer and types of networks (LAN, WAN, MAN), including devices and topologies.

Evaluation Method: Checklist-based peer review and instructor validation:

- Completeness of the map
- Correctness of networking concepts
- Use of appropriate terminology
- Logical flow and structure of the map

Unit 3: Word Processing & Presentation Design

Outcome: Learners will create professional-level documents and **design visually appealing presentations** using word processing software and presentation software.

Activity: Prepare a formal report (e.g., project proposal) in a word processor and present it using a slide deck with transitions, embedded media, and design elements.

Evaluation Method: Performance-based evaluation using a 10-point scoring scale:

- Formatting and structure of the document
- Presentation aesthetics and clarity
- Communication skills during presentation

Unit 4: Spreadsheet Analysis & Visualization

Outcome: Learners will manipulate data within spreadsheets, apply formulas, and **generate accurate summaries and visualizations.**

Activity: Analyze a dataset (e.g., student scores or sales data) using spreadsheet software. Apply formulas (SUM, AVERAGE, IF, VLOOKUP) and create relevant charts.

Evaluation Method: Practical test with a rubric:

- Correct use of formulas
- Accuracy of data summaries

Unit 5: Data Analysis and Visualization:

Outcome: Learners will apply data modelling techniques to **analyze, organize, and represent data effectively** in various scenarios.

Activity: Prepare an interactive dashboard for a given data set using EXCEL.

Evaluation Method: Evaluation of the dashboard on a 10-point scoring scale:

- Presentation aesthetics and clarity
- Interactiveness
- Communication skills during presentation

SEMESTER-I

COURSE 2: Fundamentals of Information Technology & Office Automation

Practical **Credits: 1** **2 hrs/week**

List of Experiments:

1. Demonstration of Assembling and Dessembling of Computer Systems.
2. Identify and prepare notes on the type of Network topology of your institution.
3. Prepare your resume in Word by using the Resume template.
4. Using Word, write a letter to your higher official seeking 10-days leave.
5. Create a multi-page academic report and format it using headers and footers. The header will include the document title and author name, while the footer will contain page numbers and the date.
6. Prepare a formal invitation letter and use Mail Merge to personalize it for a list of recipients.
7. Prepare a report that includes: A table summarizing sales data, A graphic (image or chart) illustrating product performance with the proper formatting and alignment of both elements
8. Prepare a document and add Citations, Footnotes, and Bibliography in Word.
9. Create a PowerPoint Presentation on the Role of AI in Business Decision-Making.
10. Using a spreadsheet, prepare your class Time Table.
11. Using a Spreadsheet, calculate the Gross and Net salary of employees(Min 5) considering all the allowances.
12. Generate the class-wise and subject-wise results for a class of 20 students. Also generate the highest and lowest marks in each subject.
13. Using IF, AND, OR, and IFERROR to Automate Grade Evaluation.
    a. Create a table of student scores in different subjects.
    b. Use IF to assign grades (A/B/C/Fail).
    c. Use IFERROR to handle missing scores or invalid data.
14. Consider the problem of preparing a stationary order for the month of March. The item description, quantity and cost per item are available. The total cost per item is to be calculated and the final cost per item involves a sales tax of 2% over the total cost. The gross total and the net total are to be displayed.

Sl. No.	Description	Quantity	Cost Per Item
1	Notepad	202	2.85
2	Writing Pad	86	3.95
3	Ball point pen (Blue)	520	2.50
4	Cello-tape	75	2.95
5	A4 Refill pad	90	5.95
6	Pencils	603	0.50
7	Crayons	80	3.85
8	Stapler	30	9.95

9	Hole punch	25	14.95
10	Ring Binder	45	10.95

15. You are given the order details of a company in the below table.

Order Id	Product	Unit price	Quantity	Discount	Revenue	Tax (2% for each order)	Net Income
11250	A	8	10	0%	?	?	?
11251	B	20.8	1	0%	?	?	?
11252	C	7.7	16	25%	?	?	?
11253	D	15.6	50	0%	?	?	?
11254	E	39.4	15	25%	?	?	?
				Total	?		?

a. Calculate the revenue and tax on the revenue for each product.

b. Calculate the net income of each product.

c. Calculate the total revenue of all products.

d. Calculate the total net income of all products.

16. Create an Excel sheet with the following fields in the Sales table.

i)Month ii) Item iii) Quantity iv) Price v) Commission

Use Data Validation criteria for:

a) Quantity and Price should be whole numbers

b) Commission @3.5% of Price should be allowed only two decimals.

c) Price should accept 5000 and above values only.

17. Consider the problem of finding the total and average marks of five subject marks for five students. Calculate the Maximum mark, minimum mark, mean, median, Standard deviation and Variance for each subject.

Roll. No.	Name	Accounting	Income Tax	Business Law	Total	Average
100	Ramesh	85	75	60	?	?
101	Mahesh	100	78	85	?	?
102	Suresh	65	72	70	?	?
103	Ravi	90	80	85	?	?
104	Raju	80	76	90	?	?