



**SNDT Women's University, Mumbai**

**Open Electives Course (OEC)**  
for  
**Students of Faculty of Humanities**  
for  
**Semester - IV**

As Per NEP – 2020

**Syllabus**  
**(W.E.F. Academic Year 2025-26)**

<b>Sr. No.</b>	<b>Subject Code</b>	<b>Title</b>
1	40420111	Business Compliances
2	40420112	Techniques of Advertising
3	40420113	Export Marketing Strategies and Procedures
4	40420114	Industrial Psychology-Workplace Behaviour
5	40420115	Marketing Research
6	40420116	Techniques of Sampling and Hypothesis Testing
7	40420117	Co-operative Management Mechanism
8	40420118	Investment & Risk Management
9	40420119	Foundations of Capitalism, Socialism, and Mixed Economies
10	40420161	Budgetary Control and Recent Trends in Business Accounting
11	40420162	Business Communication Skills
12	40444221	Social Media Management (Pr)
13	40444222	Digital Marketing (Pr)
14	40444521	Jewelry Essentials (Pr)
15	40444512	Precious and Semi-Precious Stones (Th and Pr)
16	40441221	Tie and Dye (P)
17	40441121	Festival songs
18	40443111	Introduction to AI
19	40443111	Introduction to AI

20	40443111	Introduction to AI
21	40430511	Guiding Children's Growth & Behavior
22	40430921	Fashion Accessory Making (Pr)
23	40430311	Food Labels (Th)
24	40430111	Culinary Science - II (Th) (2 Th)
25	40430111	Health for All*
26	40430411	Caring for the Elderly (Th)
27	40431011	Applications of Basic Biotechnology for Community Development - II
28	40430221	Nutrition in Health & Disease (Pr)
29	40430222	Clinical Pathophysiology (Pr)
30	40430811	The Art of Furniture Design (Pr)
31	40430711	Surface Ornamentation on Textiles
32	40432311	Mathematical Techniques for competitive examination Paper – 2
33	40432312	ओ इ सी : स्पर्धा परीक्षेसाठी गणित तंत्र भाग – २
34	40432313	Reasoning for Competitive Examination Part II
35	40432314	Basic Statistics
36	40432511	Health and Hygiene in Daily Life
37	40432512	Home Composting: Sustainable Waste Management at Home
38	40432211	Energy Sources
39	40432411	Human Parasitic Diseases
40	40435211	Introduction to Canva
41	40435212	Management Information Systems (MIS)
42	40435213	Introduction to Entrepreneurship
43	40435411	Data Visualization
44	40435412	Web Content Management Systems

45	40435413	Graphic Design
46	40434311	Blood Bank and Related Technique's
47	40432111	Waste Management
48	40432611	Medicinal Plants

<b>Course Title</b>	<b>Business Compliances</b>
<b>Course Credits</b>	<b>2</b>
<b>Course Outcomes</b>	<p>After going through the course, learners will be able to</p> <ul style="list-style-type: none"> <li>ii. Explain what business compliance is and why it is important for businesses to follow rules and regulations.</li> <li>iii. Identify the different areas of compliance—legal, financial, and ethical—and understand their significance in business.</li> <li>iv. Explain the key business laws such as the Companies Act, Indian Contract Act, and Consumer Protection Act, and their role in business operations.</li> <li>v. Describe the role of important regulatory bodies like SEBI, RBI, and the Ministry of Corporate Affairs in ensuring business compliance.</li> <li>vi. Recognize the benefits of complying with legal and regulatory requirements for businesses, including risk reduction and growth opportunities.</li> </ul>
<b>Module 1 (Credit 1):</b>	<b>Introduction to Business Compliances</b>
<b>Learning Outcomes</b>	<p>After learning the module, learners will be able to</p> <ul style="list-style-type: none"> <li>vii. Understand the concept of business compliance.</li> <li>viii. Recognize the importance of compliance in business operations.</li> <li>ix. Identify key compliance areas in organizations.</li> </ul>
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Meaning of Business Compliance</li> <li>• Importance of Compliance in Business</li> <li>• Key Areas of Compliance: Legal, Financial, Ethical</li> <li>• Benefits of Compliance for Businesses</li> <li>• Basic Compliance Frameworks</li> </ul>
<b>Module 2 (Credit 1):</b>	<b>Legal Framework for Business Compliance</b>
<b>Learning Outcomes</b>	<p>After learning the module, learners will be able to</p> <ul style="list-style-type: none"> <li>1. Understand basic business laws and their significance for businesses.</li> <li>2. Identify the role of regulatory bodies in enforcing compliance.</li> </ul>

<b>Content Outline</b>	<ol style="list-style-type: none"> <li>1. Overview of Key Business Laws:</li> <li>2. Companies Act, 2013</li> <li>3. Indian Contract Act, 1872</li> <li>4. Consumer Protection Act, 2019</li> </ol> <p>2.5 Role of Regulatory Bodies: SEBI, RBI, Ministry of Corporate Affairs</p> <p>2.6 Importance of Legal Compliance</p>
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### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)**

**Internal – NIL**

**External – 50-Marks**

#### **References:**

1. "Business Law and Business Ethics" 2015, M. C. Kuchhal and Vivek Kuchhal Publisher: Vikas Publishing House.
2. "Business Law" 2018, N.D. Kapoor Publisher: Sultan Chand & Sons.
3. "Corporate Governance and Business Ethics" ,2019, A. C. Fernando Publisher: Pearson Education.
4. "Corporate Compliance and Ethics" 2017, S. S. K. Gupta Publisher: Sage Publications.
5. "The Handbook of Corporate Governance in India" 2018, Debashis Basu and Prithviraj Kothari Publisher: Tata McGraw-Hill Education.
6. "Business Laws for Management" 2017, P.K. Goel Publisher: Vikas Publishing House.
7. "Legal Aspects of Business" 2018, Akhileshwar Pathak Publisher: McGraw Hill Education India.
8. "Corporate and Commercial Laws" 2015, Avtar Singh. Publisher: Eastern Book Company.
9. "Consumer Protection Law in India" 2016, Dr. S. S. Srivastava Publisher: Universal Law Publishing.
10. "Indian Contract Act, 1872" 2016,R.K. Bangia Publisher: Allahabad Law Agency.
11. "Companies Act 2013" by N.K. Jain Publisher: Bharat Law House.
12. "Securities Laws and Business Compliance" 2015 M.R. Sivaraman Publisher: LexisNexis India.

<b>Course Title</b>	<b>Techniques of Advertising</b>
<b>Course Credits</b>	<b>2</b>
<b>Course Outcomes</b>	<p>After going through the course, learners will be able to</p> <ol style="list-style-type: none"> <li>1. Understand the key components and frameworks involved in planning successful advertising campaigns.</li> <li>2. Develop effective advertising strategies tailored to specific audiences and marketing objectives.</li> <li>3. Select appropriate media channels and allocate budgets efficiently for campaign execution.</li> <li>4. Implement and manage advertising campaigns to achieve desired outcomes.</li> <li>5. Analyze and evaluate the effectiveness of advertising campaigns using performance metrics and apply insights for continuous improvement.</li> </ol>
<b>Module 1 (Credit 1)</b>	<b>Planning Advertising Campaigns</b>
<b>Learning Outcomes</b>	<p>After learning the module, learners will be able to</p> <ol style="list-style-type: none"> <li>1. Understand the principles of planning advertising campaigns, including setting objectives, defining target audiences, and allocating resources effectively.</li> <li>2. Develop, execute, and evaluate advertising strategies to achieve campaign goals and optimize performance.</li> </ol>
<b>Content Outline</b>	<ol style="list-style-type: none"> <li>1. Advertising Campaign: Concept, Advertising Campaign Planning -Steps Determining advertising objectives - DAGMAR model</li> <li>2. Advertising Budgets: Factors determining advertising budgets, methods of setting advertising budgets, Media Objectives - Reach, Frequency and GRPs</li> <li>3. Media Planning: Concept, Process, Factors considered while selecting media, Media Scheduling Strategies</li> </ol>
<b>Module 2 (Credit 1)</b>	<b>Execution and Evaluation of Advertising</b>
<b>Learning Outcomes</b>	<p>After learning the module, learners will be able to</p> <ol style="list-style-type: none"> <li>1. Implement advertising strategies effectively, ensuring alignment with campaign objectives and target audience needs.</li> <li>1. Analyze and evaluate the performance of advertising campaigns using key metrics to optimize outcomes and inform future strategies.</li> </ol>

<b>Content Outline</b>	2.1 Creativity: Concept and Importance, Creative Process, Concept of Creative Brief, Techniques of Visualization <ol style="list-style-type: none"> <li>1. Creative aspects: Buying Motives - Types, Selling Points- Features, Appeals – Types, Concept of Unique Selling Proposition (USP)</li> <li>2. Creativity through Endorsements: Endorsers – Types, Celebrity Endorsements – Advantages and Limitations, High Involvement and Low Involvement Products</li> </ol>
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### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)**

**Internal – NIL**

**External – 50-Marks**

#### **References:**

1. Batra, R., Myers, J. G., & Aaker, D. A. (2018). *Advertising management* (5th ed.). Pearson Education.
2. Bullmore, J. J. D., & Waterson, M. J. (2020). *The advertising association handbook*. Holt Rinehart & Winston.
3. Gupta, R. (2015). *Advertising principles and practice*. S. Chand Publishing.
4. Moriarty, S., Mitchell, N. D., & Wells, W. D. (2016). *Advertising* (10th ed.). Pearson.



<b>Course Title</b>	<b>Export Marketing Strategies and Procedures</b>
<b>Course Credits</b>	<b>2</b>
<b>Course Outcomes</b>	<p><b>After going through the course, learners will be able to</b></p> <ol style="list-style-type: none"> <li>2. Acquaint the students about the knowledge of export pricing strategies and Export pricing quotations.</li> <li>3. Enable to understand various Export incentives available Indian Exporter.</li> <li>4. Equip the students about the knowledge of procedure involved in the export marketing.</li> <li>5. Identify and understand various documents used in export trade.</li> <li>6. Understand export financing Institutions and methods of financing export trade.</li> </ol>
<b>Module 1 (Credit 1)</b>	<b>Export Pricing &amp; Export Finance</b>
<b>Learning Outcomes</b>	<p><b>After learning the module, learners will be able to</b></p> <ol style="list-style-type: none"> <li>7. learn about various export pricing strategies and export pricing quotations</li> <li>8. Understand methods of export financing and various export financing institutions to promote export</li> <li>9. Identify and understand factors determining export pricing</li> </ol>
<b>Content Outline</b>	<ol style="list-style-type: none"> <li>1. Various Export Pricing Strategies</li> <li>2. Factors Determining Export Pricing</li> <li>3. Various Export Pricing Quotations</li> <li>4. Pre-shipment and Post- Shipment finance</li> <li>5. Export financing Institutions and Letter of Credit</li> </ol>
<b>Module 2 (Credit 1):</b>	<b>Export Procedure &amp; Export documents</b>
<b>Learning Outcomes</b>	<p><b>After learning the module, learners will be able to</b></p> <ol style="list-style-type: none"> <li>1. Understand Pre-Shipment &amp; Post-Shipment Procedure involved in Export Marketing</li> <li>2. Gain knowledge about various documents used in export trade</li> <li>3. Identify and understand financial incentives and schemes available to Indian Exporters</li> </ol>
<b>Content Outline</b>	<ol style="list-style-type: none"> <li>1. Pre-Shipment and Post-shipment Export Procedure</li> <li>2. Quality control and Pre-Shipment export procedures</li> <li>3. Various export documents used in Export Trade</li> <li>4. Financial Incentives &amp; assistance available to Indian Exporter.</li> </ol> <p>2.5 Institutional assistance to Indians Exporters</p>

**Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)**

**Internal – NIL**

**External – 50-Marks**

**References:**

1. Export management, 2015, by Balagopal, T.A.S. (Himalaya publishing house)
2. Export Import Procedure & Documentation. 2018, N.G. Kale (Vipul prakashan)
3. Export Marketing. Vaz, 2015, Michael. (Madan Prakashan)
4. International Trade Policy. 2016, Robertson, David (McMilan publication)
5. International Trade theory & practice. 2019, P.N. Roy. (Wiley Eastern Lt.)
6. International Trade & export management. 2016, Cherunilam Frances (Himalaya publishing House)
7. Export Marketing. 2019, Rathar. (Himalaya Publishing House)

<b>Course Title</b>	<b>Industrial Psychology - Workplace Behavior</b>
<b>Course Credits</b>	<b>2</b>
<b>Course Outcomes</b>	After going through the course, learners will be able to
	1. Understand the nature and functions of groups in organizations
	2. Compare and contrast groups and teams at workplace
	3. Identify various dimensions of organizational communication
	4. Examine the conflict process and its resolution within organizations
<b>Module 1 (Credit 1) - Foundations of Group Behavior</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Define groups and outline stages of group development
	2. Develop various types of teams at the workplace
<b>Content Outline</b>	<ol style="list-style-type: none"> <li>1. Defining and classifying groups</li> <li>2. Stages of Group development</li> <li>3. Difference between Groups and teams</li> <li>4. Types of Team</li> </ol>
<b>Module 2 (Credit 1) - Communication in Organizations</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Facilitate the process of communication within organizations
	2. Utilize various negotiation strategies to manage organizational conflicts
<b>Content Outline</b>	<ol style="list-style-type: none"> <li>1. Functions and Direction of communication</li> <li>2. Barriers to effective communication</li> <li>3. Conflict Process</li> <li>2.4 Negotiation Strategies</li> </ol>

Internal exam-NIL

External Exam-50 Marks

**References:**

1. Robbins, S.P, and Judge, T.A. (2016). Organizational Behavior, 17th Edition. Pearson Prentice Hall, New Delhi. India

**2. Additional Texts:**

3. Butler, M and Rose, E (2011) Introduction to Organisational Behaviour. Jaico Publishing House, Mumbai. Clegg, S., Korberger, M and Pitsis, T (2012) Managing and Organizations: An Introduction to Theory and Practice. Sage Publications, New Delhi.
4. Cooper, C.L (2011) Organizational Health and Wellbeing. Vol 1, 2, 3. Sage Publications, New Delhi
5. Muchinsky, P. (8th Edition). Psychology Applied to Work.
6. Robbins, S., Judge, T. & Sanghi, S. (2009). Organizational Behavior (13th Ed). Pearson Prentice Hall.
7. Luthans, F. (2008). Organizational Behavior (11th Ed). Mc Graw Hill International Edition. ISBN: 978-007-125930-9. Singapore.
8. Singh, K. (2015). Organizational Behavior. Texts and Cases (3rd Ed). Vikas Publishing House Pvt. Ltd. New Delhi

<b>Course Title</b>	<b>Marketing Research</b>
<b>Course Credits</b>	<b>2</b>
<b>Course Outcomes</b>	<b>After going through the course, learners will be able to</b> <ol style="list-style-type: none"> <li>1. Understand and analyze the Concept &amp; Process of Marketing Research, types</li> <li>2. Analyze types of Marketing Research, Methods of Data collections</li> <li>3. Know the Difference between Marketing Research &amp; Market Research.</li> <li>4. Familiarize with the Tools &amp; Techniques of Marketing Research</li> </ol>
<b>Module 1 (Credit 1)</b>	<b>Overview of Marketing Research</b>
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Marketing Research-Meaning &amp; Definition, feature, types and process of Marketing Research,</li> <li>• Qualities of a Good Researcher and Ethics in Research.</li> <li>• Methods of Data collection- Primary Data &amp; Secondary Data &amp; its sources.</li> <li>• Research Design-Concept, Features, process and contents of Research Design</li> </ul>
<b>Module 2 (Credit 1)</b>	<b>Techniques of Marketing Research</b>
<b>Learning Outcomes</b>	<b>After learning the module, learners will be able to</b> <ol style="list-style-type: none"> <li>5. Create Sample Design-Methods of sampling, care to be taken while designing sample,</li> <li>6. Evaluate Hypothesis &amp; its Types.</li> <li>7. Understand the Analysis and Interpretation of Data.</li> <li>8. Statistical Tools &amp; Techniques used in Marketing Research.</li> <li>9. Drafting Research Report-Contents.</li> <li>10. Understanding Sample Design and its Methods &amp; selecting correct sample.</li> </ol>
<b>Content Outline</b>	2.1 Sample Design-Methods of sampling, care to be taken while designing sample, <ol style="list-style-type: none"> <li>1. Hypothesis-Concept &amp; Types of Hypotheses.</li> <li>2. Analysis and Interpretation of Data &amp; Statistical Tools &amp; Techniques used in Marketing Research.</li> <li>3. Drafting Research Report-Contents of Research Report.</li> </ol>

### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)**

**Internal – NIL Marks**

**External – 50-Marks**

### **References:**

9. Beri G. C. (2024). Marketing Research, Tata McGraw Hill, New Delhi.
10. The Essence of Marketing Research, Prentice Hall, New Delhi.
11. Richard D. Irwin, Boston Chisnall, Peter M. (2015). Marketing Research: Text and Cases.
12. Ranganatham M. & Krishnaswam O.R. (2016). Marketing Research, Himalaya Publishing House.
13. Kotler, P., Keller, K. L., Koshy, A., & Jha, M. (2022). Marketing Management. Pearson.

14. Philip Kotler, Principles of Marketing Management, 2020 (19th Edition), Pearson.

<b>Course Title</b>	<b>Techniques of Sampling and Hypothesis Testing</b>
<b>Course Credits</b>	<b>2</b>
<b>Course Outcomes</b>	After going through the course, learners will be able to
	<ol style="list-style-type: none"> <li>1. Understand and recognize sampling methods</li> <li>2. Estimate population parameters and apply large and small sample test</li> <li>3. Prepare control charts and solve problems using control charts</li> </ol>
<b>Module 1 (Credit 1)</b>	<b>Sampling</b>
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	<ol style="list-style-type: none"> <li>1. Familiarize with the concept of sampling.</li> <li>2. Have deep knowledge of different types of sampling.</li> </ol>
<b>Content Outline</b>	<ol style="list-style-type: none"> <li>1. Sampling: Sampling Concepts, Sampling Distributions</li> <li>2. Estimation Populations and samples, Parameters and Statistics, Sampling methods including Simple Random sampling, Stratified sampling, Systematic sampling, Judgment sampling and Convenience sampling.</li> </ol>
<b>Module 2 (Credit 1)</b>	<b>Hypothesis Testing and Estimation</b>
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	<ol style="list-style-type: none"> <li>1. Estimate population parameters</li> <li>2. Apply large and small sample tests to analyze the collected data.</li> </ol>
<b>Content Outline</b>	<ol style="list-style-type: none"> <li>1. Hypothesis Testing and Estimation: Tests concerning means and proportions (one and two samples; t test</li> </ol>

### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)**

**Internal – NIL Marks**

**External – 50-Marks**

### **References:**

1. Statistical techniques by S.P. Gupta

<b>Course Title</b>	<b>Co-operative Management Mechanism</b>
<b>Course Credits</b>	<b>2</b>
<b>Course Outcomes</b>	After going through the course, learners will be able to
	<ol style="list-style-type: none"> <li>3. Analyze the functioning and contribution of different types of co-operatives in Maharashtra.</li> <li>4. Examine the role of institutions like RBI, NABARD, and SBI in promoting co-operation.</li> <li>5. Evaluate the administrative and auditing frameworks of co-operatives and identify their challenges.</li> <li>6. Assess the progress of the co-operative movement in India post-independence and suggest measures for improvement.</li> </ol>
<b>Module 1 (Credit 1)</b>	<b>Special Study of Some Co-operatives in Maharashtra</b>
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	<ol style="list-style-type: none"> <li>7. Describe the working mechanisms of various co-operatives in Maharashtra.</li> <li>8. Analyze the socio-economic impact of these co-operatives on rural and urban communities.</li> <li>9. Identify challenges and suggest solutions for better performance of these co-operatives.</li> <li>10. Discuss the roles of RBI, NABARD, and SBI in supporting co-operatives.</li> </ol>
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Cotton Co-operatives.</li> <li>• Dairy Co-operatives.</li> <li>• Sugar Co-operatives.</li> <li>• Role of RBI &amp; NABARD in financing co-operatives.</li> </ul>
<b>Module 2 (Credit 1)</b>	<b>Co-operative Administration and Audit</b>
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	<ol style="list-style-type: none"> <li>1. Understand the objectives and types of co-operative audits.</li> <li>2. Identify common defects in co-operative administration and suggest remedies.</li> <li>3. Explain the roles and responsibilities of the registrar in co-operatives.</li> <li>4. Assess the growth of co-operatives in India since independence.</li> </ol>

<b>Content Outline</b>	<ol style="list-style-type: none"> <li>1. Objectives, types, defects, and remedies of co-operative audits.</li> <li>2. Kinds of audits.</li> <li>3. Powers, functions, and responsibilities of the registrar.</li> <li>4. Supervision, inspection, and guidance of co-operatives.</li> </ol> <p>2.5 Progress of the co-operative movement in India post-independence.</p>
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### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)**

**Internal – NIL**

**External – 50-Marks**

#### **References:**

1. Co-op Marketing of Fruits & Vegetables In India: K. V. Subramanyam Principal Scientist, T. M. Gajanan science Bangalore, Concept Publishers, New Delhi - 110059
2. Co-op Marketing in India and Abroad: L. P. Singh, Himalaya Publicity House, New Delhi.
3. Co-operative Perspective Latest Issues: Vainkunth Mehta Co-op. Management Institute, Pune-7
4. Indian Agriculture & Agri-Business Management: Dr. Smita Diwase, Scientific Publishers, India
5. Agri. Marketing: Swalia Bihari Verma, Scientific Publishers India, 5A New Pali Road Jodhpur-342001
6. Mathur G. R.: Co-operatives In India
7. Kulkarni K. R.: Theory & Practice of Co-operation in India, Volume I&II.
8. Hajela T. N.: Principles & Problems of Co-operation.
9. Sharada V.: The Theory of Co-operation



<b>Course Title</b>	<b>Investment &amp; Risk Management</b>
<b>Course Credits</b>	2
<b>Course Outcomes</b>	<p>After going through the course, learners will be able to -</p> <ol style="list-style-type: none"> <li>1. Understand and apply key concepts in fixed income securities such as bond pricing, YTM, duration, and convexity for effective investment and risk management.</li> <li>2. Utilize derivatives (forwards, futures, options, swaps) for managing risks related to interest rates, currency, and market fluctuations.</li> </ol>
<b>Module 1 (Credit 1) - Investment in Fixed Income Securities</b>	
<b>Learning Outcomes</b>	<p>After learning the module, learners will be able to</p> <ol style="list-style-type: none"> <li>1. Understand investment objectives and types of fixed income securities, including government and corporate bonds.</li> <li>2. Explain key bond concepts such as coupon rate, yield to maturity (YTM), and bond pricing.</li> <li>3. Calculate clean and dirty prices and perform yield calculations for bonds.</li> <li>4. Analyze interest rate risk using duration and convexity as risk measures in bond investments.</li> </ol>
<b>Content Outline</b>	<ol style="list-style-type: none"> <li>1. Objectives of investments,</li> <li>2. Types of investments,</li> <li>3. Coupon and YTM concepts,</li> <li>4. Bond market basics, bond pricing and yield calculation, clean and dirty price, interest rate risk measures like Duration and Convexity</li> </ol>
<b>Module 2 (Credit 1) - Risk Management through Derivatives</b>	
<b>Learning Outcomes</b>	<p>After learning the module, learners will be able to -</p> <ol style="list-style-type: none"> <li>1. Understand the nature and fundamentals of derivatives, including their types and how they function in financial markets.</li> <li>2. Explain and differentiate between various derivatives, such as forwards, currency futures, options, and interest rate swaps.</li> <li>3. Demonstrate an understanding of margin requirements in derivative transactions and their role in managing risk.</li> <li>4. Apply interest rate swaps and forward rate agreements (FRAs) for hedging interest rate risks and managing financial exposure.</li> </ol>
<b>Content Outline</b>	<p>2.1 Derivative: Nature, types, fundamentals, forwards, currency futures and options,</p> <ol style="list-style-type: none"> <li>1. Interest rate swaps and futures,</li> <li>2. Concept of margins,</li> <li>3. Interest rate swaps and FRAs</li> </ol>

**Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)**

**Internal – NIL**

**External – 50-Marks**

**References:**

1. Bragg, S. M. (n.d.). *Treasury management: The practitioner's guide*.
2. Chance, D. M. (n.d.). *Introduction to derivatives & risk management*. Cengage Learning.
3. Gupta, R. K. (n.d.). *Treasury management in India*.
4. Hong Kong Institute of Bankers (HKIB). (n.d.). *Corporate treasury management*.

5. Kotreshwar, G. (n.d.). *Risk management: Insurance & derivatives* (2nd ed.). Himalaya Publishing.
6. Myint, S., & Famery, F. (n.d.). *The handbook of corporate financial risk management*.

<b>Course Title</b>	<b>Foundations of Capitalism, Socialism, and Mixed Economies</b>
<b>Course Credits</b>	<b>2</b>
<b>Course Outcomes</b>	After going through the course, learners will be able to
	<ol style="list-style-type: none"> <li>1. Understand and analyze different economic systems (Capitalism, Socialism, and Mixed Economy) and their evolution.</li> <li>2. Evaluate government roles, market mechanisms, and incentives in various economic systems.</li> <li>3. Assess the efficiency and effectiveness of economic systems in achieving economic growth and social welfare.</li> <li>4. Analyze the impact of globalization, liberalization, and privatization on economic systems, especially in India.</li> <li>5. Compare and contrast the advantages and disadvantages of Capitalism, Socialism, and the Mixed Economy.</li> </ol>
<b>Module 1(Credit 1) Capitalism and Socialism</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	<ol style="list-style-type: none"> <li>6. Explain the meaning, definition, and features of Capitalism and Socialism.</li> <li>7. Analyze the institutional framework of Capitalism, including the roles of government, competition, profit motive, and consumer sovereignty.</li> <li>8. Define central planning, discuss its rationale, and evaluate its criticisms, particularly in the USSR and China.</li> <li>9. Compare the merits and demerits of Capitalism and Socialism in terms of economic growth, efficiency, and social justice.</li> </ol>
<b>Content Outline</b>	<ol style="list-style-type: none"> <li>a. Capitalism-, meaning &amp; definition, Features of Capitalism</li> <li>b. Socialism-meaning &amp; definition, Features of Socialism</li> <li>c. The institutional framework of capitalism-- the role of government, the role of competition and market mechanism, the role of the profit motive, the role of consumer's sovereignty</li> <li>d. Central Planning – definition, the rationale for central planning, and criticism of central planning regarding socialist countries like the USSR and China</li> <li>e. Merits and demerits -Capitalism and Socialism</li> </ol>
<b>Module 2(Credit 1) Mixed Economy</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	<ol style="list-style-type: none"> <li>10. Identify the key features of the Mixed Economy and how it combines aspects of Capitalism and Socialism.</li> <li>11. Examine the role of the public and private sectors, with a</li> </ol>

	focus on India. 12. Analyze the impact of Liberalization, Privatization, and Globalization, (LPG) on the Indian economy. 13. Assess the merits and demerits of the Mixed Economy in achieving economic stability and development.
<b>Content Outline</b>	f. Mixed Economy-Evolution, meaning & definition, g. Features of Mixed Economy h. Role of Public Sector and Private Sector with special reference to India, Globalization, Liberalization, and Privatization with special reference to India i. Merits and Demerits of Mixed Economy

### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)**

**Internal – NIL**

**External – 50-Marks**

#### **References:**

14. Smith, A. (1776). An Inquiry into the Nature and Causes of the Wealth of Nations. W. Strahan and T. Cadell.
15. Marx, K., & Engels, F. (1848). The Communist Manifesto.
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17. Schumpeter, J. A. (1942). Capitalism, Socialism, and Democracy. Harper & Brothers.
18. Sen, A. (1999). Development as Freedom. Oxford University Press.
19. Stiglitz, J. E. (2015). The Price of Inequality: How Today's Divided Society Endangers Our Future. W.W. Norton & Company.
20. Dornbusch, R., Fischer, S., & Startz, R. (2018). Macroeconomics (13th ed.). McGraw-Hill Education.
21. Krueger, A. O. (2002). Economic Policy Reforms and the Indian Economy. University of Chicago Press.
22. Stiglitz, J. E. (2002). Globalization and Its Discontents. W.W. Norton & Company.
23. Government of India (1991). New Economic Policy (Liberalization, Privatization, and Globalization Reforms). Ministry of Finance.

<b>Course Title</b>	<b>Budgetary Control and Recent Trends in Business Accounting</b>
<b>Course Credits</b>	<b>2</b>
<b>Course Outcomes</b>	After going through the course, learners will be able to <ol style="list-style-type: none"> <li>2. Familiarize students with the basics of budgetary control- Cash Budget</li> <li>3. Gain insights about the recent trends in Accounting.</li> </ol>
<b>Module 1 (Credit 1)</b>	<b>Budgetary Control - Cash Budget</b>
<b>Learning Outcomes</b>	After learning the module, learners will be able to <ol style="list-style-type: none"> <li>1. Understand the Concept of Cash Budget and its importance</li> <li>2. Develop the Budgeting skills and enhance the financial decision making skills</li> </ol>
<b>Content Outline</b>	<b>Theory:</b> <ol style="list-style-type: none"> <li>1. Objectives of Budgetary Control,</li> <li>2. Types of Budgetary Control,</li> <li>3. Objectives, Advantages and limitations of Cash budget</li> </ol> <b>Problems on :</b> Cash Budget
<b>Module 2 (Credit 1)</b>	<b>Recent Trends in Accounting</b>
<b>Learning Outcomes</b>	After learning the module, learners will be able to <ol style="list-style-type: none"> <li>1. Familiarize with the developments and recent trends in accounting</li> <li>2. Have knowledge of the concept of Brand Accounting and Royalties Accounting and Cloud Accounting</li> </ol>
<b>Content Outline</b>	<b>Theory:</b> <ol style="list-style-type: none"> <li>1. Introduction to Brand Accounting,</li> <li>2. Methods and Applications in Brand Accounting.</li> <li>3. Introduction to Royalties Accounting,</li> <li>4. Meaning and Types of Royalties Accounting.</li> <li>5. Introduction to Cloud Accounting, Features</li> </ol> 2.6 Cloud Accounting vs. Traditional Accounting Software.

### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)**

**Internal – NIL**

**External – 50-Marks**

### **References:**

1. Ainapure. (2023). *Advance accounting*. Manan Prakashan.
2. Choudhary. (2023). *Corporate accounting*. Sheth Publishers.
3. Gupta, R. L. (2023). *Advance accountancy*. Sultan Chand & Sons.
4. Kishnadwala. (2022). *Financial accountancy & management*. Vipul Prakashan.

5. Shukla, M. C., & Grewal, T. S. (2023). *Advance accountancy*. S. Chand & Co.

<b>Course Title</b>	<b>Business Communication Skills</b>
<b>Course Credits</b>	<b>2</b>
<b>Course Outcomes</b>	<b>After going through the course, learners will be able to</b> <ol style="list-style-type: none"> <li>1. Draft sales letters, advertisements, press releases, reports, and covering letters.</li> <li>2. Draft job applications, CVs (one-page CV and detailed CV)</li> <li>3. Draft offer letters, acceptance letters, rejections, and resignations.</li> <li>4. Prepare for job interviews.</li> </ol>
<b>Module 1 (Credit 1) Reports.</b>	<b>Writing Sales Letters, Advertisements, Press Releases and</b>
<b>Learning Outcomes</b>	<b>After learning the module, learners will be able to</b> <ol style="list-style-type: none"> <li>1. Draft Sales Letters and Advertisements.</li> <li>2. Write press releases and covering letters.</li> <li>3. Learn how to write different kinds of reports.</li> </ol>
<b>Content Outline</b>	<ol style="list-style-type: none"> <li>1. Preparing Sales Letters and Advertisements- Theory and Practice.</li> <li>2. Press Release and Covering Letters.</li> <li>3. Report Writing.</li> </ol>
<b>Module 2 (Credit 1)</b>	<b>Job Applications, CVs and Job Interviews</b>
<b>Learning Outcomes</b>	<b>After learning this module, learners will be able to</b> <ol style="list-style-type: none"> <li>1. Draft job applications, CVs (one page as well as a detailed one)</li> <li>2. Draft letters - offers, acceptance, rejections, and resignations.</li> <li>3. Appear confidently for job interviews.</li> </ol>
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Job Application and Curriculum Vitae</li> <li>• Offer Letters, Acceptance Letters and Resignation Letters.</li> </ul> <p>2.3 Preparing for Job Interviews, Do's and Don'ts of job interviews.</p>

### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE) :**

**Internal – NIL**

**External –50- Marks**

### **References:**

1. Chaturvedi, P. D., & Chaturvedi, M. (2012). *Business communication (For F.Y.B.Com Mumbai University)*. Dorling Kindersley (India) Pvt. Ltd.
2. Doctor, R. A., & Doctor, A. (2011). *Business communication (F.Y.B.Com Sem-2)*. Sheth Publishers.
3. Gupta, S. C. (2016). *A handbook of letter writing*. Arihant Publications.
4. Kennedy, M. (2014). *Beginner's guide to writing powerful press releases: Secrets the pros use to command media attention*. Createspace Independent Publishing.
5. Mulgaonkar, S. D., & Waradkar, V. G. (1997). *Business communication*. Manan Prakashan.

6. Rai, U. (2014). *Business communication*. Himalaya Publishing House.
7. Rayudu, C. S. (2010). *Communication*. Himalaya Publishing House.

<b>code</b> 40444222	<b>Course Name</b> <b>Social Media Management (Practical)</b>		<b>Crs</b> <b>02</b>
<b>Course Outcome</b>	After going through the course, learners will be able to 8. Gain in-depth knowledge of social media platforms and their relevance in the fashion industry. 9. Plan and execute engaging content strategies for fashion brands. 10. Analyze performance metrics and apply tools for campaign optimization. 11. Create visual and written content suited for various social media formats		
<b>Sr. No.</b>	<b>Module Outcomes</b>	<b>Course Contents</b>	<b>Cr.</b>
<b>Module 1</b>	<b>Social Media Platforms &amp; Content Creation</b>		<b>01</b>
	<b>Learning Outcomes</b>	<b>Module Content</b>	
	After learning the module, learners will be able to 12. Identify and compare key social media platforms used in fashion branding. 13. Create platform-specific visual and written content for audience engagement. 14. Use basic tools for designing, scheduling, and publishing posts.	15. Overview of Social Media Platforms – Instagram, Facebook, Pinterest, LinkedIn, TikTok, YouTube 16. Audience Behavior & Platform Algorithms 17. Brand Voice & Tone – Fashion Context 18. Content Types – Static posts, Reels, Stories, Carousels 19. Tools for Content Creation – Canva, Adobe Express, InShot 20. Post Scheduling Tools – Meta Business Suite, Buffer, Later	
<b>Module 2</b>	<b>Campaign Planning, Analytics &amp; Strategy</b>		<b>01</b>
	<b>Learning Outcomes</b>	<b>Module Content</b>	
	After learning the module, learners will be able to 21. Plan and manage a basic digital campaign for a fashion product or event. 22. Interpret key metrics from social media insights and analytics.	x. Social Media Campaign Structure – Objectives, KPIs, Timeline xi. Campaign Themes – Product Launch, Fashion Week, Festive Collections xii. Influencer Marketing & Collaborations	

	Optimize content strategy based on performance data.	xiii. Analytics Tools – Instagram Insights, Facebook Business Suite xiv. Key Metrics – Reach, Engagement, Impressions, Click-Through Rate xv. Strategy Refinement Based on Insights	
<b>Assignments/ Activities towards CCE</b>			
<p><b>Assignments 1</b>  <b>Title:</b> <i>Social Media Grid for a Fashion Brand (7-Day Plan)</i>  <b>Task:</b> Develop a 7-day content plan (with visuals and captions) for a fashion brand's Instagram page using Canva or equivalent tools. Include rationale for theme, target audience, and post frequency.</p> <p><b>Assignments 2</b>  <b>Title:</b> <i>Mini Social Media Campaign Plan</i>  <b>Task:</b> Design a 1-week campaign plan for a fashion event or product launch. Include post calendar, influencer collaboration ideas, budget estimate, and sample insights report.  <b>Objective:</b> Evaluate ability to plan and measure a basic fashion-focused campaign using digital tools.</p>			

## References:

23. **"Social Media Marketing All-in-One For Dummies"**  
*Authors:* Michelle Krasniak, Jan Zimmerman, Deborah Ng, *Publisher:* Wiley  
*Publication Year:* 2021
24. **"The Art of Social Media: Power Tips for Power Users"**  
*Authors:* Guy Kawasaki, Peg Fitzpatrick, *Publisher:* Portfolio  
*Publication Year:* 2014
25. **"Fashion Marketing and Communication in the Digital Age"**  
*Author:* Olga Mitterfellner, *Publisher:* Routledge  
*Publication Year:* 2022
26. **"Content Chemistry: The Illustrated Handbook for Content Marketing"**  
*Author:* Andy Crestodina, *Publisher:* Orbit Media Studios, Inc.  
*Publication Year:* 2020



<b>code</b> 40444223	<b>Course Name</b> <b>Digital Marketing</b>		<b>Crs</b> <b>02</b>
<b>Course Outcome</b>	After going through the course, learners will be able to 27. Gain in-depth knowledge, core concepts and tools of digital marketing relevant to the fashion industry. 28. Plan and execute basic digital marketing campaigns. 29. Create ad content and SEO-friendly content tailored for fashion audiences. 30. Analyze campaign performance using digital metrics and tools.		
<b>Sr. No.</b>	<b>Module Outcomes</b>	<b>Course Contents</b>	<b>Cr.</b>
<b>Module 1</b>	<b>Digital Marketing Foundations &amp; Fashion Content Creation</b>		<b>01</b>
	<b>Learning Outcomes</b>	<b>Module Content</b>	
	After learning the module, learners will be able to 31. Gain knowledge of digital marketing ecosystem in the fashion context. 32. Create engaging, SEO-optimized content for websites and social platforms. 33. Learn how to use tools like Google Trends, Canva, and Meta Business Suite.	34. Introduction to Digital Marketing – Definition, Scope, Relevance to Fashion 35. Owned, Paid, and Earned Media Channels 36. Fashion-Focused SEO Basics – Keywords, Tags, Meta Descriptions 37. Content Types – Blogs, Social Media Posts, Videos, Ads 38. Visual Tools – Canva, Adobe Express for Fashion Creatives 39. Email Marketing Basics – Mailchimp, Newsletters for Brands 40.	
<b>01Module 2</b>	<b>Campaign Planning, Paid Ads &amp; Performance Analytics</b>		<b>01</b>
	<b>Learning Outcomes</b>	<b>Module Content</b>	

	<p>After learning the module, learners will be able to</p> <ul style="list-style-type: none"> <li>xvi. Plan and execute a basic digital marketing campaign using Google and Meta platforms.</li> <li>xvii. Define budget allocation, audience targeting, and ad design.</li> <li>xviii. Analyze campaign performance using Google Analytics and Meta Insights.</li> </ul>	<ul style="list-style-type: none"> <li>41. Campaign Creation – Objective, Target Audience, Message</li> <li>42. Basics of Google Ads &amp; Meta (Facebook + Instagram) Ads</li> <li>43. Budgeting &amp; Bidding Basics for Fashion Ads</li> <li>44. Ad Design Principles – CTAs, Headlines, Aesthetics</li> <li>45. Introduction to Analytics – Google Analytics, Meta Insights</li> <li>46. Understanding KPIs – CTR, Engagement Rate, CPC, ROI</li> <li>47.</li> </ul>	
<b>Assignments/ Activities towards CCE</b>			
<p><b>Assignments 1</b>  <b>Title:</b> Create a Digital Content Kit for a Fashion Brand  <b>Task:</b> Develop an SEO-optimized blog post, 2 Instagram visuals, and a newsletter draft for a fictional or real fashion brand.  <b>Objective:</b> Evaluate strategic thinking, content writing, and visual marketing skills.</p> <p><b>Assignments 2</b>  <b>Title:</b> Design a Mini Paid Ad Campaign for a Fashion Product  <b>Task:</b> Create a campaign proposal for a new fashion collection, including ad copy, visuals, target demographics, platforms, and a basic performance tracking plan.  <b>Objective:</b> Assess campaign planning, strategic ad thinking, and analytical understanding.</p>			

## References:

- xix. **"Digital Marketing for Dummies"**  
*Author:* Ryan Deiss, Russ Henneberry, *Publisher:* Wiley, *Publication Year:* 2020  
**"Fashion Marketing"**  
*Author:* Tony Hines and Margaret Bruce, *Publisher:* Routledge, *Publication Year:* 2012
- xx. **"Digital Marketing Strategy: An Integrated Approach to Online Marketing"**  
*Author:* Simon Kingsnorth, *Publisher:* Kogan Page, *Publication Year:* 2022
- xxi. **"SEO 2023: Learn Search Engine Optimization"**  
*Author:* Adam Clarke, *Publisher:* Independently Published, *Publication Year:* 2023



<b>Course code</b> 40444521	<b>Course Name</b> Jewelry Essentials (PR)		<b>Crs</b> <b>2</b>
<b>Course Outcome</b>	After going through the course, learners will be able to 48. Analyze the different types of jewelry and their historical and cultural significance. 49. Analyze the jewelry making tools and materials safely and effectively. 50. Demonstrate fundamental techniques such as sawing, filing, soldering, and polishing. 51. Design original jewelry pieces using various materials.		
<b>Sr. No.</b>	<b>Module Outcomes</b>	<b>Course Contents</b>	<b>Cr.</b>
<b>Module 1</b>	<b>Fundamentals of Jewelry</b>		<b>1</b>
	<b>Learning Outcomes</b>	<b>Module Content</b>	
	After learning the module, learners will be able to 52. Analyze significance of jewelry history, including its roles in religion, fashion, status, and adornment. Explore how historical jewelry styles and motifs continue to influence contemporary jewelry design 53. Develop observational skills for accurately depicting three-dimensional objects in drawings. 54. Explore motifs inspired by nature, geometry, culture, and historical references. 55. Demonstrate the skills in depicting surface textures, reflections, and highlights to enhance the realism of jewelry renderings.	10. History of Indian and western jewelry 11. Basic line and object drawing 12. Motif Creation & design pattern using principles 13. Shading & Rendering 14. Design ring pendants, earring and necklace.	
<b>Module 2</b>	<b>Introduction of Tools, Vernier Caliper, Formulas &amp; Practice</b>		<b>1</b>
	<b>Learning Outcomes</b>	<b>Module Content</b>	
	15. Describe common tools and equipment used in jewelry making, including hand tools, bench tools, and machinery 16. Demonstrate the skills for marking in jewelry making to achieve precise and accurate results. 17. Practice soldering exercises such as butt joints, T-joints, and lap joints to develop proficiency in soldering techniques	22. Introduction to Tools, Safety Precautions & Workshop 23. Orientation of Vernier Caliper 24. Calculation of raising and lowering the karat 25. Introduction to melting	

	18. Demonstrate proper handling and usage of tools, emphasizing safety practices such as wearing protective gear and handling tools with care. 19. Demonstrate proper techniques for using the Vernier caliper to measure dimensions of objects accurately. 20. Rise or lower the karat value on the properties and characteristics of the resulting alloy. 21. Define the Principles of melting metal and the different methods used in jewelry making, including torch melting, crucible melting, and casting.		
<b>Assignments/ Activities towards CCE</b>			
<ul style="list-style-type: none"> <li>Rendering pearls, cabochons, and beads is an essential skill for jewelry designers. Assessment will focus on your ability to accurately depict these elements through drawing.</li> <li>The modern-day cuff bracelet is an open or closed rigid bracelet. On ones which are open, each end often has a ball so that the bracelet stays secure around your wrist. A totally closed bracelet can be snapped shut or you simply have to slide it onto your wrist.</li> <li>Draw different shapes with facets. A diamond cut is a style or faceting used when shaping a diamond Single &amp; Double brilliant cut as well as fancy shaped diamonds. Study of More Information About Different Types of Gem Cuts and Shapes.</li> </ul>			

### References:

Crowe, J. (2006). The jeweler's directory of gemstones: A complete guide to appraising and using precious stones from cut and color to shape and settings. Firefly Books.

"McCreight, T. (2010). *The complete metalsmith: An illustrated handbook* (20th anniversary ed.). Davis Publications.

Mentock, D. (2014). The jewelry maker's design book: An alchemy of objects.

Snyder, J. B. (2004). Art jewelry today. Schiffer Publishing.

Untracht, O. (1982). *Jewelry concepts & technology*. Doubleday, North Light Books.

<b>Course code</b> 40444511	<b>Course Name</b> Precious and Semi-Precious Stones (Pr)		<b>Crs</b> 2
<b>Course Outcome</b>	After going through the course, learners will be able to 59. Identify various types of gemstones and their characteristics 60. Learn basic terminology related to gemology, such as cut, color, clarity, and carat weight. 61. Demonstrate gemological tools and techniques to accurately assess and evaluate gemstones 62. Describe the different types of gem treatments and enhancements and their effects on gemstones.		
<b>Sr. No.</b>	<b>Module Outcomes</b>	<b>Course Contents</b>	<b>Cr.</b>
<b>Module 1</b>	<b>Introduction to Gemology &amp; Instruments and their applications</b>		1
	<b>Learning Outcomes</b>	<b>Module Content</b>	
	After learning the module, learners will be able to 63. Apply knowledge of gemstone properties to assess quality and authenticity 64. Learn basic terminology related to gemology, such as cut, color, clarity, and carat weight. 65. Explain the formation and geological processes that create different types of gemstones 66. Summarize the classification systems used in gemology 67. Differentiate between natural and synthetic gemstones based on their physical and optical properties. 68. Demonstrate how to use gemological tools 69. Conduct basic gemological tests to identify gemstones	70. Introduction of Gemology 71. Introduction to type of cuts & shapes 72. Types Of Rocks, Minerals and Gem 73. Properties of Mineral/Gemstones 74. Beauty, Durability and Rarity Of Gemstones Instruments to use in gemology 75. Dichroscope 76. Principle 77. Construction and working Isotropic and Anisotropic stones Dichroism and trichrome 78. Polaris cope 79. Principle 80. Construction and working S.R., D.R., A.G.G. & A.D.R stone 81. Optic character of gemstone Uniaxial and Biaxial optic signs Use of konoscope 82. Refractometer 83. Spectroscope 84. Visual Identification	
<b>Module 2</b>	<b>Types of Gemstones and their structure</b>		1
	<b>Learning Outcomes</b>	<b>Module Content</b>	

	<p>After learning the module, learners will be able to</p> <p>85. classification of gemstones into inorganic, organic, and gem rocks</p> <p>86. crystalline and cryptocrystalline quartz, garnet, feldspar, tourmaline, and other gemstones.</p> <p>87. Explain the difference between inorganic and organic gemstones.</p> <p>88. Identify and classify various gemstones based on their physical characteristics and origin.</p> <p>89. Explain the differences between natural, synthetic, and imitation gemstones.</p> <p>90. Demonstrate the ability to distinguish between different synthesis methods based on inclusions and growth patterns.</p> <p>91. techniques of synthetic diamonds and colored stones.</p> <p>92. Differentiate synthetic gemstones from natural ones through microscopic observation</p>	<p>93. Various Types Of Gems: Inorganic Gems Like Crystalline And Cryptocrystalline Quartz, Garnet, Feldspar, Tourmaline, Topaz, Peridot, Chrysoberyl's Cat'sEye, Alexandrite, Spinel, Zircon, Turquoise, Malachite, Diopside, Iolite, Tanzanite, Apatite And Other Rare Stones.</p> <p>94. Organic Gemstone Like Pearl, Ivory, Amber, Coral, Jet Gem Rock Like Lapis Lazuli</p> <p>95. Synthesis Of Diamonds and Color stones</p> <p>96. Identification Of Synthetic</p> <p>97. Synthetics, Treated &amp; Imitations</p> <p>98. Certification Practice</p>	
<b>Assignments/ Activities towards CCE</b>			
<p>99. Lab assessment of identification of gemstone</p> <p>100. Navratna chart of gemstones.</p> <p>101. PPT presentation of natural and synthetic gemstones.</p>			

### References:

- Hughes, R. W. (2018). *\*The book of gems\**.
- Hughes, R. W. (2017). *\*Gem identification made easy: A hands-on guide to more confident buying and selling\**.
- Liddicoat, R. W. (2005). *Gemology* (6th ed.). Gemological Institute of America (GIA).
- Read, P. G. (2020). *Gemology*.
- Read, P. G. (2005). *Gems and gemology: A comprehensive guide to the nature, identification, and evaluation of gemstones*. Springer.
- Webster, R. (2008). *Gemology* (3rd ed.). Wiley.
- Read, P. (2005). *\*Gemology\**. Butterworth-Heinemann.
- Schumann, W. (2009). *\*Gemstones of the world\**. Sterling Publishing.
- Webster, R. (2004). *\*Introduction to gemology\**. Robert Webster.

<b>Course Title</b>	<b>Tie and Dye (Practical)</b>
<b>Course Credits</b>	<b>02</b>
<b>Course Outcomes</b>	After going through the course, learners will be able to: 2. Study history, techniques, and processes of tie and dye 3. Explore hands-on experience in creating tie and dye 4. Learn creative expression and experimentation through tie and dye 5. Apply cultural and artistic significance of tie and dye within the broader context of textile arts.
<b>Module 1 (Credit 1) Introduction to Tie and Dye Techniques</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to: 6. Handle the materials, tools, and techniques 7. Explore color theory and color mixing 8. Apply Design principles and composition in tie and dye
<b>Content Outline</b>	9. History and cultural significance of tie and dye 0. Traditional tie and dye techniques: bandhani, shibori, and leheriya 1. Dyeing techniques: immersion dyeing, resist dyeing, and direct application.
<b>Module 2 (Credit 1) Advanced Tie and Dye Techniques</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to: 11. Experiment with different types of Tie and Dye Techniques 12. Explore patterns and motifs using advanced Tie and Dye Techniques
<b>Content Outline</b>	2. Advanced tie and dye techniques: clamp resist, stitch resist, and pleating

### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)**

113. Weekly assignments (sketches, studies, sample swatches)
114. Midterm Tie and Dye project (exploration of basic techniques and design principles)
115. Final Tie and Dye project (individual Tie and Dye artwork demonstrating technical skill and creative expression)

Students will have to submit at least **06** Assignments in various materials and sizes.

**Internal Assessment:** There will be no internal assessment.

**External Assessment:** External assessment at the end of the semester, which carries a weightage of **50 marks**. During the assessment, students will create their Tie and Dye own artwork

### **Bibliography:**

Elisabeth Berkau. (2022) *Learn to Dye & Print Fabric using shibori, Tie-Dye, Sun Printing and more*. Landauer Publishing



Subject Code	Courses, Modules and Outcomes	Course Contents	Cr
	<b>SEMESTER IV</b>		
<b>4.4</b>	<b>Festival Song (Practical) OEC</b>		<b>2</b>
	<b>Course Outcomes: Learners will be able to:</b> 116. Perform the festival songs. 117. Analyze the evolution of national festival songs. 118. Identify regional musical characteristics. 119. Appreciate festival songs. 120. Recognize how music enhances unity in celebrations. 121. Preserve and popularize rare festival songs.		
<b>Module 1</b>	<b>National Festival Songs</b>		<b>1</b>
	<b>LOs:</b> Learners will be able to 13. Study the expression of patriotism and national pride through music. 14. Analyze devotional and inspirational songs related to Mahatma Gandhi's ideals. 15. Recognize the role of music in fostering unity and tribute on significant national occasions.	<b>Module Contents:</b> 122. Songs of Unity 123. Songs related to Gandhi Jayanti 124. Songs related to Maharashtra Day 125. Songs related to Samvidhan Din 126. Other National Commemorations	
<b>Module 2</b>	<b>Traditional Festival Songs</b>		<b>1</b>
	<b>LOs:</b> Learners will be able to 127. Sustain the tradition of festival and to promote Indian knowledge system through songs. 128. Explore the characteristics and emotions of different musical Songs	<b>Module Contents: Festival Songs from different region of India</b> 129. Diwali 130. Navratri 131. Holi 132. Ganesh Chaturthi 133. Gokul Ashtami 134. Ram Navami	
<b>Assignments/ Activities towards CCE</b>			
	135. Celebration of different festivals through Songs. 136. To Organized popular festival like Garba and Vasant Panchami in campus.		

### References:

137. Khare, V. (1998). Maharashtra's loksangeet (Folk music of Maharashtra). Sahitya Prakashan.
138. Sonawane, S. L. (2005). Bharatiya loksangeet (Indian folk music). Lokvangmay Griha.
139. Vanarse, S. (2010). Loksangeet: Ek sanskrutik varasa (Folk music: A cultural heritage). Dr. Babasaheb Ambedkar Marathwada University.
140. Joshi, M. (2012). Lokgeete ani tyanche samajik mahatva (Folk songs and their social significance). Granthali Prakashan.
141. Deshpande, P. (1995). Maharashtra's lokkala ani parampara (Maharashtrian folk art and traditions). Rajhans Prakashan.

142. Shinde, U. (2017). Bharatiya lokparampara ani sangeet (Indian folk traditions and music). Sadhana Prakashan.
143. Vasant. (2005). Sangeet Visharad. Hathras, UP: Sangeet Karyalaya.
144. Taralekar, G. H. (1973). Bharatiya vaddyancha itihis (History of Indian percussion instruments). Pune: Go. Ya. Rane Prakashan.
145. Borkar, P. Tulasidas. (2014). Sanvadini Sadhana. Mumbai: Shree Navdurga Prakashan.
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147. Bandyopadhyaya, S. (1988). Techniques of Sitar. Delhi: B R Publication.
148. Velhal, Dr. R., & More, Dr. S. (2021). [Book Title Missing]. White Falcon Publishing.
149. Oistrakh, D. (1967). The Principles of Violin Fingering. London: Oxford University Press.

<b>4.4</b>	<b>Introduction to AI</b>		
<b>Course Outcomes:</b>	<b>Learners will be able to:</b> <ol style="list-style-type: none"> <li>11. Demonstrate fundamental understanding of the history of artificial intelligence (AI) and its foundations.</li> <li>12. Analyze AI and Human Computer Interaction (HCI) problems and design and evaluate AI and HCI.</li> <li>13. Identify key issues and analyze complex problems related to AI and HCI.</li> <li>14. Examine issues related to AI and HCI.</li> </ol>		
<b>Module 1</b>	<b>Introduction to Artificial Intelligence</b>		<b>1</b>
	<b>LOs: Learners will be able to</b> <ol style="list-style-type: none"> <li>15. Examine the concept of Artificial Intelligence (AI).</li> <li>16. Recognize various AI applications.</li> <li>17. Analyze the role and impact of AI in society.</li> <li>18. Develop critical thinking and problem-solving skills.</li> </ol>	<b>Module Contents:</b> <ol style="list-style-type: none"> <li>19. Definition, history, and scope of AI</li> <li>20. Types of AI: narrow or weak AI, general or strong AI, and superintelligence</li> <li>21. AI applications: expert systems, natural language processing, computer vision, and robotics tools</li> </ol>	
<b>Module 2</b>	<b>Human-Computer Interaction (HCI)</b>		<b>1</b>
	<b>LOs: Learners will be able to</b> <ol style="list-style-type: none"> <li>150. Examine the interactive systems using HCI principles and methods.</li> <li>151. Evaluate the impact of technology on humans and society.</li> <li>152. Communicate HCI concepts and designs effectively to stakeholders.</li> <li>153. Apply HCI principles to real-world problems</li> </ol>	<ol style="list-style-type: none"> <li>154. Introduction to HCI: human-centered design, user experience, and usability</li> <li>155. Human factors: cognitive psychology, perception, and attention</li> <li>156. Interaction design: input devices, output devices, and interaction techniques</li> </ol>	
<b>Assignments/ Activities towards CCE</b>			
	Students will be given the following projects: <ol style="list-style-type: none"> <li>157. AI Case Study Presentation</li> <li>158. Project on HCI Design</li> <li>159. Projects based on 'Impacts of AI'</li> </ol>		

## References:

- Dix, A., Finlay, J., Abowd, G. D., & Beale, R. (2004). Human-Computer Interaction (3rd ed.). Pearson. United Kingdom.
- Goyal, S. K. (2015). Human-Computer Interaction. Tata McGraw-Hill. India.
- Gupta, R. K. (2012). Artificial Intelligence. Tata McGraw-Hill. India.
- Iyengar, S. S. (2011). Artificial Intelligence and Robotics. New Age International. India.

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Khemani, D. (2013). Artificial intelligence. Oxford University Press. India.

Russell, S., & Norvig, P. (2020). Artificial Intelligence: A Modern Approach (4th ed.). Pearson. United States.

Sharma, R. K. (2018). Human-Computer Interaction. Oxford University Press. India.

Tidwell, J. (2010). Designing Interfaces (2nd ed.). O'Reilly Media. United States.

<b>4.4</b>	<b>Introduction to AI</b>		
<b>Course Outcomes:</b>	<b>Learners will be able to:</b> <ul style="list-style-type: none"> <li>22. Demonstrate fundamental understanding of the history of artificial intelligence (AI) and its foundations.</li> <li>23. Analyze AI and Human Computer Interaction (HCI) problems and design and evaluate AI and HCI.</li> <li>24. Identify key issues and analyze complex problems related to AI and HCI.</li> <li>25. Examine issues related to AI and HCI.</li> </ul>		
<b>Module 1</b>	<b>Introduction to Artificial Intelligence</b>		<b>1</b>
	<b>LOs: Learners will be able to</b> <ul style="list-style-type: none"> <li>26. Examine the concept of Artificial Intelligence (AI).</li> <li>27. Recognize various AI applications.</li> <li>28. Analyze the role and impact of AI in society.</li> <li>29. Develop critical thinking and problem-solving skills.</li> </ul>	<b>Module Contents:</b> <ul style="list-style-type: none"> <li>30. Definition, history, and scope of AI</li> <li>31. Types of AI: narrow or weak AI, general or strong AI, and superintelligence</li> <li>32. AI applications: expert systems, natural language processing, computer vision, and robotics</li> </ul>	
<b>Module 2</b>	<b>Human-Computer Interaction (HCI)</b>		<b>1</b>
	<b>LOs: Learners will be able to</b> <ul style="list-style-type: none"> <li>160. Examine the interactive systems using HCI principles and methods.</li> <li>161. Evaluate the impact of technology on humans and society.</li> <li>162. Communicate HCI concepts and designs effectively to stakeholders.</li> <li>163. Apply HCI principles to real-world problems</li> </ul>	<ul style="list-style-type: none"> <li>164. Introduction to HCI: human-centered design, user experience, and usability</li> <li>165. Human factors: cognitive psychology, perception, and attention</li> <li>166. Interaction design: input devices, output devices, and interaction techniques</li> </ul>	
<b>Assignments/ Activities towards CCE</b>			
	Students will be given the following projects: <ul style="list-style-type: none"> <li>167. AI Case Study Presentation</li> <li>168. Project on HCI Design</li> <li>169. Projects based on 'Impacts of AI'</li> </ul>		

## References:

Dix, A., Finlay, J., Abowd, G. D., & Beale, R. (2004). Human-Computer Interaction (3rd ed.). Pearson. United Kingdom.

Goyal, S. K. (2015). Human-Computer Interaction. Tata McGraw-Hill. India.

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Russell, S., & Norvig, P. (2020). Artificial Intelligence: A Modern Approach (4th ed.). Pearson. United States.

Sharma, R. K. (2018). Human-Computer Interaction. Oxford University Press. India.

Tidwell, J. (2010). Designing Interfaces (2nd ed.). O'Reilly Media. United States.

<b>4.4</b>	<b>Introduction to AI</b>		
<b>Course Outcomes:</b>	<b>Learners will be able to:</b> <ul style="list-style-type: none"> <li>33. Demonstrate fundamental understanding of the history of artificial intelligence (AI) and its foundations.</li> <li>34. Analyze AI and Human Computer Interaction (HCI) problems and design and evaluate AI and HCI.</li> <li>35. Identify key issues and analyze complex problems related to AI and HCI.</li> <li>36. Examine issues related to AI and HCI.</li> </ul>		
<b>Module 1</b>	<b>Introduction to Artificial Intelligence</b>		<b>1</b>
	<b>LOs: Learners will be able to</b> <ul style="list-style-type: none"> <li>37. Examine the concept of Artificial Intelligence (AI).</li> <li>38. Recognize various AI applications.</li> <li>39. Analyze the role and impact of AI in society.</li> <li>40. Develop critical thinking and problem-solving skills.</li> </ul>	<b>Module Contents:</b> <ul style="list-style-type: none"> <li>41. Definition, history, and scope of AI</li> <li>42. Types of AI: narrow or weak AI, general or strong AI, and superintelligence</li> <li>43. AI applications: expert systems, natural language processing, computer vision, and robotics</li> </ul>	
<b>Module 2</b>	<b>Human-Computer Interaction (HCI)</b>		<b>1</b>
	<b>LOs: Learners will be able to</b> <ul style="list-style-type: none"> <li>170. Examine the interactive systems using HCI principles and methods.</li> <li>171. Evaluate the impact of technology on humans and society.</li> <li>172. Communicate HCI concepts and designs effectively to stakeholders.</li> <li>173. Apply HCI principles to real-world problems</li> </ul>	<ul style="list-style-type: none"> <li>174. Introduction to HCI: human-centered design, user experience, and usability</li> <li>175. Human factors: cognitive psychology, perception, and attention</li> <li>176. Interaction design: input devices, output devices, and interaction techniques</li> </ul>	
<b>Assignments/ Activities towards CCE</b>			
	Students will be given the following projects: <ul style="list-style-type: none"> <li>177. AI Case Study Presentation</li> <li>178. Project on HCI Design</li> <li>179. Projects based on 'Impacts of AI'</li> </ul>		

## References:

- Dix, A., Finlay, J., Abowd, G. D., & Beale, R. (2004). Human-Computer Interaction (3rd ed.). Pearson. United Kingdom.
- Goyal, S. K. (2015). Human-Computer Interaction. Tata McGraw-Hill. India.
- Gupta, R. K. (2012). Artificial Intelligence. Tata McGraw-Hill. India.
- Iyengar, S. S. (2011). Artificial Intelligence and Robotics. New Age International. India.

Jackson, P. C. (1985). Introduction to Artificial Intelligence. Dover Publications. United States.

Khemani, D. (2013). Artificial intelligence. Oxford University Press. India.

Russell, S., & Norvig, P. (2020). Artificial Intelligence: A Modern Approach (4th ed.). Pearson. United States.

Sharma, R. K. (2018). Human-Computer Interaction. Oxford University Press. India.

Tidwell, J. (2010). Designing Interfaces (2nd ed.). O'Reilly Media. United States.



<b>Course Title</b>	<b>Guiding Children's Growth &amp; Behavior (OEC)</b>
<b>Course Credits</b>	<b>2 credits</b>
<b>Course Outcome</b>	<p>By the end of the course, students will be able to understand:</p> <p>180. analyze key principles of child guidance</p> <p>181. interpret common behavior problems in children, their causes, and effective intervention strategies.</p> <p>182. Critique disciplining techniques</p>
<b>Module (Credit 1)</b>	<b>Foundations of Child Guidance</b>
<b>Learning Outcome</b>	<p>After learning the module, learners will be able to-</p> <p>183. explain the concept and importance of child guidance.</p> <p>184. identify key child development theories relevant to behavior guidance.</p> <p>185. apply positive discipline techniques to guide children.</p> <p>186. recognize the role of caregivers and educators in shaping children's behavior.</p>
<b>Content Outline</b>	<p>187. Introduction to Child Guidance</p> <p style="padding-left: 40px;">1. Meaning, Importance &amp; Principles of Guidance</p> <p>188. Theories to understand behavior</p> <p style="padding-left: 40px;">a. Vygotsky, Skinner, Albert bandura, Lawrence Kohlberg, Urie Bronfenbrenner</p> <p>189. Positive Discipline for Child Guidance</p> <p>190. Role of Family, Educators, and Environment in Guidance</p>
<b>Module 2 (Credit 1)</b>	<b>Behavior Problems in Children</b>

<b>Learning Outcome</b>	<p>After learning the module, learners will be able to-</p> <ul style="list-style-type: none"> <li>191. identify common behavior problems in children</li> <li>192. implement positive guidance strategies for different age groups.</li> <li>193. create an environment that fosters self-regulation.</li> <li>194. assess challenging behaviors through behavior management strategies.</li> </ul>
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>195. Understanding normal vs. problematic behavior <ul style="list-style-type: none"> <li>1. Causes of Behavior Problems <ul style="list-style-type: none"> <li>1. Psychological factors (temperament, emotional regulation)</li> <li>2. Environmental factors (parenting style, school environment, peer influence)</li> <li>3. Biological factors (neurological and genetic influences)</li> </ul> </li> <li>2. Common behavior problems <ul style="list-style-type: none"> <li>1. Temper tantrums, Emotional dysregulation, Lying, Stealing, Aggression, Quarrelling, Defiance, Truancy, Enuresis</li> </ul> </li> <li>3. Behavior Management Strategies <ul style="list-style-type: none"> <li>1. Positive reinforcement and discipline techniques</li> </ul> </li> </ul> </li> </ul>

	196. Cognitive-behavioral approaches for emotional regulation 197. Parent training and involvement 198. School-based interventions and teacher strategies
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### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):**

#### **Module 1**

199. Develop a case study (fictional or real) describing a child displaying the behavior and propose behavior management technique

#### **Module 2**

- xxii. Design an engaging digital or physical toolkit that provides practical behavior management techniques for caregivers and educators.
- xxiii. Structure a debate exploring the impact of family, educators, and environment on child behavior and guidance.

#### **References:**

200. Barkley, R. A. (2020). Defiant Children: A Clinician's Manual for Assessment and Parent Training. Guilford Press.
201. Gartrell, D. (2017). Guidance of Young Children. Pearson.
202. Jain, S. & Jain, N. (2006). Handling Behavior Problems in Young Children. Scholars Hub.
203. Kazdin, A. E. (2008). The Kazdin Method for Parenting the Defiant Child. Houghton Mifflin Harcourt.
204. Nelsen, J. (2020). Positive Discipline: The Classic Guide to Helping Children Develop Self-Discipline, Responsibility, and Respect. Harmony.
205. Mash, E. J., & Wolfe, D. A. (2019). Abnormal Child Psychology. Cengage Learning.
206. Popat, S. (n.d.). Effective practices for addressing challenging behaviors.
207. Shaw, D. S., & Gilliam, K. S. (2017). Behavior Problems in Preschool Children: Clinical and Developmental Issues. Guilford Press.



<b>Course Title</b>	<b>Fashion Accessory Making (Pr)</b>
<b>Course Credits</b>	<b>2 (0+2)</b>
<b>Course Outcomes</b>	After going through the course, learners will be able to
	208. <b>Analyze</b> the role and significance of fashion accessories in enhancing overall style and design.
	209. <b>Evaluate</b> various materials and construction techniques used in making accessories.
	210. <b>Create</b> fashion accessories such as jewelry, bags, and belts using appropriate tools and methods.
	211. <b>Apply</b> design principles and finishing techniques to improve the aesthetic and functional quality of accessories.
<b>Module 1 (Credit 1): Introduction to Accessory Making</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	xxiv. Identify and analyse different fashion accessories and their significance. xxv. Understand various materials and tools used in accessory making.
<b>Content Outline</b>	xxvi. Overview of fashion accessories and their role in fashion. xxvii. Types of accessories: Jewellery, bags, belts, hair accessories, and headwear. xxviii. Materials used in accessory making: Leather, metal, fabric, beads, resin, wood, waste textile raw material, etc. xxix. Tools and equipment: Cutting tools, adhesives, sewing tools, jewellery-making tools.
<b>Module 2(Credit 1): Jewelry Making</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	xxx. Work with different jewellery-making materials like beads, metal, fabric, resin, etc. xxxi. Apply various jewellery-making techniques to create wearable designs.
<b>Content Outline</b>	xxxii. Types of jewellery: Earrings, bracelets, necklaces, rings, brooches. xxxiii. Techniques: Beading, wire wrapping, knotting, resin casting, metal embossing. xxxiv. Surface embellishments: Stone setting, engraving, painting, and mixed media techniques.

**Assignments/Activities towards Comprehensive Continuous Evaluation (CCE) :**

**Module 1: Introduction to Accessory Making**

212. Mood Board & Research – Create a trend board on contemporary fashion accessories.
213. Material Swatch Book – Collect and document different accessory-making materials.

## **Module 2: Jewellery Making**

214. Design & Sketch – Develop 3 jewellery design sketches with material selection.
215. Jewellery Making Project – Create one handmade jewellery piece (earrings, necklace, or bracelet).

## **References:**

216. Brown, S. (2023). *Regenerative Fashion: A Pathway to Sustainable Development in the Fashion Industry*. Bloomsbury Publishing.
217. Armitage, N. (2022). *Leathercraft: Traditional Handcrafted Leatherwork Skills*. Schiffer Publishing.
218. Black, S. (2021). *The Sustainable Fashion Handbook*. Thames & Hudson.
219. Caspary, P. (2021). *Modern Jewelry Made Easy: A Step-by-Step Guide to Creating Stunning Handmade Pieces*. Rockport Publishers.
220. Gustafson, R. (2019). *Bag Design: Techniques, Inspiration, and Practical Tips for Creating Stylish Bags*. Laurence King Publishing.
221. Muthu, S. S. (2019). *Sustainability in the Textile and Apparel Industries*. Springer.
222. Gwilt, A. (2018). *Fashion Design for Sustainability*. Laurence King Publishing.
223. Sagara, K. (2018). *Hand-Stitched Leather: Easy Techniques and 20 Great Projects*. Kodansha International.
224. Young, M. (2017). *The Jeweler's Studio Handbook: Traditional and Contemporary Techniques for Working with Metal and Wax*. Quarto Publishing.
225. Newman, J. (2016). *Mastering Contemporary Jewelry Design: Inspiration, Process, and Techniques*. Schiffer Publishing.
226. Fletcher, K. (2014). *Sustainable Fashion and Textiles: Design Journeys (2nd ed.)*. Routledge.
227. Becker, V. (2013). *The Art of Fine Enameling (2nd ed.)*. Stackpole Books.
228. Horton, T. (2012). *The Leatherworking Handbook: A Practical Illustrated Sourcebook of Techniques and Projects*. Cassell.
229. Ivo, S. (2012). *Bags: A Selection from the Museum of Bags and Purses*. ACC Art Books.
230. McCreight, T. (2010). *The Complete Metalsmith: Professional Edition*. Brynmorgen Press.

<b>Course Title</b>	<b>Food Labels (Th)</b>
<b>Course Credits</b>	<b>2</b>
<b>Course Outcomes</b>	<p>After going through the course, learners will be able to</p> <ol style="list-style-type: none"> <li>1. Define legal framework of food labeling.</li> <li>2. Identify misleading claims and assess their impact on consumer trust and public health.</li> <li>3. Describe key food label components.</li> <li>4. Interpret nutritional labeling, macronutrients, micronutrients, and front-of-pack labeling systems.</li> <li>5. Analyze different types of nutrition claims and their regulatory implications.</li> <li>6. Evaluate the regulatory and consumer implications of special labeling requirements for organic, GMO, allergen, and country-of-origin claims.</li> </ol>
<b>Module 1(Credit 1)</b>	<b>Introduction, regulations, ethical considerations</b>
<b>Learning Outcomes</b>	<p>After learning the module, learners will be able to</p> <ol style="list-style-type: none"> <li>231. Explain the Basics of Food Labels.</li> <li>232. Analyze the Legal Framework for Food Labeling.</li> <li>233. Evaluate Country-Specific Food Labeling Regulations.</li> <li>234. Assess Consumer Awareness and Ethical Considerations in Food Labeling.</li> </ol>
<b>Content Outline</b>	<p><b>1.Introduction to Food Labels</b>          -Definition and importance of food labels          -Legal framework for food labeling  <b>2.Food Labeling Regulations</b>          -Country-specific regulations (e.g., FDA [USA], FSSAI [India], EFSA [EU])          -Mandatory vs. voluntary labelling  <b>3.Consumer Awareness and Ethical Considerations</b>          -Misleading claims and marketing tactics          -The role of food labels in public health          -Consumer rights and responsibilities</p>
<b>Module 2(Credit 1) requirements</b>	<b>Key components, nutritional claims and special</b>
<b>Learning Outcomes</b>	<p>After learning the module, learners will be able to</p> <ol style="list-style-type: none"> <li>235. Identify and describe the essential components of food labels</li> <li>236. Recognize the importance of nutritional labeling and its impact on consumer choices and health.</li> <li>237. Analyze different types of nutrition claims, such as health claims.</li> <li>238. Evaluate front-of-pack labeling systems like the traffic light system and Nutri-Score in guiding consumer decisions.</li> </ol>

<b>Content Outline</b>	<p><b>1.Key Components of Food Labels</b> -Mandatory components of food labels as per FSSAI guidelines</p> <p><b>2.Nutritional Labeling &amp; Claims</b> -Understanding macronutrients and micronutrients on labels -Types of nutrition claims (health claims, nutrient content claims, structure-function claims) -Front-of-pack labelling (traffic light system, Nutri-Score, etc.)</p> <p><b>3.Special Labeling Requirements</b> -Organic, GMO, and allergen labelling -Country of origin labelling (COOL) -Labelling for specific consumer groups (e.g., Halal, Kosher, Vegan)</p>
<p><b>Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):</b></p> <p>26. <b>Case Study on Misleading Food Labels:</b> Analyze real-life examples of misleading food labels, discuss their impact on consumer trust and health, and propose regulatory measures to prevent such practices.</p> <p>27. Activity: Prepare a sample food label as per the FSSAI (Mandatory) and other voluntary standards</p>	

**References: -**

239. Food Safety and Standards Authority of India (FSSAI). (2019). *The Pink Book: Your guide for safe and nutritious food at home*. FSSAI.
240. Scott, J. K., & Hayes, M. I. (2012). *Food labeling: FDA protections and country-of-origin labels*. Nova Science Publishers.
241. Future Learn. (n.d.). *Understanding food labels*. University of Reading. Retrieved February 23, 2025,
242. Choudhary, V. (2014). *Fundamentals of food processing, packaging, labelling and marketing*. Anmol Publications Pvt. Ltd.
- 243.** NIIR Board of Consultants & Engineers. (2020). *Food packaging technology handbook* (3rd rev. ed.). NIIR Project Consultancy Services.



<b>Course Title</b>	<b>Culinary Science -II (Theory)</b>
<b>Course Credits</b>	<b>2</b>
<b>Course Outcomes</b>	<p>After going through the course, learners will be able to</p> <ol style="list-style-type: none"> <li>1. Enlist types of food commodities</li> <li>2. Observe changes taking place in foods during cooking</li> <li>3. Describe their role and uses in food preparations</li> <li>4. Discuss Popular recipes made with them</li> <li>5. Discuss Preparations made seasonally or during festivals</li> </ol>
<b>Module 1 (Credit 1)</b>	<b>Role of Vegetables, Fruits, Milk in Cookery</b>
<b>Learning Outcomes</b>	<p>After learning the module, learners will be able to</p> <p>Enlist types of vegetables, fruits, milk and their products</p> <p>Describe their role &amp; use in popular, seasonal and festive food preparations</p>
<b>Content Outline</b>	<p><b>VEGETABLES and FRUITS:</b>  Types and importance of fruits and vegetables.  Processing of fruits and vegetables.  Preparations as per season and festival.</p> <p><b>MILK and MILK PRODUCTS:</b>  Types of milk and their uses.  Types of milk products and their uses.  Preparations as per season and festival.</p>
<b>Module 2 (Credit 1)</b>	<b>Role of Sugar, Jaggery, Spices and Condiments in Cookery</b>
<b>Learning Outcomes</b>	<p>After learning the module, learners will be able to</p> <p>Enlist types and varieties of sweetening agents &amp; spices and condiments</p> <p>Describe their role &amp; use in popular, seasonal and festive food preparations</p>
<b>Content Outline</b>	<p><b>SUGAR, JAGGERY ETC:</b>  Types of sugar and uses.  Molasses, honey  Syrups  Artificial Sweeteners</p> <p><b>SPICES AND CONDIMENTS:</b>  Types and uses.</p>
<b>Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)</b> Collect samples and discuss varieties of the foods Select/plan popular, seasonal and festive recipes with the foods	

**References:**

1. S. L. Doshi. Anthropology of Foods and Nutrition. Rawat Publication, Jaipur 1995.
2. Nambiar Vanisha. Festive Foods of India, Magnum Publications, 202
3. Parvinder. S. Theory of cookery. Bali Oxford University. Press, 2017 ND
4. Pushpesh Pant. Indian: The Cookbook

<b>Course Title</b>	<b>Health for All*</b>
<b>Course Credits</b>	2
<b>Course Outcomes</b>	After going through the course, learners will be able to -
	28. Explain the basic concepts of health 29. Identify key health behaviors 30. Interpret basic public health concerns 31. Develop skills to interpret health messages 32. Apply behavior modification strategies for positive health outcomes
<b>Module 1 (Credit 1)</b>	<b>Determinants of Health</b>
<b>Learning Outcomes</b>	33. Develop awareness of the social determinants of health 34. Explain the association between healthy behaviors of populations and public health
<b>Content Outline</b>	5. Factors influencing health: social, economic, cultural, and environmental determinants 6. Challenges in community health 7. Key health behaviors and public health 8. Health literacy and misinformation
<b>Module 2 (Credit 1)</b>	<b>Health and Culture</b>
<b>Learning Outcomes</b>	9. Explain the cultural context of health 10. Develop skills to interpret health communication 11. Apply knowledge of technological tools to monitor basic health parameters
<b>Content Outline</b>	12. Cultural norms, beliefs, and traditions around health 13. Health communication across cultures 14. Community and/or culture-based health concerns and management strategies 15. Digital Technology and Health – Wearables, apps, telemedicine, AI

**Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):**

16. Individual / group projects / essays on healthy behaviors and community health
17. Classroom discussions on health communication in different communities and cultures
18. Group or individual assignments on applications of digital technology in health

monitoring for self.

**References:**

19. Park, k. (2021). Parks Textbook of Preventive and Social Medicine (28<sup>th</sup> Ed), Banarsidas Bhanot Publishers
20. Lal, S. (2007). Textbook of Community Medicine: Preventive and Social Medicine (8<sup>th</sup> Ed), CBS Publishers and Distributors Pvt. Ltd.
21. McKenzie, J.F. (2011). An Introduction to Community Health (5<sup>th</sup> Ed), Jones and Bartlett Publishers, Inc
22. MacLachlan, M. (2006). Culture and Health-A Critical Perspective Towards Global Health (2<sup>nd</sup> Ed), John Wiley & Sons Inc.

<b>Course Title</b> <b>Course Code</b>	<b>Caring for the Elderly (Th)</b>
<b>Course Credits</b>	<b>2 credits</b>
<b>Theory</b>	<b>50 Marks</b>
<b>Course Outcome</b>	<p>By the end of this course, students will be able to:</p> <ol style="list-style-type: none"> <li>23. distinguish the biological, psychological, and social aspects of aging.</li> <li>24. compare common health issues and challenges faced by the elderly.</li> <li>25. demonstrate knowledge of ethical and legal considerations in elder care.</li> <li>26. analyze the role of family, caregivers, and community resources.</li> <li>27. examine strategies for effective communication with older adults.</li> </ol>
<b>Module (Credit 1)</b>	<b>Introduction to Gerontology</b>
<b>Learning Outcome</b>	<p>After learning the module, learners will be able to:</p> <ol style="list-style-type: none"> <li>16. analyze the aging process</li> <li>17. interpret biological aging</li> <li>18. evaluate health concerns in the elderly</li> </ol>
<b>Content Outline</b>	<ol style="list-style-type: none"> <li>19. <b>Introduction to Gerontology</b> <ul style="list-style-type: none"> <li>• Definition of aging, demographics, lifespan development</li> </ul> </li> <li>20. <b>The Aging Process</b> <ol style="list-style-type: none"> <li>b) Biological aging, cognitive changes, emotional transitions</li> </ol> </li> </ol> <p><b>3.Health Concerns in the Elderly</b> Common illnesses, nutrition, mobility, medication management</p>
<b>Module 2 (Credit 1)</b>	<b>Key Concerns in Ageing</b>

<b>Learning Outcome</b>	<p>After learning the module, learners will be able to:</p> <ol style="list-style-type: none"> <li>21. analyze mental health and aging issues in elderly</li> <li>22. demonstrate appropriate communication techniques for interacting with older adults.</li> <li>23. differentiate between various types of elder abuse and identify warning signs.</li> <li>24. assess the effectiveness of existing policies and programs for elderly welfare.</li> </ol>
<b>Content Outline</b>	<p><b>28. Mental Health and Aging</b></p> <ol style="list-style-type: none"> <li>1. Depression, dementia, loneliness, coping mechanisms</li> </ol> <p><b>29. Communication with Older Adults</b></p> <ol style="list-style-type: none"> <li>1. Active listening, empathy, non-verbal cues, cultural sensitivity</li> </ol> <p><b>30. Family and Caregiving Dynamics</b></p> <ol style="list-style-type: none"> <li>1. Informal vs. formal care, caregiver stress, intergenerational relationships</li> </ol> <p><b>31. Elder Abuse and Protection</b></p> <ol style="list-style-type: none"> <li>1. Types of abuse, detection, legal frameworks, safeguarding rights</li> </ol> <p><b>32. Policies and Programs for the Elderly</b></p> <ol style="list-style-type: none"> <li>1. Government schemes, insurance, retirement benefits, NGOs</li> </ol>

### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):**

#### **Module 1**

33. Create ethical guidelines to respond to scenarios involving elder care.
34. Role play on the impact of family, community, and cultural factors on elderly care.
35. Group Presentation on Elderly Issues

#### **Module 2**

36. Examine case studies to identify challenges and solutions in caregiving situations.
37. Critique ethical dilemmas related to autonomy and end-of-life decisions.
38. Design an awareness campaign or care strategy that promotes healthy aging.
39. Propose improvements to current elderly care systems or community support models.

## References:

40. Alam, M., Karan, A., & Yusuf, F. (2012). Health of the elderly in India: A multilayered analysis. In R. Mazumdar (Ed.), *Ageing in Asia – Findings from new and emerging data initiatives* (pp. 259–292). National Academies Press.
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44. Rajan, I. S., Mishra, U. S., & Sarma, P. S. (1999). *India's elderly: Burden or challenge?* Sage Publications India.
45. Sharma, M. L. (2004). Aging in India: Challenge for the society. *Indian Journal of Social Work*, 65(2), 219–232.
46. United Nations Population Fund (UNFPA) & HelpAge India. (2017). *Caring for Our Elders: Early Responses – India Ageing Report 2017*. UNFPA India. <https://india.unfpa.org>.

<b>Course Title</b>	<b>Applications of Basic Biotechnology for Community Development II</b>  <b>Sericulture II: Mulberry Silkworm Rearing</b>
<b>Course Credits</b>	02 (Pr)
<b>Course Outcomes</b>	<p>After going through the course, learners will be able to</p> <ol style="list-style-type: none"> <li>1. To make the students aware about the significance of sericulture as a profit-making enterprise.</li> <li>2. To help the students to understand the biology of silkworms and its nutritional requirement to secrete quality silk.</li> <li>3. To give an understanding about the techniques of silkworm rearing, reeling of silk and various measures to be taken to maximize the benefits.</li> <li>4. To help the students to know about various uses of silk and develop entrepreneurial skills required for self-employment in sericulture and silk production sector.</li> </ol>
<b>Module 1 (Credit 1) (Pr) Introduction to sericulture. Life cycle of silkworm and its characteristic features</b>	
<b>Learning Outcomes</b>	<p>After learning the module, learners will be able to</p> <ol style="list-style-type: none"> <li>1. Learn about the history of sericulture and silk route.</li> <li>2. Recognize various species of silk moths in India, and exotic and indigenous races.</li> <li>3. Be aware about the opportunities and employment in sericulture industry- in public, private and government sector.</li> <li>4. Gain thorough knowledge about the techniques involved in silkworm rearing and silk reeling.</li> </ol>
<b>Content Outline</b>	<ol style="list-style-type: none"> <li>1. Study of models of rearing houses, appliances used in silkworm rearing</li> <li>2. Preparation and application of disinfectants in rearing house and appliances</li> <li>3. Technique for hot and cold acid treatment of silkworm eggs, its advantages and disadvantages</li> <li>4. Rearing Techniques: Harvesting and preservation technique; leaf selecting for different instants; mulberry leaf estimation; Identification of moulting larva, care during moulting, mounting and mounting density, types of mountages; Harvesting of cocoons, assessment of cocoons.</li> </ol>
<b>Module 2 (Credit 1) (Pr) Introduction to sericulture. Rearing of mulberry silk worm</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to



	<p>1. Develop entrepreneurial skills necessary for self-employment in mulberry and seed production and be apprised about practicing sericulture as a profit-making enterprise.</p> <p>2. Enhance collaborative learning and communication skills through practical sessions, team work, group discussions, assignments and projects.</p>
<b>Content Outline</b>	<p>1. Selection of moth, pairing and despairing, preparation of eggs (loose and sheet, surface sterilization of eggs)</p> <p>2. Visit to seed cocoon markets, commercial grainage and cold storage centre to know activities of cocoon markets, preparation of laying and cold storage of eggs.</p> <p>3. Mulberry Crop Cultivation: Preparation of nursery beds, Different propagation methods – grafting and layering, Planting System and Intercultural Operations: - pit and row system, mulching, irrigation.</p> <p>4. Visit to Sericulture research institute</p>

#### **Assessment Criteria:**

47. Field visit to a local sericulture unit and study of all essential practices
48. Field visit to a local mulberry cultivation farm and study of different practices
49. Report making on Harvesting and preservation techniques
50. Preparation of brief study report on Sericulture after Visit to Sericulture research institute.

#### **References:**

51. Manual on Sericulture (1976); Food and Agriculture Organisation, Rome Ullal, S.R. and Narasimhanna M.N. (1987) Handbook of Practical Sericulture; 3rd Edition, CSB, Bangalore
52. Yonemura, M. and Rama Rao, N. (1951) A Handbook of Sericulture. I. Rearing of silk-worms. Government Branch Press, Mysore.
53. Ananthanarayanan, S. K. (2008) Silkworm Rearing. Daya Publishing House Aruga, H. (1994). Principles of Sericulture. CRC Press

<b>Course Title</b>	<b>Nutrition in Health &amp; Disease (Pr)</b>
<b>Course Credits</b>	<b>2</b>
<b>Course Outcomes</b>	<p>After going through the course, learners will be able to:</p> <ol style="list-style-type: none"> <li>1. Describe Nutrient Functions</li> <li><b>2. Analyze</b> the impact of nutritional factors on physical and psychological aging.</li> <li><b>3. Evaluate</b> dietary modifications for common health concerns at different life stages.</li> <li>4. Identify Nutrition-Related Diseases</li> <li><b>5. Design</b> appropriate meal plans by considering physiological, socio-economic, and cultural factors.</li> <li>6. Analyze the Relationship Between Nutrition and Disease</li> </ol>
<b>Module 1(Credit 1) Nutrition for the Elderly and Common Health Conditions</b>	
<b>Learning Outcomes</b>	<p>After learning the module, learners will be able to</p> <ol style="list-style-type: none"> <li>54. <b>Explain</b> the physiological and metabolic changes associated with aging.</li> <li>55. <b>Identify</b> the nutritional needs and common deficiencies in older adults.</li> <li>56. <b>Apply</b> dietary modifications for managing diarrhea, constipation, and fever.</li> <li>57. Evaluate the role of iron in preventing and managing iron deficiency anemia.</li> </ol>
<b>Content Outline</b>	<ol style="list-style-type: none"> <li>44. <b>Nutritional Considerations for the Elderly:</b> Understanding age-related changes in digestion, metabolism, and nutrient absorption. Meal planning for elderly.</li> <li>45. <b>Dietary Modifications for Common Health Issues:</b> <ol style="list-style-type: none"> <li>a. <b>Diarrhea:</b> Identifying causes, symptoms, and dietary strategies for management, including hydration and fiber intake.</li> <li>b. <b>Constipation:</b> Importance of fiber, hydration, and specific dietary interventions to promote gut health.</li> <li>c. <b>Fever:</b> Nutritional support for recovery, including hydration, energy-dense foods, and immune-boosting nutrients.</li> </ol> </li> <li>46. <b>Iron Deficiency Anemia:</b> Causes, risk factors, symptoms, and dietary strategies to improve iron intake, absorption, and overall management.</li> </ol>
<b>Module 2(Credit 1) Nutrition and Metabolic Health</b>	
<b>Learning Outcomes</b>	<p>After learning the module, learners will be able to</p> <ol style="list-style-type: none"> <li>58. <b>Describe</b> the role of diet in weight management and metabolic disorders.</li> <li>59. <b>Differentiate</b> between underweight, overweight, and obesity in terms of causes, health risks, and nutritional management and dietary modifications.</li> <li>60. <b>Develop</b> personalized dietary modifications for individuals with hypertension and type 2 diabetes.</li> </ol>

<b>Content Outline</b>	<p>47. <b>Dietary Modifications for Weight Management:</b></p> <p>d. <b>Underweight:</b> Identifying causes, health risks, and dietary approaches to achieve healthy weight gain through nutrient-dense meals.</p> <p>e. <b>Overweight and Obesity:</b> Understanding contributing factors, health risks, and the role of balanced diets, portion control, and lifestyle modifications.</p> <p>48. <b>Dietary Interventions for Metabolic Disorders:</b></p> <p>f. <b>Hypertension:</b> Role of sodium, potassium, DASH diet principles, and lifestyle interventions in managing high blood pressure.</p> <p>g. <b>Type 2 Diabetes:</b> Importance of glycemic control, carbohydrate management, and meal planning strategies for optimal blood sugar regulation.</p>
<b>Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):</b> <p>49. <b>Assessment of Meal Planning</b></p> <p>50. <b>Interpretation and designing meal plans based on different case study</b></p> <p>51. Journal writing</p>	

#### References:

61. Mudambi, S. R., & Rajagopal, M. V. (2022). *Fundamentals of foods, nutrition and diet therapy* (5th ed.). New Age International Pvt. Ltd.
62. Indian Council of Medical Research (ICMR). (2020). *Nutrient requirements and recommended dietary allowances for Indians*. National Institute of Nutrition.
63. **National Institute of Nutrition.** (2017). *Indian food composition tables (IFCT)*. Indian Council of Medical Research.
64. Guthrie, H. A. (1989). *Introductory nutrition*. Times Mirror/Mosby College Publishing.
65. Guthrie, H. A. (1994). *Human nutrition*. William C. Brown.
66. Joshi, S. (2021). *Nutrition and dietetics*. McGraw Hill Higher Education.
67. Mudambi, S. R., & Rajagopal, M. V. (2022). *Fundamentals of foods and nutrition* (7th ed.). New Age International Pvt. Ltd.
68. Maharashtra State Board of Secondary and Higher Secondary Education. (2012). *Food science* (1st ed.). Sheth Publications.
69. Robinson, C. H., & Lawler, M. R. (1990). *Normal and therapeutic nutrition* (17th ed.). Macmillan Publishing Co.
70. Roday, S. (2018). *Food science and nutrition* (3rd ed.). Oxford University Press.
71. Smith, A. M., Collene, A. L., & Spees, C. K. (2024). *Wardlaw's contemporary nutrition* (12th ed.). McGraw Hill.

<b>Course Title</b>	<b>Clinical Pathophysiology (Pr)</b>
<b>Course Credits</b>	<b>2</b>
<b>Course Outcomes</b>	<p>After going through the course, learners will be able to</p> <p>Explain the anatomy and physiology of different organ systems.  Apply knowledge of normal anatomy and physiology to promote a clear understanding of disease processes  Describe the pathogenesis and etiology, of various diseases  Identify the clinical manifestations of various diseases.  Describe how pathophysiological aberrations of organ systems influence each other's functioning</p>
<b>Module 1 (Credit 1) Pathophysiology of Gastrointestinal, Cardiovascular, Hepatobiliary, and Renal Systems</b>	
<b>Learning Outcomes</b>	<p>77. Explore the pathophysiology of gastrointestinal disorders like reflux disease, ulcers, and inflammatory bowel diseases</p> <p>78. Examine the pathophysiology of cardiovascular conditions like hypertension, coronary artery disease, and heart failure</p> <p>79. Explain the pathophysiology of liver, gallbladder, and pancreatic disorders</p> <p>80. Describe the pathophysiology of excretory system disorders such as chronic kidney disease, nephritis, and renal failure.</p>
<b>Content Outline</b>	<p>81. Disorders of the gastrointestinal systems including GERD, ulcers, and inflammatory bowel diseases.</p> <p>82. Pathophysiology of cardiovascular disorders including hypertension, coronary artery disease, and heart failure.</p> <p>83. Disorders of Liver, Gall bladder &amp; Pancreas (e.g., cirrhosis, hepatitis), gallbladder disorders (e.g., cholelithiasis), and pancreatic disorders (e.g., pancreatitis, diabetes).</p> <p>84. Disorders of the excretory system: chronic kidney disease, nephritis, and renal failure.</p> <p>85.</p>
<b>Module 2(Credit 1) Pathophysiology of Metabolic, Endocrine, Skeletal, and Respiratory Disorders</b>	
<b>Learning Outcomes</b>	<p>After learning the module, learners will be able to</p> <p>86. Explore the pathophysiology of malnutrition, and metabolic disorders affecting energy metabolism and weight management.</p> <p>87. Explain the pathophysiology of common endocrine disorders such as diabetes, thyroid dysfunction, and adrenal diseases.</p> <p>88. Correlate the mechanisms behind bone diseases and skeletal disorders like osteoporosis, osteoarthritis, and fractures.</p> <p>89. Describe the pathophysiology of respiratory disorders, including asthma, COPD, and pneumonia.</p>

<b>Content Outline</b>	90. Pathophysiological changes during obesity, malnutrition, and metabolic disorders in energy metabolism and weight management. 91. Disorders of the Endocrine system including diabetes, thyroid dysfunction, and adrenal diseases. 92. Pathophysiology of Bone Diseases and Skeletal Disorders such as osteoporosis, osteoarthritis, and bone fractures. 93. Disorders of the Respiratory system such as asthma, chronic obstructive pulmonary disease (COPD), and pneumonia. 94.
<b>Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):</b>  Group assignments on pathophysiology of different organ systems  Case Studies/ Report interpretation	

### References:

95. Levison, D., Reid, R., Burt, A.D., Harrison, D.J., & Fleming, S. (Eds.). (2008). Muir's Textbook of Pathology (14th ed.). CRC Press.
96. Tortora G. J., Derrickson B. (2009). Principles of Anatomy and Physiology. (12thed.). USA:John Wiley & Sons, Inc.
97. Kumar, V., Abbas A. K., Fausto N. (2008). Robbins & Cotran Pathologic Basis of Disease (7thed.). Pennsylvania: Saunders Elsevier, Inc.
98. Porth C. (2011). Essentials of Pathophysiology: Concepts of Altered Health States. (3rded.). Philadelphia: Wolters Kluwer/ Lippincott Williams and Wilkins.
99. Krause's Food & the Nutrition Care Process - E-Book: Krause's Food & the Nutrition Care Process - E-Book A Mahan, L.K. 9780323340762

<b>Course Title</b>	<b>The Art of Furniture Design (Pr)</b>
<b>Course Credits</b>	2
<b>Course Outcomes</b>	After going through the course, learners will be able to
	100. Develop concept-based furniture designs with functional and aesthetic value.
	101. Apply ergonomic principles to furniture layouts and forms.
	102. Select appropriate materials and fabrication techniques for furniture making.
	103. Demonstrate proficiency in creating scaled models and prototypes.
	104. Evaluate and refine their designs based on user needs, sustainability, and craftsmanship.
<b>Module 1 (Credit 1) – Fundamentals of Furniture Design</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	4. Explain the fundamental principles of furniture design, including aesthetics, ergonomics, and functionality.
	5. Analyze different furniture styles, materials, and construction techniques used in traditional and contemporary designs.
	6. Demonstrate the ability to conceptualize and sketch original furniture designs, incorporating user needs and design trends.
	7. Apply ergonomic principles to ensure comfort, durability, and efficiency in furniture pieces.
	8. Explore sustainable and eco-friendly materials suitable for modern furniture making.
<b>Content Outline</b>	105. Introduction to furniture design: History and evolution 106. Principles of furniture aesthetics and functionality 107. Anthropometry and ergonomic considerations in furniture 108. Materials and finishes: Wood, metal, glass, composites, and upcycled materials 109. Joinery techniques and construction methods 110. Sketching, rendering, and digital visualization tools
<b>Module 2 (Credit 1) – Crafting &amp; Prototyping Furniture (Pr)</b>	
	After learning the module, learners will be able to

<b>Learning Outcomes</b>	9. Develop scaled models and prototypes using various woodworking tools, digital design software, and manual techniques.
	10. Construct furniture components by understanding joinery methods, assembly techniques, and surface treatments.
	11. Evaluate the structural integrity, material efficiency, and functional aspects of furniture designs.
	12. Experiment with different finishing techniques to enhance aesthetics and durability.
	13. Present a fully realized furniture design project, demonstrating creativity, craftsmanship, and problem-solving skills.
<b>Content Outline</b>	111. Design process: From ideation to execution 112. Fabrication techniques: Cutting, shaping, assembling, and finishing 113. Sustainable and modular furniture design 114. Testing and evaluating furniture prototypes 115. Refinement and detailing of design for functionality and comfort 116. Presentation and critique of final project

### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE)**

#### **Continuous assessment based on Projects / Practical's (Marks 50)**

##### **Module -1: Practical Work:**

- 117. Sketching basic furniture concepts
- 118. Material exploration and selection exercise
- 119. Case study on iconic furniture designs
- 120. Mini prototype of a simple stool or chair

##### **Module -2: Practical Work:**

- 121. Creating a scaled prototype of a furniture piece (e.g., chair, table, or storage unit)
- 122. Hands-on work with tools and materials
- 123. Group critique and feedback sessions
- 124. Final presentation and exhibition

#### **Evaluation Pattern (50 Marks) for "The Art of Furniture Design"**

<b>Component</b>	<b>Marks Allocation (%)</b>	<b>Marks (Out of 50)</b>
Concept Development	20%	10
Sketches & Renderings	15%	7.5
Material & Construction Understanding	15%	7.5
Functional Prototype	30%	15
Presentation & Documentation	20%	10
<b>Total</b>	<b>100%</b>	<b>50 Marks</b>

This breakdown ensures a **balanced evaluation** of both **creative and technical aspects** of furniture design.

## References

125. Beylerian, G., & Dent, M. (2011). Designing the 21st century: Furniture, interiors, architecture. Taschen.
  126. Booth, J. (2021). Furniture making: A foundation course. Crowood Press.
  127. Brown, D. (2016). Furniture design: An introduction to development, materials, and manufacturing. Laurence King Publishing.
  128. Fiell, C., & Fiell, P. (2012). 1000 chairs. Taschen.
  129. Jones, C. (2014). Design for living: Furniture and accessories 1950-2000. Victoria & Albert Museum.
  130. Kilmer, R., & Kilmer, W. O. (2014). Construction drawings and details for interiors. Wiley.
  131. Malo, A. (2013). Woodwork: A step-by-step photographic guide. DK Publishing.
  132. McGowan, M., & Kruse, R. (2020). Furniture design: From concept to creation. Schiffer Publishing.
  133. Panero, J., & Zelnik, M. (2014). Human dimension and interior space: A source book of design reference standards. Watson-Guptill.
  134. Pile, J. (2015). Interior design. Pearson.
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<b>Course Title</b>	<b>Surface Ornamentation on Textiles</b>
<b>Course Credits</b>	2 (0+2)
<b>Course Outcomes</b>	After going through the course, learners will be able to
	1. Familiarize the student with the role of surface ornamentation on textiles.
	2. Identify various materials suitable for surface ornamentation.
	3. Acquaint with various surface ornamentation techniques.
	4. Apply various types of ornamentation techniques.
	5. Apply knowledge in developing product.
<b>Module 1(Credit 1)</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Adapt skills of embroidery techniques for surface ornamentation of textiles
<b>Content Outline</b>	1. <b>Surface Ornamentation by Embroidery</b> – 1. Kantha / Kasuti Embroidery on Dupatta /Stole Or 2. Satin Embroidery on Dupatta / Stole
	1. Make one article with the given embroidery technique – <b>25 marks</b>
<b>Module 2(Credit 1)</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Develop skills in various traditional paintings.
<b>Content Outline</b>	1. <b>Traditional Fabric paintings-</b> Madhubani, Kalamkari, Phad, Pichwai, Warli.
	2. Make any one article with the painting technique on stole/Apparel/table cover– <b>25 marks</b>

#### **Evaluation:**

1. Continuous internal evaluation of 50 marks
2. Each module of 25 marks
3. No external examination.

#### **References:**

14. Bernard P Corbman - Textiles- fiber to fabric, Mac Graw Hill, Inc, sixth edition
15. Bindu L Datary - Curtains and Draperies
16. Helene Levenson-Creating an Interior, Hall INC/Englewood cliffs, New Jersey.  
1980.
17. Isabel B. Wingate- Textile fabrics and their selection, Hall, Inc, Engle wood cliffs,  
New Jersey, seventh edition.
18. Ideas for great window treatments - editions of sunset books- Book editor-  
Lynne Gilberg, Editorial director- Sunset book, Bob Doyle, fifth printing July 1995,  
Sunset publishing corporation
19. Kathrine Paddock Hess - Textile fibers and their use, Oxford and IBH publishing  
co, Sixth edition.
20. Larry Eisinger - Today's woman - small home Decorating, A Fawcett, publication  
in Greenwich.
21. Reader's Digest - Complete guide to sewing, Reader's digest associate, Inc 13th  
edition

<b>Course Title</b>	<b>Mathematical Techniques for competitive examination Paper – 2</b>
<b>Course Credits</b>	<b>2</b>
<b>Course Outcomes</b>	After completing this course, learner will be able to
	1. <b>Understand</b> and apply foundational concepts of the trains, Races, games of skill, Proportion, linear equations, system of linear equations and quadratic equations.
	2. <b>Analyze</b> , evaluate, and apply advanced techniques in equations , Proportion and fast track formulae effectively, demonstrating critical thinking and proficiency in solving complex mathematical problems at an advanced level.
	3. <b>Apply</b> formulae and simplification techniques in solving basic numerical problems.
	4. <b>Analyze</b> complex mathematical problem-solving strategies and obtain the solutions to the problems easily.
<b>Module1(Credit1) – Problems based on Train, Races and Games</b>	
<b>Learning Outcomes</b>	After learning this module, learner will be able to
	5. <b>Demonstrate</b> a comprehensive understanding of rains problems, Games of Skill and Proportion.
	6. <b>Apply</b> shortcut formulae to obtain the solution to the problems, and Fundamental employ sophisticated problem-solving strategies for challenging mathematical questions.
<b>Content Outline</b>	<ol style="list-style-type: none"> <li>Problems based on Trains.</li> <li>Races and Games of Skill.</li> <li>Direct Proportion and indirect Proportion.</li> <li>Fast track formulae to solve the questions.</li> </ol>
<b>Module2(Credit1) – Equations</b>	
<b>Learning Outcomes</b>	After learning this module, learner will be able to
	1. <b>Demonstrate</b> proficiency to solve mathematical problems accurately.
	2. <b>Distinguish</b> the situations for various problems and obtain the solutions.
	3. <b>Develop</b> the ability to analyze complex word problems, apply appropriate mathematical techniques to obtain the solutions of the problems.
<b>Content Outline</b>	<ol style="list-style-type: none"> <li>Linear Equations in one, two and three variables</li> <li>System of linear equations</li> </ol>

	7. Quadratic Equations 8. Word problems based on equations
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**Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):**

1. Students have to solve questions based on the topic Problems based on trains from various competitive examination question papers.
2. Solve questions based on topic Proportion from various competitive examination question papers.
3. Obtain the solutions of the problems based on Linear equations and System of equations
4. Obtain the solutions of the problems based on quadratic equations.

**Reference Books:**

1. Verma R. Fast Track Objective Arithmetic (Complete revised edition). Arihant Publications (India) Limited.
2. Aggarwal R. S. Quantitative Aptitude for Competitive Examinations.
3. Aggarwal R. S. Objective Arithmetic (SSC and Railway Exam Special).
4. Sharma A. Teach Yourself Quantitative Aptitude.
5. Dinkar Patil, Spardha Pariksha Ankaganit, Yashodin Publication, N 53, S.F. 4 /5/ 3 Uttamnagar Po. Trimurti Chowk CIDCO Nashik 422008

<b>Course Title</b>	ओ इ सी : स्पर्धा परीक्षेसाठी गणित तंत्र भाग – २
<b>Course Credits</b>	2
<b>Course Outcomes</b>	<p>सदर विषय अभ्यासल्यानंतर विध्यार्थी पुढील बाबीसाठी सक्षम असेल</p> <p>7. <b>Understand</b> and apply foundational concepts of the speed distance and time and Calendar</p> <p>8. <b>Analyze</b>, evaluate, and apply advanced techniques in work, distance and time and fast track formulae effectively, demonstrating critical thinking and proficiency in solving complex mathematical problems at an advanced level.</p> <p>9. <b>Apply</b> formulae and simplification techniques in solving basic numerical problems.</p> <p>10. <b>Analyze</b> complex mathematical problem-solving strategies and obtain the solutions to the problems easily.</p>
<b>Module1(Credit1) – वेळ या संकल्पनेवर आधारित प्रश्न</b>	
<b>Learning Outcomes</b>	<p>सदर पाठ अभ्यासल्यानंतर विध्यार्थी पुढील बाबीसाठी सक्षम असेल</p> <p>1. <b>Demonstrate</b> a comprehensive understanding of करणी, विभाज्यतेच्या कसोट्या, कमिशन व सूट, रोमन अंक</p> <p>2. <b>Apply</b> shortcut formulae to obtain the solution to the problems, and Fundamental employ sophisticated problem-solving strategies for challenging mathematical questions.</p>
<b>Content Outline</b>	<p>1. करणी</p> <p>2. विभाज्यतेच्या कसोट्या</p> <p>3. कमिशन व सूट</p> <p>4. रोमन अंक</p> <p>5. उदाहरणे जलद सोडवण्यासाठी सूत्रे व त्यांचा वापर.</p>
<b>Module2(Credit1) – पाणी (द्रव) या संकल्पनेवर आधारित प्रश्न</b>	
<b>Learning Outcomes</b>	<p>सदर पाठ अभ्यासल्यानंतर विध्यार्थी पुढील बाबीसाठी सक्षम असेल</p> <p>1. <b>Demonstrate</b> proficiency to solve mathematical problems accurately</p> <p>2. <b>Distinguish</b> the situations for and obtain the solutions.</p> <p>3. <b>Develop</b> the ability to analyze complex word problems, apply appropriate mathematical techniques to obtain the solutions of the problems.</p>
<b>Content Outline</b>	<p>1. घातांक</p> <p>2. वर्ग व वर्गमूळ</p> <p>3. घन व घनमूळ</p> <p>4. अंकगणिती व भूमिती श्रेढी</p>

	5. आंतरराष्ट्रीय प्रमाण वेळ 6. गुणोत्तर व प्रमाण उदाहरणे जलद सोडवण्यासाठी सूत्रे व त्यांचा वापर
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**Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):**

1. विद्यार्थ्यांनी एम पी एस सी च्या मागील वर्षीच्या प्रश्नपत्रिकेमध्ये विचारलेले प्रश्न सोडवणे
2. विद्यार्थ्यांनी पोलीस भरती व तलाठी भरती च्या मागील वर्षीच्या प्रश्नपत्रिकेमध्ये विचारलेले प्रश्न सोडवणे
3. विद्यार्थ्यांनी बँक भरती च्या मागील वर्षीच्या प्रश्नपत्रिकेमध्ये विचारलेले प्रश्न सोडवणे
4. विद्यार्थ्यांनी मागील वर्षीच्या स्पर्धा परीक्षेच्या प्रश्नपत्रिकेमध्ये विचारलेले प्रश्न सोडवणे.

**संदर्भ पुस्तके:**

1. दिनकर पाटील , स्पर्धा परीक्षा अंकगणित , यशोदिन पब्लिकेशन्स नाशिक
2. सिद्धेश्वर हाडबेज , अंकगणित व बुद्धिमत्ता , भारती प्रकाशन पुणे
3. पंढरीनाथ राणे, **Sampurna Ganit** , चैताली प्रकाशन

Course Title	Reasoning for Competitive Examination Part II	
Course Credits	2	
Course Outcomes	After completing this course, learner will be able to	
	1. <b>Understand</b> and apply foundational concepts of reasoning to solve the problems in various competitive examinations	
	2. <b>Analyze</b> , evaluate, and apply advanced techniques in reasoning and fast track formulae effectively, demonstrating critical thinking and proficiency in solving complex mathematical problems at an advanced level.	
	3. <b>Apply</b> formulae and simplification techniques in solving problems	
	4. <b>Solve</b> complex mathematical problem-solving strategies and obtain the solutions to the problems appeared in various competitive examinations easily.	
Module1(Credit1) – Verbal Reasoning Tests		
Learning Outcomes	After learning this module, learner will be able to	
	1. <b>Demonstrate</b> a comprehensive understanding of pipes, cisterns , boats and stream, Clock and Calendar .	
	2. <b>Apply</b> shortcut formulae to obtain the solution to the problems, and Fundamental employ sophisticated problem-solving strategies for challenging mathematical questions.	
Content Outline	<ul style="list-style-type: none"><li>• Series Completion<ol style="list-style-type: none"><li>1. Letter Series</li><li>Number Series</li><li>2. Letter number mixed series</li></ol></li><li>• Verbal Classification<ul style="list-style-type: none"><li>• Letter Classification</li><li>• Number Classification</li><li>• Word/ item classification</li></ul></li></ul> <ol style="list-style-type: none"><li>1. Verbal Analogy</li><li>2. Letters and Numbers analogy</li><li>3. Coding and Decoding</li><li>4. Sense of directions</li><li>5. Word building</li><li>6. Formatting meaningful word from jumbled letters</li><li>7. Word completion</li><li>8. Finding similar or dissimilar words</li><li>9. Jumbled words</li></ol>	
Module2(Credit1) – Logical Reasoning		
Learning Outcomes	After learning this module, learner will be able to	
	1. <b>Demonstrate</b> proficiency to solve mathematical problems acc	
	2. <b>Distinguish</b> the situations for and obtain the solutions.	

	3. <b>Develop</b> the ability to analyze complex word problems, apply a mathematical techniques to obtain the solutions of the problem
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Basic concepts in Logic</li> <li>• Types of logical relationships</li> <li>• Logical inference</li> <li>• Immediate inference</li> <li>• Assumption/ Conclusion</li> <li>• Analysis of Statements</li> <li>• Reasoning Logical Diagrams</li> <li>• Family/ Blood relations</li> <li>• Age doubts</li> <li>• Arrangement Problems</li> </ul>

### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):**

1. Students have to form meaningful words from given jumbled letters
2. To complete the given words.
3. To find similar and dissimilar words.
4. Find family/ Blood relations.
5. Solve Arrangement Problems.

### **Reference Books:**

1. Edgar Thorpe; Test of reasoning for competitive examinations, Third Edition, Tata McGraw Hill.
  1. For unit 1:Section 4 and 5.
  2. For unit 2:Section 6 and 7.
2. Surendranath Banarjee ; A handbook of verbal reasoning, New Age International Publisher..
3. Dr. R.S. Aggarwal; A modern Approach to verbal and Nonverbal reasoning, S. Chand.
4. Dr. M. B. Lal and Ashok Gupta; CSAT Logical Reasoning and Analytical Reasoning, Upkar Prakashan



<b>Course Title</b>	<b>Basic Statistics</b>
<b>Course Credits</b>	2
<b>Course Outcomes</b>	After going through the course, learners will be able to
	1. <b>Understand the scope of statistics.</b>
	2. <b>Understand</b> basic terminology in Statistics.
	3. <b>Differentiate</b> the primary and secondary data.
	4. <b>Understand</b> the applicability of measure of central tendency and dispersion.
<b>Module 1(Credit 1) – Measure of Central Tendency</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	5. <b>Identify</b> the characteristics of the population.
	6. <b>Interpret</b> the result through the construction of graph and diagraph.
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>a. Introduction to Statistics: Population, Data, Frequency distribution,</li> <li>b. Diagram and Graph</li> <li>c. Measure of Central Tendency: Arithmetic mean, weighted mean, mode, median, quartiles, deciles.</li> </ul>
<b>Module 2(Credit 1) – Measure of Dispersion and Correlation.</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. <b>Calculate the</b> standard deviation of data and interpret the results.
	2. <b>Apply</b> correlation for data analysis.
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>1. Introduction to dispersion</li> <li>2. Types of dispersion: range, quartile deviation, mean Deviation, standard deviation</li> <li>3. Introduction to correlation: Definition, Scatter diagram, types of correlation</li> <li>1. Karl Pearson Coefficient of Correlation, Spearman's Rank Correlation Coefficient</li> </ul>

#### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):**

1. Construct three real world examples. Each example should contains at least ten observations. Students are suggested to calculate any three types of measure of central tendency and dispersion. Mention your conclusion about measure of central tendency and dispersion used for data set. Submit the detail report to course

instructor. (CO1)(CO4)

2. Make a survey of your college students and collect the data of study hours and marks obtained in last semester. Randomly collect the sample of at least 10 students from the population. Draw scatter diagram for bivariate data. Also find Karl pearson coefficient of correlation for this data. Write your comments from the calculation. Submit the detail report to course instructor (CO2)(CO3)

**References:**

1. M.F. Triola, Elementary Statistics, Pearson Education, 13<sup>th</sup> edit., Boston, 2020
2. D.J.Hand, Statistics a very short introduction, Oxford University Press, Oxford, 2014.
3. V.R.P. Murthy, Elementary Statistics, Himalaya Public. House, Mumbai, 2018.
4. S.C.Gupta, V.K.Kapoor, Introduction to statistics, Sultan Chand and Sons, New Delhi, 2018.

<b>Course Title</b>	<b>Health and Hygiene in Daily Life</b>
<b>Course Credits</b>	2
<b>Course Outcomes</b>	<p>After going through the course, learner will be able to,</p> <ol style="list-style-type: none"> <li>1. Evaluate the role of normal microbial flora in human body.</li> <li>2. Acquainted clinical specimen collection, transportation and lab diagnosis.</li> <li>3. Categorize different bacterial, viral, fungal and protozoal diseases depending upon its causative agents and clinical features.</li> <li>4. Demonstrate variety of Antimicrobial agents.</li> <li>5. Identify the scope and relevance of medical microbiology.</li> </ol>
<b>Module 1 (Credit 1) – Microbes affecting Health</b>	
<b>Learning Outcomes</b>	<p>After learning the module, learner will be able to,</p> <ul style="list-style-type: none"> <li>• Introduce to normal microbial flora and its medical importance</li> <li>• In depth understand the host pathogen interaction</li> <li>• Evaluate different methods for clinical specimen collection, transportation and lab diagnosis.</li> </ul>
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• <b>Introduction to normal microbial flora and host pathogen interaction:</b> <ol style="list-style-type: none"> <li>A. Normal microflora of the human body: Importance of normal microflora, normal microflora of skin, throat, gastrointestinal tract, urogenital tract.</li> </ol> </li> <li>• <b>Host pathogen interaction:</b> <ul style="list-style-type: none"> <li>• Definitions - Infection, Invasion, Pathogen, Pathogenicity, Virulence, Toxigenicity.</li> <li>• Carriers and their types, Opportunistic infections, Nosocomial infections and Transmission of infection.               <ul style="list-style-type: none"> <li>○ <b>Clinical specimen collection, transportation and lab diagnosis:</b> <ol style="list-style-type: none"> <li>1. Collection, transport and culturing of clinical samples.</li> <li>2. Identification of microbe depending upon its cultural and biochemical characteristics.</li> </ol> </li> </ul> </li> </ul> </li> </ul>
<b>Module 2 (Credit 1) - Microbes causing diseases</b>	
<b>Learning Outcomes</b>	<p>After learning the module, learner will be able to,</p>
	<ol style="list-style-type: none"> <li>1. Differentiation various diseases depending upon its causative agents.</li> <li>2. In depth understand the bacterial, viral, protozoal and fungal pathogenesis and their laboratory diagnosis</li> <li>3. Summarize variety of Antimicrobial agent depending upon its general characteristics and mode of action</li> </ol>

<b>Content Outline</b>	<b>1. Bacterial Diseases:</b> List of diseases of various organ systems and their causative agents <b>2. Viral Diseases:</b> List of diseases of various organ systems and their causative agents <b>3. Protozoal Disease:</b> List of diseases of various organ systems and their causative agents <b>4. Fungal Disease:</b> A. Different types of mycoses
	B. List of diseases of various organ systems and their causative agents <b>1. Antimicrobial agents: General characteristics and mode of action</b> 1. Antibacterial agents: Five modes of action with one example each: Inhibitor of nucleic acid synthesis, Inhibitor of cell wall synthesis, Inhibitor of cell membrane function, Inhibitor of protein synthesis, Inhibitor of metabolism. 2. Antifungal agents: Mechanism of action of Amphotericin B, Griseofulvin. 3. Antiviral agents: Mechanism of action of Amantadine, Acyclovir, Azidothymidine.

#### **Assignments/ Activities towards Comprehensive Continuous Evaluation (CCE):**

1. Seminar Presentation:
  1. Host and Pathogen interaction
  2. Viral and fungal Diseases.
2. Quizzes on Antimicrobial agent: antibacterial, anti-fungal and antiviral agents.
3. Poster presentation on laboratory diagnosis of various bacteriological clinical specimen.
4. Demonstrate antibacterial sensitivity by kirby-Bauer method.

#### **Reference:**

1. Ananthanarayan R. and Paniker C.K.J. (2009) Textbook of Microbiology. 8th edition, University Press Publication
2. Brooks G.F., Carroll K.C., Butel J.S., Morse S.A. and Mietzner, T.A. (2013) Jawetz, Melnick and Adelberg's Medical Microbiology. 26th edition. McGraw Hill Publication
3. Goering R., Dockrell H., Zuckerman M. and Wakelin D. (2007) Mims' Medical Microbiology. 4th edition. Elsevier
4. Willey JM, Sherwood LM, and Woolverton CJ. (2013) Prescott, Harley and Klein's Microbiology. 9th edition. McGraw Hill Higher Education

<b>Course Title</b>	<b>Home Composting: Sustainable Waste Management at Home</b>
<b>Course Credits</b>	2
<b>Course Outcomes</b>	<p>After going through the course, learner will be able to,</p> <ol style="list-style-type: none"> <li>1. Realise the environmental and economic benefits of home composting.</li> <li>2. Identify compostable materials and the science behind composting.</li> <li>3. Set up and manage a home composting system effectively.</li> <li>4. Troubleshoot common composting issues.</li> <li>5. Utilize compost in home gardens or plant care effectively..</li> </ol>
<b>Module 1 (Credit 1) - : Introduction to Composting and Organic Waste Management</b>	
<b>Learning Outcomes</b>	<p>After learning the module, learner will be able to,</p> <ol style="list-style-type: none"> <li>6. Identify types of organic waste suitable for composting.</li> <li>7. Describe the biological process and key components (carbon, nitrogen, oxygen, moisture) involved and distinguish between different composting methods.</li> </ol>
<b>Content Outline</b>	<ol style="list-style-type: none"> <li><b>8. Introduction to Composting</b> <ol style="list-style-type: none"> <li>a. What is composting?</li> <li>b. Environmental and economic benefits</li> <li>c. Composting vs landfill disposal</li> </ol> </li> <li><b>9. Organic Waste: What Can Be Composted</b> <ol style="list-style-type: none"> <li>a. Green (nitrogen-rich) vs Brown (carbon-rich) materials</li> <li>b. What not to compost (meat, dairy, diseased plants)</li> </ol> </li> <li><b>10. The Science of Composting</b> <ol style="list-style-type: none"> <li>a. Role of microbes, fungi, and decomposers</li> <li>b. The composting cycle: aerobic breakdown</li> <li>c. Importance of C:N ratio, temperature, moisture</li> </ol> </li> <li><b>11. Types of Composting</b> <ol style="list-style-type: none"> <li>a. Backyard composting</li> <li>b. Vermicomposting (using worms)</li> <li>c. Trench and pit composting</li> <li>d. Bokashi (fermentation-based)</li> </ol> </li> <li><b>12. Setting Sustainability Goals</b> <ol style="list-style-type: none"> <li>a. Home waste audit</li> <li>b. Measuring environmental impact</li> </ol> </li> </ol>
<b>Module 2 (Credit 1)-: Practical Home Composting and Compost Use</b>	
<b>Learning Outcomes</b>	<p>After learning the module, learner will be able to,</p>
	<ol style="list-style-type: none"> <li>1. Set up a composting system suitable for home use and maintain the compost pile and monitor key parameters.</li> <li>2. Identify and solve common composting problems (odor, pests, imbalance) and harvest, store, and use finished compost effectively.</li> </ol>

<b>Content Outline</b>	<ol style="list-style-type: none"> <li><b>1. Setting Up a Compost System</b> <ol style="list-style-type: none"> <li>1. Choosing a bin or DIY methods</li> <li>2. Selecting a site (balcony, backyard, apartment-friendly methods)</li> <li>3. Layering technique and starter materials</li> </ol> </li> <li><b>2. Managing the Composting Process</b> <ol style="list-style-type: none"> <li>1. Turning the pile and aeration</li> <li>2. Moisture monitoring and temperature control</li> <li>3. Speeding up decomposition naturally</li> </ol> </li> <li><b>1. Troubleshooting</b> <ol style="list-style-type: none"> <li>1. Bad smells, pest issues, slow decomposition</li> <li>2. How to rebalance the pile (adjusting greens/browns)</li> </ol> </li> <li><b>2. Harvesting and Using Compost</b> <ol style="list-style-type: none"> <li>1. Signs compost is ready</li> <li>2. Screening and storing compost</li> <li>3. Applications: potting mix, garden beds, lawn booster, tree mulching</li> </ol> </li> <li><b>3. Sustainability Integration</b> <ol style="list-style-type: none"> <li>1. Composting as a zero-waste lifestyle habit</li> <li>2. Community composting options and outreach</li> </ol> </li> </ol>
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#### **Assignments/ Activities towards Comprehensive Continuous Evaluation (CCE):**

1. Create a personal compost bin (on-site or virtual demo)
2. Weekly composting log (materials added, pile condition)
3. Troubleshooting scenarios (case studies)
4. Field visit to a local compost facility (optional)
5. DIY compost bin building from recycled materials

#### **References:**

6. **"Let It Rot! The Gardener's Guide to Composting"** by Stu Campbell
7. **EPA Composting at Home** – <https://www.epa.gov/recycle/composting-home>
8. Local municipality or NGO composting guidelines

<b>Course Title</b>	<b>Energy Sources</b>
<b>Course Credits</b>	<b>2</b>
<b>Course Outcomes</b>	After going through the course, learners will be able to
	1. <b>Apply</b> the principles of physics to explain the working mechanisms of conventional and non-conventional energy sources such as thermal, hydro, solar, wind, and nuclear energy.
	2. <b>Analyze</b> the efficiency, advantages, and limitations of different energy conversion systems and technologies used in harnessing renewable and non-renewable energy.
	3. <b>Evaluate</b> the environmental impact, sustainability, and economic feasibility of various energy sources through scientific reasoning and data interpretation.
	4. <b>Compare</b> energy storage methods and distribution systems to determine optimal solutions for energy management in different contexts.
	5. <b>Create</b> basic models or conceptual frameworks for alternative energy systems that demonstrate innovative use of clean and sustainable energy technologies.
<b>Module 1(Credit 1) Wind and Tidal Energy harvesting</b>	
<b>Learning Outcomes</b>	<b>After learning the module, learners will be able to</b>
	1. <b>Apply</b> the fundamental principles of wind energy to understand the working of wind turbines and identify the role of different electrical machines used in wind power generation.
	2. <b>Analyze</b> the function of power electronic interfaces and various grid interconnection topologies in integrating wind energy into the electrical grid efficiently and safely.
	3. <b>Evaluate</b> the comparative potential of ocean energy sources against wind and solar energy, based on availability, consistency, and environmental impact.
	4. <b>Interpret</b> wave and tide characteristics using statistical data to assess their suitability and efficiency for energy conversion.
	5. <b>Examine</b> the working principles and technological aspects of wave energy devices, tidal energy systems, and ocean thermal energy conversion (OTEC) systems for harnessing marine energy.

<b>Content Outline</b>	1. Fundamentals of Wind energy, Wind Turbines and different electrical machines in wind turbines, Power electronic interfaces, and grid interconnection topologies. 2. Ocean Energy Potential against Wind and Solar, Wave Characteristics and Statistics, Wave Energy Devices. Tide characteristics and Statistics, Tide Energy Technologies, Ocean Thermal Energy.
<b>Module 2 (Credit 1)      Geothermal and Hydro-energy</b>	
<b>Learning Outcomes</b>	<b>After learning the module, learners will be able to</b>
	1. <b>Apply</b> the principles of thermodynamics and fluid mechanics to explain the extraction and utilization of energy from geothermal resources using various geothermal technologies.
	2. <b>Analyze</b> the working of hydropower systems by studying hydropower resources, types of turbines, and energy conversion technologies involved.
	3. <b>Evaluate</b> the environmental and socio-economic impacts of hydropower projects, including effects on ecosystems, water usage, and displacement issues.
	4. <b>Assess</b> the role and effectiveness of carbon capture technologies in reducing greenhouse gas emissions and supporting sustainable energy systems.
	5. <b>Compare</b> different energy storage solutions such as electrochemical cells and batteries, and <b>examine</b> patterns of power consumption for efficient energy management.
<b>Content Outline</b>	Geothermal Resources, Geothermal Technologies. Hydropower resources, hydropower technologies, environmental impact of hydro power sources. Carbon captured technologies, cell, batteries, power consumption
<b>References: -</b>	1. Godfrey Boyle, "Renewable Energy, Power for a sustainable future", 2004, Oxford University Press, in association with The Open University. 2. J. Balfour, M. Shaw and S. Jarosek, Photovoltaics, Lawrence J Goodrich(USA). 3. <a href="http://en.wikipedia.org/wiki/Renewable_energy">http://en.wikipedia.org/wiki/Renewable_energy</a>

**Evaluation: -**

**Internal –** No Internal Evaluation for OEC

**External- 50 marks**



<b>Course Title</b>	<b>Human Parasitic Diseases</b>
<b>Course Credits</b>	<b>2</b>
<b>Course Outcomes</b>	After going through the course, learners will be able to :
	1. Relate the various types of host-parasite interactions
	2. Interpret the pathogenicity of the various parasitic infections
	3. Describe the pathogenicity of the various zoonotic diseases
	4. Evaluate the importance of national health programs for control of zoonotic infections
<b>Module 1(Credit 1) : Introduction to parasitology</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	1. Relate the various types of host-parasite interactions
	2. Interpret the pathogenicity of the various parasitic infections
<b>Content Outline</b>	1. Introduction to Parasitology and Types of Parasites: <ol style="list-style-type: none"> <li>Definitions: Parasitism, Host, Parasite, Vector-biological and mechanical</li> <li>Types of parasite: Ectoparasite, Endoparasite and their parasitic adaptations</li> <li>Types of host: Intermediate and definitive, reservoir</li> </ol> 2. Life cycle of the parasite, pathogenicity, control measures and treatment of : <ol style="list-style-type: none"> <li>Amoebic dysentery</li> <li>Malaria</li> <li>Leishmaniasis (Kala azar)</li> <li>Taeniasis (Tape worm infection)</li> <li>Filariasis</li> <li>Ascariasis</li> </ol>
<b>Module 2(Credit 1) : Zoonotic diseases</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to :
	1. Describe the pathogenicity of the various zoonotic diseases
	2. Evaluate the importance of national health programs for control of zoonotic infections

<b>Content Outline</b>	<ol style="list-style-type: none"> <li>1. Introduction to zoonosis:</li> <li>2. Causes, symptoms, prevention and treatment of : <ol style="list-style-type: none"> <li>1. Bird flu</li> <li>2. Rabies</li> <li>3. Toxoplasmosis</li> <li>4. Japanese Encephalitis</li> <li>5. outbreaks of Nipah Virus</li> <li>6. Outbreaks of nCovid-19</li> </ol> </li> <li>3. Role of National Center for Vector Borne Diseases for disease control through various awareness programs and health services</li> </ol>
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### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):**

- Literature review on epidemiology of the various parasitic diseases - Five research articles and newspaper articles to be included. Statistical data to be collected and conclusions drawn from these as report submission.
- Conduct a survey-based project on the awareness of the general public regarding the causes of parasitic diseases and their control. The findings could be compiled and submitted as a brief report.

### **References:**

- Parasitology. Chatterjee K. D. Chatterjee Medical Publishers.
- Textbook of Medical Parasitology- C. K. Jayaram Paniker, Jaypee Brothers.
- Essentials of Parasitology- Gerald D. Schmidt: Universal Bookstall, New Delhi.
- Introduction to Parasitology- Chandler and Read John Wiley & Sons

<b>Course Title</b>	<b>Introduction to Canva</b>
<b>Course Credit</b>	<b>2 Credits</b>
<b>Course Outcomes</b>	<b>1. Apply</b> design principles such as color, typography, and composition to create visually compelling reports, presentations, and marketing materials.
	<b>2. Analyze</b> the effectiveness of design elements, such as layout, fonts, and branding consistency, in communicating messages across various formats.
	<b>3. Evaluate</b> the quality and impact of design work based on industry standards, visual communication strategies, and user engagement metrics.
	<b>4. Create</b> professional documents, reports, and marketing materials using Canva's templates, customization tools, and collaboration features.
<b>Module 1 (Credit 1)</b>	<b>Introduction to canva and design basics</b>
<b>Learning Outcomes</b>	<b>After learning the module, learners will be able to</b>
	<ol style="list-style-type: none"> <li><b>1. Apply</b> design principles such as color, typography, and composition to create visually appealing and effective designs using Canva's tools and features.</li> <li><b>2. Analyze</b> Canva's templates and customization options to select and modify designs that align with specific business needs and branding guidelines.</li> <li><b>3. Evaluate</b> the effectiveness of reports, presentations, and other design projects based on their visual appeal, clarity, and communication of key information.</li> <li><b>4. Create</b> professional business reports, including charts, tables, and infographics, using Canva's features and tools for data visualization and effective communication.</li> <li><b>5. Design</b> engaging and dynamic presentations by incorporating multimedia elements, animations, and transitions to enhance audience interaction and message delivery.</li> </ol>
<b>Content Outline</b>	<b>Introduction to Canva &amp; Design Basics</b> <ol style="list-style-type: none"> <li>1. Navigating the Canva interface</li> </ol>

	<ol style="list-style-type: none"> <li>1. Understanding design principles (color, typography, and composition)</li> <li>2. Exploring Canva's templates and customization options</li> </ol> <p><b>Designing Reports</b></p> <ol style="list-style-type: none"> <li>3. Creating professional business reports</li> <li>4. Formatting charts, tables, and infographics</li> <li>5. Exporting and sharing reports effectively</li> </ol> <p><b>Creating Engaging Presentations</b></p> <ol style="list-style-type: none"> <li>6. Designing visually compelling slides</li> <li>7. Using animations and transitions effectively</li> <li>8. Enhancing presentations with multimedia elements.</li> </ol>
<b>Module 2 (Credit 1)</b>	<b>Marketing Material and Branding</b>
<b>Learning Outcomes</b>	<b>After learning the module, learners will be able to</b>
	<ol style="list-style-type: none"> <li>1. <b>Apply</b> Canva's design tools to create marketing materials such as posters, brochures, and social media graphics that adhere to branding guidelines.</li> <li>2. <b>Analyze</b> the integration of branding elements (logos, color schemes, fonts) in marketing materials to ensure visual consistency and alignment with brand identity.</li> <li>3. <b>Evaluate</b> the effectiveness of digital and print marketing materials by applying best practices to assess their visual appeal, communication, and target audience engagement.</li> <li>4. <b>Create</b> professional documents such as letterheads, resumes, and official materials, utilizing Canva's design and collaboration features to produce polished, high-quality outputs suitable for business and personal use.</li> </ol>
<b>Content Outline</b>	<p><b>Marketing Materials &amp; Branding</b></p> <ul style="list-style-type: none"> <li>• Designing posters, brochures, and social media graphics</li> <li>• Incorporating branding elements (logos, color schemes, fonts)</li> <li>• Best practices for digital and print marketing</li> </ul> <p><b>Document Design &amp; Collaboration</b></p> <ul style="list-style-type: none"> <li>• Creating letterheads, resumes, and official documents</li> </ul>

	<ol style="list-style-type: none"> <li>1. Utilizing Canva's real-time collaboration features</li> <li>2. Sharing, exporting, and printing document</li> </ol>
<b>Activities to be done in the classroom towards Comprehensive Continuous Evaluation (CCE)</b>	
<b>Module 1: Introduction to Canva</b> Create designs using canva's design tools. Format Text and elements effectively. Edit photos and videos.	
<b>Module 2: Marketing Materials and branding</b> Design with drawing tools and apps. Practice with interactive activities.	

**External Evaluation for 50 Marks will be conducted by university.**

**Textbooks: -**

1. "The Non-Designer's Design Book" by Robin Williams.
2. "Canva for Work: How to Design Like a Pro" by Melanie H. K.
3. "Branding: In Five and a Half Steps" by Michael Johnson
4. "Creating Documents with Canva: A Practical Guide for Beginners" by Olivia Davis

**Additional Resources:**

1. **Canva's own design tutorials:** Canva provides free, comprehensive tutorials on its platform, which are highly beneficial for students.
2. **Online articles and video tutorials** on YouTube or platforms like Skillshare and Udemy, focusing on using Canva for specific projects.

**Required Tools:**

- **Canva Free or Pro Account** (depending on access)
- Computer with internet connection

<b>Course Title</b>	<b>Management Information Systems (MIS)</b>
<b>Course Credits</b>	<b>2 Credits</b>
	1. Evaluate the fundamental concepts and components of MIS. 2. Analyze the role of MIS in decision-making and business strategy 3. Evaluate database management techniques for effective information processing 4. Apply business intelligence and data analytics for strategic insights
<b>Module 1(Credit 1)</b>	<b>Introduction to MIS</b>
<b>Learning Outcomes</b>	<b>After learning the module, learners will be able to</b>
	1. Evaluate Define MIS and its role in organizations 2. Apply various types of information systems 3. Evaluate database management techniques. 4. Analyze the ethical and security challenges in MIS.
<b>Content Outline</b>	<b>Introduction to MIS</b>  Definition, Purpose, and Scope of MIS  Role of MIS in Business and Management  Components of MIS: Hardware, Software, Data, People, Processes  <b>Types of Information Systems</b>  Transaction Processing Systems (TPS) Decision Support Systems (DSS) Enterprise Resource Planning (ERP) Customer Relationship Management (CRM) Business Intelligence Systems  <b>Database Management &amp; Data Processing</b>  Introduction to Database Management Systems  (DBMS) SQL Basics and Database Queries Data Warehousing & Big Data in MIS  Cloud Computing in Data Management  <b>Decision Support Systems (DSS) &amp; Business Analytics</b>  Role of DSS in Managerial Decision-Making

	<p>Business Analytics and Predictive Analytics</p> <p>Data Visualization Techniques (Dashboards, BI Tools)</p> <p><b>MIS Security &amp; Ethical Concerns</b></p> <p>Cybersecurity Threats and MIS Security Strategies</p> <p>Ethical Issues in Information Management</p> <p>Data Privacy and Compliance (GDPR, HIPAA)</p>
<b>Module 2(Credit 1)</b>	<b>Cloud Computing and Emerging Technologies</b>
<b>Learning Outcomes</b>	1. Create enterprise information systems using MIS principles.
	2. Apply data analytics for business decision-making
	3. Evaluate IT governance and risk management in MIS
	4. Create cloud computing and emerging technologies in MIS
<b>Content Outline</b>	<p><b>Enterprise Systems &amp; IT Governance</b></p> <p>Introduction to Enterprise Information Systems</p> <p>(EIS) IT Governance Frameworks (COBIT, ITIL)</p> <p>Risk Management in Information Systems</p> <p><b>Cloud Computing &amp; Emerging Technologies</b></p> <p>Cloud-Based MIS Solutions</p> <p>AI, Machine Learning, and Automation in MIS</p> <p>Blockchain in Information Systems</p> <p><b>Business Intelligence &amp; Data Analytics</b></p> <p>Business Intelligence Tools (Power BI, Tableau) Data Mining and Machine Learning in MIS</p> <p>Case Studies on Data-Driven Decision Making</p> <p><b>Strategic Role of MIS in Organizations</b></p> <p>MIS for Competitive Advantage</p> <p>Digital Transformation and Business Innovation</p> <p>Future Trends in MIS</p>
<b>Activities to be done in the classroom towards Comprehensive Continuous Evaluation</b>	
<p><b>Module 1</b></p> <ul style="list-style-type: none"> <li>Data collection and gathering for projects.</li> </ul>	

**Module 2**

- Effective use of cloud computing services in education.

**External Evaluation for 50 Marks will be conducted by university.**

**References:**

- **"Management Information Systems"** – Kenneth C. Laudon & Jane P. Laudon
- **"Business Intelligence: A Managerial Perspective on Analytics"** – Ramesh Sharda, Dursun Delen
- **"Database Management Systems"** – Raghu Ramakrishnan
- **"IT Strategy for Business"** – Bernard Marr
- **"Information Systems for Managers"** – Gabriele Picco



<b>Course Title</b>	<b>Introduction to Entrepreneurship</b>
<b>Course Credits</b>	<b>2 Credits</b>
<b>Course Outcomes</b>	1. Understand the Concept and Role of Entrepreneurship
	2. Identify and Develop Entrepreneurial Traits and Business Ideas
	3. Apply Knowledge to Launch and Manage a Startup
	4. Analyze Institutional Support and Contemporary Trends
<b>Module 1 (Credit 1)</b>	
<b>Learning Outcomes</b>	<b>After learning the module, learners will be able to</b>
	1. Explain Key Concepts of Entrepreneurship
	2. Demonstrate Entrepreneurial Traits and Skills
	3. Develop a Framework to Start and Manage a Business
<b>Content Outline</b>	<b>Introduction to Entrepreneurship</b>  <b>Concept and Meaning of Entrepreneurship</b> Definition and evolution Characteristics and need for entrepreneurship <b>Types and Classifications of Entrepreneurs</b> Innovative, Imitative, Drone, Fabian Social, Serial, Women, and Corporate Entrepreneurs <b>Entrepreneur vs Manager vs Intrapreneur</b> Roles, differences, and similarities <b>Importance of Entrepreneurship</b> Economic and social contributions Role in job creation, innovation, and self-reliance <b>Entrepreneurship in Indian Context</b> Historical background Present trends and future scope
<b>Module 2 (Credit 1)</b>	
<b>Learning Outcomes</b>	<b>After learning the module, learners will be able to</b>
	1. Explain key motivational theories relevant to entrepreneurship

	2. Identify and assess entrepreneurial traits and competencies
	3. Use creative thinking techniques
	4. Analyze the business environment
<b>Content Outline</b>	<p><b>Entrepreneurial Motivation</b></p> <p>McClelland's Theory of Need for Achievement (nAch)</p> <p>Maslow's Hierarchy of Needs</p> <p><b>Entrepreneurial Traits and Competencies</b></p> <p>Creativity, innovation, leadership, risk-taking</p> <p>Competency mapping</p> <p><b>Idea Generation Techniques</b></p> <p>Brainstorming, mind mapping, design thinking</p> <p>Opportunity identification and assessment</p> <p><b>Feasibility Study and Business Plan Development</b></p> <p>Elements of a business plan</p> <p>Market research and demand analysis</p> <p>Project appraisal (technical, financial, social)</p>
<b>Activities to be done in the class towards Comprehensive Continuous Evaluation</b>	
<p><b>Module 1:</b></p> <p><b>Activities:</b></p> <p><b>1. Self-Assessment</b></p> <p>Complete a personal entrepreneurial traits checklist to identify strengths and areas for development.</p> <p><b>2. Video Reflection</b></p> <p>Watch a video or documentary on a successful entrepreneur and write a short summary of their journey and mindset.</p> <p><b>3. Entrepreneur Profile Poster</b></p> <p>Research and create a profile poster or digital slide of a well-known entrepreneur including:</p> <p>Name &amp; Background</p>	

Business type

Key traits

Success story

#### 4. Myth Buster Quiz

Participate in a quiz identifying myths vs. realities of entrepreneurship.

#### 5. Entrepreneur Case Study

Write or present on any successful entrepreneur (e.g., Kiran Mazumdar-Shaw, Elon Musk).

1. Focus on journey, challenges, and lessons.

### **Module 2:**

#### **Activities:**

1. Idea Generation  
Use brainstorming or the SCAMPER method to generate 5 potential business ideas.
2. Opportunity Screening Matrix  
Select top 3 ideas and evaluate using criteria like market demand, cost, competition, and profitability.
3. Market Survey  
Conduct a basic survey (Google Form or physical) to understand customer needs or preferences.
4. SWOT Analysis  
Perform a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis for one selected business idea.
5. 2-Minute Pitch  
Prepare and present a short elevator pitch explaining:
  1. What your business does
  2. Who it's for

3. Why it will succeed
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**Reference Books: -**

1. Entrepreneurship Development Author: S. S. Khanka Publisher: S. Chand Publishing
2. Entrepreneurship and Small Business Management Author: C.B. Gupta and N.P. Srinivasan Publisher: Sultan Chand & Sons
3. Entrepreneurship Development, Author: Vasant Desai Publisher: Himalaya Publishing House.
4. Dynamics of Entrepreneurial Development and Management, Author: Vasant Desai Publisher: Himalaya Publishing House

**Assessment:**

**External Assessment: (Marks 50)**

End Semester examination of 50 marks for 2 hours duration will be conducted

<b>Course Title</b>	<b>Data Visualization</b>
<b>Course Credit</b>	<b>2 Credits</b>
<b>Course Outcomes</b>	<ol style="list-style-type: none"> <li>1. Understand the principles and importance of data visualization</li> <li>2. Connect to and prepare data from various sources for visualization.</li> <li>3. Develop and customize basic visualizations and dashboards.</li> <li>4. Design advanced visualizations and apply complex calculations</li> <li>5. Apply storytelling principles and best practices in data visualization.</li> </ol>
<b>Module 1 (Credit 1)</b>	<b>Introduction of Data Visualization</b>
<b>Learning Outcomes</b>	<p><b>After learning the module, learners will be able to</b></p> <p>Describe the key features and benefits of using Tableau/Power Bi for data visualization</p> <p>Create basic visualizations (bar charts, line charts, scatter plots, etc.) using Tableau/Power Bi to communicate data insights.</p> <p>Design interactive dashboards using Tableau/Power Bi, incorporating filters, parameters, and actions to facilitate data exploration.</p>
<b>Content Outline</b>	<p>Introduction to Data Visualization and Tableau/Power Bi</p> <p>Overview of data visualization and its importance</p> <ol style="list-style-type: none"> <li>1. Introduction to Tableau/Power Bi and its features</li> <li>2. Setting up Tableau/Power Bi and connecting to data sources</li> </ol> <p>Connecting to Data Sources and Data Preparation</p> <ol style="list-style-type: none"> <li>3. Connecting to various data sources (Excel, CSV, SQL Server, etc.)</li> <li>4. Data preparation and cleaning</li> <li>5. Data modelling and data validation</li> </ol> <p>Creating Basic Visualizations and Dashboards</p> <ol style="list-style-type: none"> <li>1. Creating basic visualizations (bar charts, line charts, scatter plots, etc.)</li> <li>2. Creating interactive dashboards</li> <li>3. Using filters, parameters, and actions</li> </ol>

<b>Module 2 (Credit 1)</b>	<b>Advanced Data Visualization</b>
<b>Learning Outcomes</b>	<b>After learning the module, learners will be able to</b>
	<p>Create advanced visualizations (maps, treemaps, word clouds, etc.) using Tableau/Power Bi to communicate complex data insights.</p> <p>Design interactive stories and presentations using Tableau/Power Bi to communicate data insights effectively.</p>
<b>Content Outline</b>	<p>Advanced Visualizations and Calculations</p> <ol style="list-style-type: none"> <li>1. Creating advanced visualizations (maps, treemaps, word clouds, etc.)</li> <li>2. Using calculations and formulas in Tableau/Power Bi</li> <li>3. Creating custom calculations and data blending</li> </ol> <p>Storytelling and Presentation</p> <ul style="list-style-type: none"> <li>• Principles of storytelling and presentation</li> <li>• Creating interactive stories and presentations</li> <li>• Using annotations, labels, and tooltips</li> </ul> <p>Advanced Topics and Best Practices</p> <ol style="list-style-type: none"> <li>1. Advanced topics (data densification, data visualization best practices, etc.)</li> <li>2. Data visualization best practices</li> <li>3. Creating reusable dashboards and templates</li> </ol>
<b>Assignment/Activities towards Comprehensive Continuous Evaluation (CCE):</b>	
<p><b>Module 1: Introduction to Data Visualization</b></p> <p>Assignment 1: Basic Visualization Project</p> <ul style="list-style-type: none"> <li>- Create basic visualizations (bar charts, line charts, scatter plots, etc.) using Tableau/Power Bi to communicate data insights.</li> <li>- Use a sample dataset to create 3-4 basic visualizations and submit a report explaining the insights gained from each visualization.</li> </ul> <p>Assignment 2: Interactive Dashboard</p> <ul style="list-style-type: none"> <li>-Design an interactive dashboard using Tableau/Power Bi, incorporating filters, parameters, and actions to facilitate data exploration.</li> <li>- Task: Create an interactive dashboard using a sample dataset and submit a report explaining the design decisions and functionality.</li> </ul>	

Activity: Data Visualization Quiz

- Assess understanding of data visualization concepts and Tableau/Power Bi features.
- Complete a quiz on data visualization concepts, Tableau/Power Bi features, and best practices.

## **Module 2: Advanced Data Visualization**

Assignment 1: Advanced Visualization Project

- Create advanced visualizations (maps, treemaps, word clouds, etc.) using Tableau/Power Bi to communicate complex data insights.
- Use a sample dataset to create 2-3 advanced visualizations and submit a report explaining the insights gained from each visualization.

Assignment 2: Interactive Storytelling

- Design an interactive story using Tableau/Power Bi to communicate data insights effectively.
- Create an interactive story using a sample dataset and submit a report explaining the narrative and design decisions.

## **Textbooks:**

1. Chaturvedi, A., & Malik, P. (2024). *Mastering data visualization with Tableau*. BPB Publications.
2. Kumar, P. (2020). *Data visualization with Tableau*. Notion Press
3. Roy, S. (2023). *Data visualization using Power BI, Orange, and Excel*. Notion Press

## **Assessment:**

### **External Assessment: (50 marks)**

End Semester examination of 50 marks for 2 hours duration will be conducted

<b>Course Title</b>	<b>Web Content Management Systems Design</b>
<b>Course Credit</b>	<b>2 Credits</b>
<b>Course Outcomes</b>	1. Understand the fundamental concepts and architecture of Web Content Management Systems (WCMS).
	2. Develop skills in creating, designing, and maintaining websites using popular WCMS platforms like WordPress
	3. Manage digital content effectively using themes, plugins, and content blocks.
	4. Collaborate and publish content on a CMS-driven website.
	5. Apply SEO and web usability principles in a CMS environment.
<b>Module 1 (Credit 1)</b>	<b>Introduction to Web Content Management Systems Design (WCMS)</b>
<b>Learning Outcomes</b>	<b>After learning the module, learners will be able to</b>
	Describe key components and advantages of WCMS.
	Install and configure a basic WordPress site on a local server.
	Create and manage content using posts, pages, and media in a CMS.
<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Introduction to WCMS</li> <li>• Types and features of CMS platforms (WordPress, Joomla, Drupal)</li> <li>• WCMS architecture and core components</li> <li>• Installing WordPress on local server (XAMPP)</li> <li>• Overview of WordPress dashboard and settings</li> <li>• Creating and managing posts and pages</li> <li>• Media library management and content organization</li> </ul>
<b>Module 2 (Credit 1)</b>	<b>Design and Functional Customization in WordPress</b>
<b>Learning Outcomes</b>	<b>After learning the module, learners will be able to</b>
	Design a simple website layout using themes and plugins.
	Manage user roles and implement basic site security.
	Demonstrate understanding of SEO, widgets, and responsive design.



<b>Content Outline</b>	<ul style="list-style-type: none"> <li>• Customizing WordPress themes and layout</li> <li>• Installing and configuring plugins</li> <li>• Using widgets and menus</li> <li>• Understanding user roles and permissions</li> <li>• SEO basics and permalinks</li> <li>• Website backup and basic security tips</li> <li>• Responsive design principles</li> </ul>
<b>Assignment/Activities towards Comprehensive Continuous Evaluation (CCE):</b>	
<b>Module 1:</b> Install and set up a WordPress site using XAMPP. Create a 3-page website with homepage, about, and contact sections using a theme and plugins	
<b>Module 2:</b> Customize menu, sidebar, and add a gallery plugin. Submit a working folder and a video walkthrough of your site.	

**References: -**

1. **Singh, S. (2019).** *Web Designing and Development*. Katson Books. Covers HTML, CSS, WordPress basics, and CMS concepts in simple language.
2. **Xavier, C. (2018).** *Web Technology and Design*. New Age International Publishers. Comprehensive overview of web technologies including CMS fundamentals.
3. **Williams, A. (2023).** *WordPress for Beginners 2023*. Independently Published. Step-by-step guide to building WordPress websites.
4. **Sipos, D. (2021).** *Drupal 9 Module Development*. Packt Publishing. Focused on module development and customization in Drupal-based WCMS.
5. **Pisa, L. (2022).** *Joomla! 4 Masterclass*. Independently Published. Covers site creation and content publishing using Joomla CMS.

**Assessment:**

**External Assessment: (50 marks)**

End Semester examination of 50 marks for 2 hours duration will be conducted

<b>Course Title</b>	<b>Introduction to Graphic Design</b>
<b>Course Credit</b>	<b>2 Credits</b>
<b>Course Outcomes</b>	1. Understand the core principles of graphic design and digital visual communication.
	2. Use Canva to design professional and engaging graphics for social media, print, and branding.
	3. Explore and apply open-source tools like GIMP, Inkscape, and Photopea for advanced editing and illustration.
	4. Create digital designs using principles of composition, layout, and color theory.
	5. Build a portfolio of creative work using both browser-based and open-source tools.
<b>Module 1 (Credit 1)</b>	<b>Design with Canva</b>
<b>Learning Outcomes</b>	<b>After learning the module, learners will be able to</b>
	1. Recognize and apply design principles using Canva's interface and templates.
	2. Create marketing materials like flyers, infographics, social media posts, and brochures.
	3. Customize templates using color, typography, layout, and brand assets.
<b>Content Outline</b>	<p>Introduction to Graphic Design and Canva</p> <ul style="list-style-type: none"> <li>• Elements and Principles of Design</li> <li>• Canva interface overview and templates</li> <li>• Brand Kit and design identity</li> </ul> <p>Designing for Real-World Applications</p> <ul style="list-style-type: none"> <li>• Posters, flyers, infographics</li> <li>• Instagram, Facebook, and YouTube graphics</li> <li>• Resume and business card designs</li> </ul> <p>Collaboration and Export</p> <ul style="list-style-type: none"> <li>• Team design, comment and share features</li> <li>• Export formats and printing guidelines</li> </ul>
<b>Module 2 (Credit 1)</b>	<b>Graphic Design with Open-Source Tools</b>
<b>Learning Outcomes</b>	<b>After learning the module, learners will be able to</b>
	1. Use open-source tools like GIMP and Inkscape for photo editing and vector illustration.
	2. Apply advanced features like layers, masks, and

	blending modes.
	3. Create UI design, logos, icons, and mockups using open-source environments.
<b>Content Outline</b>	<p>Introduction to Open-Source Design Tools</p> <ol style="list-style-type: none"> <li>1. Overview of GIMP, Inkscape, Photopea</li> <li>2. Installation and interface navigation</li> </ol> <p>Advanced Design Techniques</p> <ol style="list-style-type: none"> <li>1. Image manipulation and photo retouching (GIMP)</li> <li>2. Vector design and logo creation (Inkscape)</li> <li>3. Working with layers, gradients, paths, and filters</li> </ol> <p>Cross-Tool Integration</p> <ol style="list-style-type: none"> <li>1. Exporting between tools (SVG, PNG, PSD formats)</li> <li>2. Preparing assets for web and print</li> <li>3. Introduction to collaboration tools and versioning</li> </ol>
<b>Assignment/Activities towards Comprehensive Continuous Evaluation (CCE):</b>	
<b>Module 1: Design with Canva</b> <ol style="list-style-type: none"> <li>4. Assignment 1: Create a campaign poster, an Instagram post, and a business card using Canva.</li> <li>5. Assignment 2: Collaborate on a brochure project using Canva Team. Submit final designs and peer feedback.</li> </ol>	
<b>Module 2: Open-Source Tools</b> <ol style="list-style-type: none"> <li>6. Assignment 1: Create a logo and a multi-layered digital illustration using GIMP or Inkscape.</li> <li>7. Assignment 2: Submit a branding kit (logo, icons, typography samples) using only open-source tools. Include export files and process documentation.</li> </ol>	

**References: -**

1. Chapman, C. (2023). *The Non-Designer's Guide to Canva*. Independently Published.
2. Lobster, T. (2021). *GIMP 2.10 Cookbook*. Packt Publishing.
3. Bah, O. (2022). *Mastering Inkscape for Graphic Design*. TechPress.
4. Smith, A. (2023). *Design with Open Tools: GIMP, Inkscape, and Photopea*. Open Source Visuals.
5. Canva Design School: <https://www.canva.com/learn>

**Assessment:**

**External Assessment: (50 marks)**

End Semester examination of 50 marks for 2 hours duration will be conducted

<b>Course Title</b>	<b>Blood Bank and Related Technique's (Theory + Practical)</b>
<b>Course Credits</b>	<b>2 (1+1)</b>
<b>Course Outcomes</b>	After going through the course, the learner will be able to
	1. Comprehend the different types of blood donors and donation.
	2. Information about adverse reaction.
	3. They will be able to know the importance of blood transfusion.
	4. Information about blood components and separation techniques.
	5. Importance of quality control and waste management in blood bank.
<b>Module 1 (Credit 1) – Transfusion Medicine Theory</b>	
<b>Learning Outcomes</b>	After learning the module, the learner will be able to,
	1. Introduce the blood bank and its importance.
	2. Information about blood grouping and understanding the importance of compatibility testing.
	3. Understand Hemapheresis and its working.
	4. They will be able to know about the different blood transfusion reactions.
<b>Course Outline</b>	<ol style="list-style-type: none"> <li><b>Blood Collection:</b> Donor Registration, Selection of Blood Donor, Medical History and Physical Assessment, Rejection Criteria, Phlebotomy, Adverse Donor Reaction.</li> <li><b>Blood Processing:</b> ABO Blood Grouping and Rh Typing, Antibody Screening, Transfusion Transmitted Disease Testing.</li> <li><b>Blood Preservation:</b>Anticoagulant and RBCs Additives, Biochemical Changes in Stored Blood, Storage of Frozen RBCs.</li> <li><b>Blood Components:</b>Preparation and Selection of Blood Components and Derivates, Temperature and Storage of Blood Components.</li> <li><b>Special Situations:</b>Apheresis, Hemolytic Diseases of Newborns, Exchange Transfusion, Autologous Transfusion.</li> <li><b>Pretransfusion Testing:</b>General Consideration, Selection of Unit, Compatibility Testing, Antibody Screening, Coomb's Testing.</li> <li><b>Infusion of Blood and its Components:</b> Proper Identification, Conditions Affecting While Infusion of Blood or Blood Components, Monitoring the Patients.</li> <li><b>Transfusion Reaction:</b>Hemolytic And Nonhemolytic Transfusion Reaction, Investigation of Transfusion Reaction, Transfusion Transmitted Diseases, Graft Versus Host Diseases (GVHD), Transfusion Induces Immunosuppression.</li> <li><b>Quality Management</b></li> <li><b>Waste Management</b></li> </ol>

<b>Module 2 (Credit 1) – Transfusion Medicine Practical</b>	
<b>Learning Outcomes</b>	After learning the module, the learner will be able to,
	1. Importance of blood grouping and antibody screening.
	2. Information about different testing to avoid transfusion reaction.
<b>Course Outline</b>	<ol style="list-style-type: none"> <li>1. Collection of Blood from Donor</li> <li>2. Preparation And Storage of Blood Components</li> <li>3. Preparation of Pooled Red Cells</li> <li>4. ABO Blood Grouping and Rh Typing</li> <li>5. Antibody Screening</li> <li>6. Test for Weak D or Du Variants</li> <li>7. Quality Check of Antisera</li> <li>8. Coomb's Test or Antiglobulin Testing</li> <li>9. Compatibility Testing or Cross-Matching</li> <li>10. Transfusion Transmitted Disease Testing</li> <li>11. Investigation of Transfusion Reaction</li> </ol>

**Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):**

1. Blood bank drive
2. 10 Marks Presentation and Assessment

**Reference Books:**

- Textbook of Medical Laboratory Technology by Dr. P. B. Godkar, 4<sup>th</sup> edition, 2024
- Essential in hematology and clinical pathology by Dr. Ramdas Nayak, 2<sup>nd</sup> edition, 2017
- Henry's Clinical Diagnosis & Management by Laboratory methods by Mc Pherson and Pincus, 23<sup>rd</sup> edition, 2016

<b>Course Title</b>	<b>Waste Management</b>
<b>Course Credits</b>	2
<b>Course Outcomes</b>	After going through the course, learners will be able to
	<ul style="list-style-type: none"> <li>• To provide basic understanding of waste types, sources, and characteristics.</li> <li>• To familiarize students with sustainable waste handling, treatment, and disposal techniques.</li> <li>• To promote awareness of waste legislation and community involvement.</li> <li>• To introduce concepts of zero-waste and circular economy approaches.</li> </ul>
<b>Module 1(Credit 1)</b>	<b>Fundamentals of Waste Management</b>
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	<ol style="list-style-type: none"> <li>1. Identify and classify different types of waste.</li> <li>2. Understand methods for effective waste treatment and disposal.</li> <li>3. Interpret key waste management regulations and policies in India.</li> <li>4. Propose sustainable solutions for waste minimization and recovery.</li> </ol>
<b>Content Outline</b>	<p>Definition and classification of waste:</p> <ul style="list-style-type: none"> <li>• Solid waste, municipal waste, industrial waste, agricultural waste, biomedical waste, hazardous waste, e-waste, plastic waste</li> <li>• Sources and composition of various wastes</li> <li>• Collection, segregation, storage, and transportation of waste</li> <li>• Problems associated with unscientific waste disposal (health, environment, economy)</li> <li>• Overview of waste management hierarchy: Reduce, Reuse, Recycle, Recover, Dispose</li> </ul>
<b>Module 2(Credit 1)</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to
	<ol style="list-style-type: none"> <li>1. Introduction to Circular Economy and Zero Waste Practices</li> <li>2. Case studies: Indian municipalities with successful waste management systems</li> </ol>

<b>Content Outline</b>	<p>Waste treatment methods:</p> <ul style="list-style-type: none"> <li>• Composting, vermicomposting, anaerobic digestion</li> <li>• Incineration, pyrolysis, RDF (Refuse Derived Fuel)</li> <li>• Landfilling: types, leachate control, methane recovery</li> <li>• Resource recovery and recycling technologies</li> <li>• Informal sector and waste pickers in India</li> <li>• Extended Producer Responsibility (EPR)</li> <li>• Overview of Solid Waste Management Rules 2016, Plastic Waste Rules, and E-Waste Rules</li> </ul>
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### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):**

#### **Module I: Classification and Sources of Waste**

**Activity Title:** Waste Audit of Local Environment

**Assignment Type:** Field Observation + Classification Report

#### **Tasks:**

1. Conduct a **waste audit** at your home, college, or a public place.
2. Classify the waste into the following categories:
  1. Biodegradable
  2. Non-biodegradable
  3. Municipal
  4. Industrial
  5. Biomedical
  6. E-waste
3. Create a tabular report with:
  1. Type of waste
  2. Quantity (approx.)
  3. Source (household, lab, office, etc.)
  4. Disposal method
4. Optional: Take photos or sketches and suggest improvements in disposal or segregation.

#### **Module II: Waste Collection and Segregation**

**Activity Title:** Design a Segregation Plan for a Small Community

**Assignment Type:** Flowchart + Awareness Report

#### **Tasks:**

1. Propose a **waste collection and segregation model** for:
  1. A school/college campus
  2. Small housing society
  3. Local street or ward
2. Include:
  1. Color-coded bins and their types
  2. Flowchart from collection to processing

3. Awareness strategies (posters, talks, campaigns)
3. Optional: Draft a sample **waste management awareness poster** for display.

### **Module III: Waste Treatment Methods**

**Activity Title:** Comparative Study of Waste Disposal Techniques

**Assignment Type:** Concept Map + Short Analytical Report

#### **Include in your report:**

1. Principles and comparison of:
  1. Landfilling
  2. Incineration
  3. Composting
  4. Vermicomposting
  5. Anaerobic digestion
2. For each method:
  1. Write pros and cons
  2. Cost-effectiveness
  3. Environmental impact
  4. Suitability for different waste types
3. Optional: Visit or virtually explore a local composting or waste facility and include your observations.

### **Module IV: Waste Management Laws and Sustainability**

**Activity Title:** Understanding Waste Policies and Circular Economy

**Assignment Type:** Legislative Report + Sustainable Solutions

#### **Tasks:**

1. Study key features of Indian Waste Management Rules:
  1. Solid Waste Management Rules (2016)
  2. E-Waste Management Rules (2022)
  3. Plastic Waste Management Rules
2. Include in your report:
  1. Summary of regulations
  2. Roles of individuals, municipalities, and industries
  3. Penalties and compliance framework
3. Suggest sustainable practices aligned with **circular economy**:
  1. Reduce–Reuse–Recycle strategies
  2. Extended producer responsibility
  3. Zero waste lifestyle tips

#### **Reference:**

1. Duckett, J. (2011). HTML and CSS: Design and Build Websites. Wiley.
2. Castro, E., & Hyslop, B. (2013). HTML5 and CSS3: Visual QuickStart Guide. Peachpit Press.
3. W3Schools Online Web Tutorials –  
[<https://www.w3schools.com>](<https://www.w3schools.com>)
4. Mozilla Developer Network (MDN) –  
[<https://developer.mozilla.org>](<https://developer.mozilla.org>)



<b>Course Title</b>	<b>Medicinal Plants</b>
<b>Course Credits</b>	2
<b>Course Outcomes</b>	After going through the course, learners will be able to
	<ul style="list-style-type: none"> <li>• Apply techniques of conservation and propagation of medicinal plants</li> </ul>
	<ul style="list-style-type: none"> <li>• Setup process of harvesting, drying and storage of medicinal herbs</li> </ul>
	<ul style="list-style-type: none"> <li>• Propose new strategies to enhance growth of medicinal herbs</li> </ul>
<b>Module 1 (Credits 1)</b>	
<b>Learning Outcomes</b>	After learning the module, learners will be able to understand
	<ul style="list-style-type: none"> <li>• Know the importance of Medicinal Plants and its conservation</li> </ul>
	<ul style="list-style-type: none"> <li>• Identify and document local medicinal plants along with their traditional uses.</li> </ul>
<b>Content Outline</b>	History, Scope and Importance of Medicinal Plants; polyherbal formulations. Conservation, Augmentation and Ethnobotany and Folk Medicine Conservation of Endemic and endangered medicinal plants,
<b>Module 2 (Credits 1)</b>	
<b>Learning Outcomes</b>	<ul style="list-style-type: none"> <li>• The learners will be aware of the various medicinal plants and its application</li> </ul>
	<ul style="list-style-type: none"> <li>• Understand the ecological significance and conservation needs of medicinal plant species.</li> </ul>
<b>Content Outline</b>	Brief description of selected plants and derived drugs, Guggul ( Commiphora), Boswellia, Arjuna (Terminalia arjuna), Turmeric (Curcuma longa), Kutaki (Picrorhiza kurroa), Opium Poppy, Cincona and Artemisia and Podophyllum

### **Assignments/Activities towards Comprehensive Continuous Evaluation (CCE):**

As part of the Comprehensive Continuous Evaluation (CCE), the course instructor is expected to design activities for each chapter that bridge theoretical knowledge to practical application, emphasizing problem-solving and collaboration. These activities aim to evaluate both theoretical understanding and practical skills, aligning the curriculum with real-world problem scenarios. The evaluation can be done in the following manner External Examination with Theory papers and the practical examination including Product submission, projects, etc. The Internal evaluation should comprise the Unit tests, and continuous Internal evaluation emphasizing practical, Projects, activities, presentations, seminars, workshops, products, assignments and reports.

## References:

1. Akerele, O., Heywood, V. and Synge, H. (1991). The Conservation of Medicinal Plants. Cambridge University Press.
2. AYUSH ([www.indianmedicine.nic.in](http://www.indianmedicine.nic.in)). About the systems—An overview of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy. New Delhi: Department of
3. Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy (AYUSH), Ministry and Family Welfare, Government of India.
4. CSIR- Central Institute of Medicinal and Aromatic Plants, Lucknow (2016). Aush Gyanya: Handbook of Medicinal and Aromatic Plant Cultivation.
5. Dev, S. (1997). Ethno-therapeutics and modern drug development: The potential of Ayurveda. *Current Science* 73:909–928.
6. Evans, W.C. (2009). Trease and Evans Pharmacognosy, 16th edn. Philadelphia, PA: Elsevier Saunders Ltd.
7. Jain, S.K. and Jain, Vartika. (eds.) (2017). Methods and Approaches in Ethnobotany: Concepts, Practices and Prospects. Deep Publications, Delhi
8. Kapoor, L.D. (2001). Handbook of Ayurvedic medicinal plants. Boca Raton, FL: CRC Press.
9. Saroya, A.S. (2017). Ethnobotany. ICAR publication.
10. Sharma, R. (2003). Medicinal Plants of India-An Encyclopaedia. Delhi: Daya Publishing House.
11. Sharma, R. (2013) Agro Techniques of Medicinal Plants. Daya Publishing House, Delhi.
12. Thakur, R.S., H.S. Puri, and Husain, A. (1989). Major medicinal plants of India. Central Institute of Medicinal and Aromatic Plants, Lucknow, India.

