

# **TEERTHANKER MAHAVEER UNIVERSITY, MORADABAD**

## ***MULTIDISCIPLINARY MINOR SPECIALIZATION COURSES***

**FOR COURSES OFFERED UNDER -NEP-2020**

**From the Academic Session 2024-25**

## List of Multidisciplinary Minor Specialization

S.No	Specialization	No. of Courses	Course Code	Course Name	L-T-P	Evaluation Int. Ext.	Offering College
1	Data Science	1	IDMDS240101	Basics of Statistics	4-0-0=4	40:60	Computing Sciences & Information Technology
		2	IDMDS240201	Introduction to Data Science	4-0-0=4	40:60	
		3	IDMDS240301	Business Intelligence	4-0-0=4	40:60	
		4	IDMDS240401	Basics of Data Visualization	4-0-0=4	40:60	
2	Artificial Intelligence & Prompt Engineering	1	IDMAP240101	Introduction to Artificial Intelligence	4-0-0=4	40:60	
		2	IDMAP240201	Introduction to Generative AI	4-0-0=4	40:60	
		3	IDMAP240301	Prompt Engineering for ChatGPT	4-0-0=4	40:60	
		4	IDMAP240401	Generative AI Tools for research writing	4-0-0=4	40:60	
3	Painting	1	IDMPA240151	Fundamentals of Drawing	0-0-8=4	50:50	Fine Arts
		2	IDMPA240251	Drawings & Sketching	0-0-8=4	50:50	
		3	IDMPA240351	Basics of Colour Theory	0-0-8=4	50:50	
		4	IDMPA240451	Drawing for Paining	0-0-8=4	50:50	
4	Law & Governance	1	IDMLG240101	Introduction to Laws & Legal System	4-0-0=4	40:60	Law & Legal Studies
		2	IDMLG240201	An Introduction To Indian Constitution	4-0-0=4	40:60	
		3	IDMLG240301	Consumer Protection Laws	4-0-0=4	40:60	
		4	IDMLG240401	Right To Information	4-0-0=4	40:60	
5	Quality Health Care Practice	1	IDMQH240101	Emergency Care and Management	4-0-0=4	40:60	Nursing
		2	IDMQH240201	Good Health and Wellness I	4-0-0=4	40:60	
		3	IDMQH240301	Good Health and Wellness II	4-0-0=4	40:60	Physiotherapy
		4	IDMQH240401	Awareness to Healthcare System	4-0-0=4	40:60	
6	Yoga and Meditation	1	IDMYM240101	Yoga Education	4-0-0=4	40:60	Physical Education
		2	IDMYM240201	Schools of Yoga & Yogic Treatment	4-0-0=4	40:60	
		3	IDMYM240301	Yogic Life Style	4-0-0=4	40:60	
		4	IDMYM240401	Yogic Meditation	4-0-0=4	40:60	
7	Digital Marketing	1	IDMDM240101	Introduction of Digital Marketing	4-0-0=4	40:60	Management TMIMT
		2	IDMDM240201	Content Marketing	4-0-0=4	40:60	
		3	IDMDM240301	Social Media Marketing	4-0-0=4	40:60	
		4	IDMDM240401	Search Engine Optimization Strategies	4-0-0=4	40:60	
8	Finance	1	IDMFN240101	Money and Banking	4-0-0=4	40:60	
		2	IDMFN240201	Financial Institutions and Markets	4-0-0=4	40:60	
		3	IDMFN240301	Investment Analysis and portfolio Management	4-0-0=4	40:60	
		4	IDMFN240401	Financial Modelling and valuation	4-0-0=4	40:60	
9	Forensic Science	1	IDMFS240101	Narcotics and Psychotropic substances	4-0-0=4	40:60	Paramedical Science
		2	IDMFS240201	Questioned Documents and Fingerprint	4-0-0=4	40:60	
		3	IDMFS240301	Crime Scene Investigation	4-0-0=4	40:60	
		4	IDMFS240401	Digital Forensic and Cybercrime	4-0-0=4	40:60	

## Multidisciplinary Minor Courses

Offered Under NEP-2020

From the Academic Session 2024-25

**Specialization-** Data Science

**Offering College -** Computing Sciences & Information Technology

No. of Courses	Course Code	Course Name	L-T-P	Evaluation Int. Ext.
1	IDMDS240101	Basics of Statistics	4-0-0=4	40:60
2	IDMDS240201	Introduction to Data Science	4-0-0=4	40:60
3	IDMDS240301	Business Intelligence	4-0-0=4	40:60
4	IDMDS240401	Basics of Data Visualization	4-0-0=4	40:60

### Specialization- Data Science (IDMDS)

<b>Course Code:</b> IDMDS240101	<b>Semester-I</b>  <b>Basics of Statistics</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be:</b>	
<b>CO1.</b>	Remembering basic concepts of collection of data and representation of data.	
<b>CO2.</b>	Understanding significance of statistical tools, measures of central tendency and measures of dispersion.	
<b>CO3.</b>	Understanding the concepts of probability and probability distribution.	
<b>CO4.</b>	Understanding the concepts of Quartile Deviation and Standard Deviation for data compression.	
<b>CO5.</b>	Applying the addition and multiplication theorem of probability.	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Introduction and graphical representation:</b> Definitions of Statistics, Importance of statistics, Advantages and Limitations, Scope of Statistics, Collection of Data, Types of Data, Attributes and variables, Graphical representation of Frequency distribution: (Histogram, Frequency Polygon, Frequency Curve and Cumulative Frequency curves (Ogive curves)).	<b>8 Hours</b>
<b>Unit II</b>	<b>Measures of Central Tendency:</b> Mean (Direct method, short cut method, Step Deviation method), Median, Mode, Relation between Mean, Median and Mode.	<b>8 Hours</b>
<b>Unit III</b>	<b>Measures of Dispersion:</b> Range, Coefficient of Range, Mean Deviation, Coefficient of Mean Deviation, Quartile Deviation, Coefficient of Quartile Deviation, Standard Deviation.	<b>8 Hours</b>
<b>Unit IV</b>	<b>Elementary Probability Theory:</b> Sample space, events, classical definition of probability, relative frequency definition, theorems of total & compound probability, Independent & dependent event, mutually exclusive events, mathematical expectation.	<b>8 Hours</b>
<b>Unit V</b>	<b>Correlations and time series:</b> Definition of Correlation, Types of Correlation, Karl Pearson's coefficient of correlations for ungrouped data and problems, Definition and components of time series, Measures of trends, Moving average method and least square method and problems.	<b>8 Hours</b>
<b>Text Books:</b>	<ol style="list-style-type: none"> <li>Kapoor, B. K., &amp; Gupta, S. C. (2020). <i>Fundamentals of statistics</i>. S. Chand Publication.</li> <li>Agarwal, B. L. (2013). <i>Basic statistics</i>. New Age International.</li> </ol>	
<b>Reference Books:</b>	<ol style="list-style-type: none"> <li>Singh, Y. K. (2019). <i>Fundamentals of research methodology and statistics</i>. New Age International Publishers.</li> <li>Kothari, C. R. (2019). <i>Research methodology: Methods and techniques</i>. New Age International Publishers.</li> </ol>	
<b>Additional electronics reference material:</b>	<ol style="list-style-type: none"> <li><a href="https://youtu.be/IqubHoFzTw0">https://youtu.be/IqubHoFzTw0</a></li> <li><a href="https://youtu.be/N-IVFB8Rlfo">https://youtu.be/N-IVFB8Rlfo</a></li> <li><a href="https://www.cusb.ac.in/images/cusb-files/2020/el/cbs/MCCOM2003C04%20(Business%20Research%20Methods)Research%20Methodology%20C%20R%20Kothari.pdf">https://www.cusb.ac.in/images/cusb-files/2020/el/cbs/MCCOM2003C04%20(Business%20Research%20Methods)Research%20Methodology%20C%20R%20Kothari.pdf</a></li> </ol>	

**Specialization- Data Science (IDMDS)**

<b>Course Code:</b> IDMDS240201	<b>Semester-II</b>  <b>Introduction to Data Science</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be :</b>	
<b>CO1.</b>	Explore the fundamental concepts of data science	
<b>CO2.</b>	Understand data analysis techniques for applications handling large data	
<b>CO3.</b>	Understand various machine learning algorithms used in data science process	
<b>CO4.</b>	Visualize and present the inference using various tools	
<b>CO5.</b>	Learn to think through the ethics surrounding privacy, data sharing and algorithmic decision-making	
<b>Course Content:</b>		
<b>Unit I</b>	Introduction to data science: - Definition – Define Data Science and Introduction to Data Science. - Data Science Process Overview – Defining goals – Retrieving data – Data preparation – Data exploration – Data modeling – Presentation.	<b>8 Hours</b>
<b>Unit II</b>	Big Data: - Problems when handling large data – General techniques for handling large data – Steps in big data – Distributing data storage	<b>8 Hours</b>
<b>Unit III</b>	Machine Learning: - Machine learning – Modeling Process – Training model – Validating model – Predicting new observations	<b>8 Hours</b>
<b>Unit IV</b>	Deep learning: - Introduction – Deep Feedforward Networks – Regularization – Optimization of Deep Learning – Applications of Deep Learning	<b>8 Hours</b>
<b>Unit V</b>	Data Visualization: - Introduction to data visualization – Data visualization options – Filters – MapReduce – Dashboard development tools	<b>8 Hours</b>
<b><u>Text Books:</u></b>	<ol style="list-style-type: none"> <li>1. Cielen, D., Meysman, A. D. B., &amp; Ali, M. (2016). <i>Introducing Data Science</i>. Manning Publications Co.</li> <li>2. James, G., Witten, D., Hastie, T., &amp; Tibshirani, R. (2013). <i>An Introduction to Statistical Learning: with Applications in R</i>. Springer.</li> <li>3. Goodfellow, I., Bengio, Y., &amp; Courville, A. (2016). <i>Deep Learning</i>. MIT Press.</li> <li>4. Patil, D. J., Mason, H., &amp; Loukides, M. (2018). <i>Ethics and Data Science</i>. O'Reilly.</li> </ol>	
<b><u>Reference Books:</u></b>	<ol style="list-style-type: none"> <li>1. Grus, J. (2015). <i>Data Science from Scratch: First Principles with Python</i>. O'Reilly.</li> <li>2. O'Neil, C., &amp; Schutt, R. (2013). <i>Doing Data Science: Straight Talk from the Frontline</i>. O'Reilly.</li> <li>3. Leskovec, J., Rajaraman, A., &amp; Ullman, J. D. (2014). <i>Mining of Massive Datasets</i> (2nd ed.). Cambridge University Press.</li> </ol>	
<b><u>Additional Electronic Reference Material:</u></b>	<ol style="list-style-type: none"> <li>1. <a href="https://intellipaat.com/blog/tutorial/data-science-tutorial/">https://intellipaat.com/blog/tutorial/data-science-tutorial/</a></li> <li>2. <a href="https://elitedatascience.com/data-science-resources">https://elitedatascience.com/data-science-resources</a></li> </ol>	

	<b>Specialization- Data Science (IDMDS)</b>	
<b>Course Code:</b> <b>IDMDS240301</b>	<b>Semester-III</b>  <b>Business Intelligence</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be :</b>	
<b>CO1.</b>	Understand the basic concepts of business intelligence and its application.	
<b>CO2.</b>	Elucidate the role of business intelligence and its value chain analysis.	
<b>CO3.</b>	Apply various modeling techniques.	
<b>CO4.</b>	Design appropriate marketing models, Logistic and production models.	
<b>CO5.</b>	Effectively evaluate the future of Business Intelligence by using emerging technologies.	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Business Intelligence an Introduction:</b> Introduction, Definition, History and Evolution, Business Intelligence Segments , Difference between Information and Intelligence, Defining Business Intelligence Value Chain, Factors of Business Intelligence System, Real time Business Intelligence.	<b>8 Hours</b>
<b>Unit II</b>	<b>Essentials of Business Intelligence :</b> Introduction, Creating Business Intelligence Environment, Business Intelligence Landscape, Types of Business Intelligence, Business Intelligence Platform, Dynamic roles in Business Intelligence, Challenges, Business Intelligence Tools, Modern Business Intelligence.	<b>8 Hours</b>
<b>Unit III</b>	<b>Efficiency: Efficiency measures –</b> The CCR model, Definition of target objectives, Peer groups, Identification of good operating practices, Cross efficiency analysis	<b>8 Hours</b>
<b>Unit IV</b>	<b>Business intelligence applications:</b> Marketing models: Relational marketing, Sales force management Logistic and production models: Supply chain optimization, Optimization models for logistics planning, Revenue management systems.	<b>8 Hours</b>
<b>Unit V</b>	<b>Future of Business Intelligence :</b> Future of business intelligence, Emerging Technologies, Machine Learning, Predicting the Future, BI Search & Text Analytics, Advanced Visualization, Rich Report.	<b>8 Hours</b>
<b>Text Books:</b>	<ol style="list-style-type: none"> <li>Howson, C. (2007). <i>Successful Business Intelligence</i> (2nd ed.). McGraw-Hill &amp; Osborne Media.</li> <li>Moss, L. T., &amp; Atre, S. (2003). <i>Business Intelligence Roadmap</i> (9th ed.). Addison Wesley.</li> <li>Sabherwal, R., &amp; Fernandez, I. B. (2011). <i>Business Intelligence: Practices, Technologies, and Management</i> (2nd ed.). Wiley &amp; Sons.</li> </ol>	

<b><u>Reference Books:</u></b>	1. Turban, E., Sharda, R., Aronson, J. E., & King, D. (2013). <i>Business Intelligence: A Managerial Approach</i> (9th ed.). Prentice Hall. 2. Moss, L. T., & Atre, S. (2003). <i>Business Intelligence Roadmap: The Complete Project Lifecycle of Decision Making</i> . Addison Wesley.	
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### Specialization- Data Science (IDMDS)

<b><u>Course Code:</u></b> IDMDS240401	<b>Semester-IV</b>  <b>Basics of Data Visualization</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be :</b>	
<b>CO1.</b>	Understand foundational visualization concepts	
<b>CO2.</b>	Demonstrate visualizations principles to enhance data visualization.	
<b>CO3.</b>	Analyze and apply essential design principles to data exploration and visualization.	
<b>CO4.</b>	Design appropriate charts, tables, maps and dashboards	
<b>CO5.</b>	Effectively create and tell a story based on visualized data	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Visualization Fundamentals:</b> Introduction to data visualization-Need for data visualization and its definition-Tools for Visualizing Data-Methods of visualizing data-Overview of modern visualization tools - working with various data formats - Basic chart types.	<b>8 Hours</b>
<b>Unit II</b>	<b>Data Visualization for human perception:</b> The Human Brain and Data Visualization-Cognitive vs Perceptual Design Distinction-Introduction of Effective and Ineffective Visuals-Types of Visualizations and its examples- Practicing Good Ethics in Data Visualization.	<b>8 Hours</b>
<b>Unit III</b>	<b>Design and exploratory analysis:</b> Introduction-Exploratory and Explanatory Analysis -Identifying Outliers-Constructing a Control Chart-Design For Purpose-Data, Relationships, and Design-Static Versus Interactive Visualizations-Multiple, Connected View, Language, Labelling, and Scales-Visual Lies and Cognitive Bias.	<b>8 Hours</b>
<b>Unit IV</b>	<b>Visual Analytics and Planning:</b> Basics of Visual Analytics -Charts- Colours, Shapes, and Sizes-Dual Line Charts-Bar Charts, Line Graphs, Pie Charts-Scatter Plots, Gantt Charts, Bubble Charts-Histograms, Bullet Charts, Heat Maps and Highlight Tables-Dates- Discrete vs. Continuous Dates-Basics of table calculations Maps. Introduction to Planning and Preproduction for Visualizations-A Design Checklist-understanding Stakeholders-Prioritizing, Optimizing, and Designing.	<b>8 Hours</b>
<b>Unit V</b>	<b>Dashboard and storytelling:</b> Dashboard Design Principles-Hierarchies, Actions, Filters, and Parameters Creating Dashboards. The Story of the data-The Art of Storytelling (Past, Present, and Future)-Storytelling and the Human Brain.	<b>8 Hours</b>
<b><u>Text Books:</u></b>	1. Ware, C. (2008). <i>Visual Thinking for Design</i> . Morgan Kaufmann Publishers. 2. Fry, B. (2007). <i>Visualizing Data</i> . O'Reilly.	
<b><u>Reference Books:</u></b>	1. Chakrabarti, S. (2003). <i>Mining the Web: Discovering Knowledge from Hypertext Data</i> . Morgan Kaufmann Publishers.	
<b>Additional Electronic Reference Material:</b>	1. <a href="https://www.coursera.org/learn/data-visualization-tableau?specialization=data-visualization">https://www.coursera.org/learn/data-visualization-tableau?specialization=data-visualization</a> 2. Essential Design Principles for Tableau: <a href="https://www.coursera.org/learn/dataviz-design?specialization=data-visualization">https://www.coursera.org/learn/dataviz-design?specialization=data-visualization</a>	

	<p>3. Visual Analytics with Tableau :https://www.coursera.org/learn/dataviz visual-analytics?specialization=data-visualization</p> <p>4. Creating Dashboards and Storytelling with Tableau: https://www.coursera.org/learn/dataviz- dashboards?specialization=data visualization</p> <p>5. Data Visualization with Tableau Project: <a href="https://www.coursera.org/learn/dataviz-project">https://www.coursera.org/learn/dataviz-project</a></p> <p>6. Data Visualization with Tableau Specialization:</p> <p>7. <a href="https://www.coursera.org/specializations/data-visualization">https://www.coursera.org/specializations/data-visualization</a></p>	
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## Multidisciplinary Minor Courses

Offered Under NEP-2020

From the Academic Session 2024-25

**Specialization-** Artificial Intelligence & Prompt Engineering

**Offering College -** Computing Sciences & Information Technology

No. of Courses	Course Code	Course Name	L-T-P	Evaluation Int. Ext.
1	IDMAP240101	Introduction to Artificial Intelligence	4-0-0=4	40:60
2	IDMAP240201	Introduction to Generative AI	4-0-0=4	40:60
3	IDMAP240301	Prompt Engineering for ChatGPT	4-0-0=4	40:60
4	IDMAP240401	Generative AI Tools for research writing	4-0-0=4	40:60

### Specialization – Artificial Intelligence & Prompt Engineering

<b>Course Code:</b> <b>IDMAP240101</b>	<b>Semester-I</b>  <b>Introduction to Artificial Intelligence</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be:</b>	
<b>CO1.</b>	To understand the concept of classify different knowledge and their representation.	
<b>CO2.</b>	To understand the concept about intelligence and different perspectives of researchers about artificial intelligence.	
<b>CO3.</b>	To understand the concept about expert systems, the process of their creation and usage.	
<b>CO4.</b>	To understand the concept of intelligent agents, their structure and behavior.	
<b>CO5.</b>	To understand the concept about various domains where artificial intelligence could be used.	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Introduction–Definition of Hypothesis:</b> knowledge, knowledge type's, knowledge representation using propositional logic, predicate logic.	<b>8 Hours</b>
<b>Unit II</b>	<b>Introduction to Intelligence:</b> Intelligent behavior; Various definitions of Artificial Intelligence; History of AI; Goals of Artificial Intelligence, Parts of Artificial Intelligence.	<b>8 Hours</b>
<b>Unit III</b>	<b>Introduction, Knowledge Base:</b> Working Memory, Inference Engine, Expert System, Expert System Shells, Application of Expert Systems i.e. Mycin	<b>8 Hours</b>
<b>Unit IV</b>	<b>Definition of Intelligent Agents:</b> Software Agents Architecture for Intelligent Agents; Characteristics of Intelligent Agents; Types of Intelligent Agents; Application of Intelligent Agents.	<b>8 Hours</b>
<b>Unit V</b>	<b>Applications AI applications</b> – Information Retrieval; Information Extraction; Natural Language Processing; Machine Translation; Speech Recognition; Robot – Hardware – Perception – Planning – Moving	<b>8 Hours</b>
<b><u>Text Books:</u></b>	<ol style="list-style-type: none"> <li>1. Russell, S., &amp; Norvig, P. (2009). <i>Artificial Intelligence: A Modern Approach</i> (3rd ed.). Prentice Hall.</li> <li>2. Russell, S., &amp; Norvig, P. (2020). <i>Artificial Intelligence: A Modern Approach</i> (4th ed.). Pearson Education.</li> <li>3. Bratko, I. (2011). <i>Prolog: Programming for Artificial Intelligence</i> (4th ed.). Addison-Wesley Educational Publishers Inc.</li> </ol>	
<b><u>Reference Books:</u></b>	<ol style="list-style-type: none"> <li>1. Clocksin, W. F., &amp; Mellish (1981) C. S. <i>Programming in Prolog</i>. Narosa Publishing House.</li> <li>2. Janakiraman, V. S., &amp; Sarukesi (1990) K. <i>Foundation of Artificial Intelligence &amp; Expert System</i>. Macmillan.</li> </ol> <p><b>* Latest editions of all the suggested books are recommended.</b></p>	
<b><u>Additional Electronic Reference Material:</u></b>	<a href="https://nptel.ac.in/courses/106/105/106105077/">https://nptel.ac.in/courses/106/105/106105077/</a> <a href="https://www.youtube.com/watch?v=JMUxmLyrhSk">https://www.youtube.com/watch?v=JMUxmLyrhSk</a>	

## Specialization - Artificial Intelligence & Prompt Engineering (IDMAP)

<b>Course Code:</b> <b>IDMAP240201</b>	<b>Semester-II</b>  <b>Introduction to Generative AI</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be:</b>	
<b>CO1.</b>	Understanding artificial intelligence, including its history, building blocks, and applications.	
<b>CO2.</b>	Understanding the principles and ethical considerations of generative AI, and use relevant tools effectively.	
<b>CO3.</b>	Analyzing the development, applications, limitations, and sustainability of large language models.	
<b>CO4.</b>	Understanding data privacy and safety when working with LLMs and comply with data protection laws.	
<b>CO5.</b>	Applying the advancements and applications of conversational LLMs and their impact on human-computer interactions.	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Introduction to Artificial Intelligence:</b> Introduction to AI, History and building blocks of AI, Applications of AI, Generative AI, Principles behind Generative AI, Ethics of Generative AI, Tools of Generative AI.	<b>8 Hours</b>
<b>Unit II</b>	<b>Artificial Intelligence with Machine Learning:</b> Introduction, Machine Learning, Supervised, Unsupervised, Reinforcement and Semi-Supervised Learning, Expert Systems, Bots.	<b>8 Hours</b>
<b>Unit III</b>	<b>Large Language Models:</b> Large Language Models, Introduction and History, Explosion of LLMs, Applications of LLMs, Limitations of LLMs, Sustainability of LLMs	<b>8 Hours</b>
<b>Unit IV</b>	<b>Data Privacy:</b> Data privacy and safety with LLMs, Mitigating privacy risks, Improving safety, Understanding Data Protection Laws	<b>8 Hours</b>
<b>Unit V</b>	<b>Conversational LLMs:</b> Conversational LLMs: Revolution in Dialogue, OpenAI: ChatGPT, Google's: Bard/LaMDA, Microsoft's: Bing AI, Meta's: LLaMa, Stanford's: Alpaca.	<b>8 Hours</b>
<b><u>Text Books:</u></b>	1. Engler, M., & Dhamani, N. (2024). <i>Introduction to Generative AI</i> . O'Reilly.	
<b><u>Reference Books:</u></b>	1. Babcock, J. (2023). <i>Generative AI with Python and TensorFlow 2: Create Images, Text, and Music with VAEs, GANs, LSTMs, Transformer Models</i> . Apress. 2. Foster, D. (2021). <i>Generative Deep Learning</i> . O'Reilly. 3. Fregly, C. (2023). <i>Generative AI on AWS</i> . O'Reilly	
<b><u>Additional Electronics Materials</u></b>	NLP and ML tutorials, AI documentation.	

### Specialization - Artificial Intelligence & Prompt Engineering (IDMAP)

<b>Course Code:</b> IDMAP240301	<b>Semester-III</b>  <b>Prompt Engineering for Chat GPT</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be:</b>	
<b>CO1.</b>	Understanding the architecture and evolution of GPT models, including attention mechanisms and transformer networks.	
<b>CO2.</b>	Understanding effective prompts and utilizes advanced prompt engineering techniques to enhance model performance.	
<b>CO3.</b>	Analyzing real-world applications and engage in practical exercises to apply prompt engineering skills.	
<b>CO4.</b>	Applying emerging trends and address challenges in prompt engineering, ensuring ethical and responsible AI practices.	
<b>CO5.</b>	Creating a comprehensive prompt engineering project using ChatGPT.	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Introduction to Prompt Engineering:</b> Overview of prompt engineering, Significance in conversational AI, Introduction of ChatGPT, Concepts of prompt conditioning and its impact on model responses, Role of prompts in fine-tuning language models. <b>Natural Language Processing Fundamentals:</b> Introduction to NLP and its applications, Basic concepts such as tokenization, stemming, and lemmatization, Techniques for text pre-processing and cleaning.	<b>8 Hours</b>
<b>Unit II</b>	<b>Machine Learning Basics:</b> Introduction to machine learning and its types, Supervised, unsupervised, and reinforcement learning, Training data preparation and feature engineering. <b>Introduction to GPT Models:</b> Overview of Generative Pre-trained Transformers (GPT), Evolution of GPT models and their architecture, Attention mechanisms and transformer networks.	<b>8 Hours</b>
<b>Unit III</b>	<b>Fine-tuning GPT Models:</b> Techniques for fine-tuning GPT models for specific tasks, Data augmentation and data selection strategies, Hyper parameter tuning and model evaluation. <b>Effective Prompt Design Strategies:</b> Types of prompts and their applications, Crafting prompts for different types of responses, prompt conditioning and control.	<b>8 Hours</b>
<b>Unit IV</b>	<b>Advanced Prompt Engineering Techniques:</b> Using metadata and context for better prompt design, Transfer learning and domain adaptation techniques, Handling biases and ethical considerations in prompt engineering. <b>Case Studies and Practical Applications:</b> Real-world examples of prompt engineering in ChatGPT, Hands-on exercises and projects for prompt design, Evaluation of different prompt strategies and their impact on model performance.	<b>8 Hours</b>
<b>Unit V</b>	<b>Future Directions and Challenges:</b> Emerging trends in prompt engineering and conversational AI, Challenges such as bias mitigation, interpretability, and scalability, Ethical considerations and responsible AI practices in prompt design. <b>Final Project and Assessment:</b> Designing and implementing a prompt engineering project using ChatGPT, Presentation and evaluation of the project, Peer review and feedback sessions.	<b>8 Hours</b>
<b>Text Books:</b>	<ol style="list-style-type: none"> <li>Bird, S., Klein, E., &amp; Loper, E. (2009). <i>Natural Language Processing with Python</i>. O'Reilly.</li> <li>Goodfellow, I., Bengio, Y., &amp; Courville, A. (2016). <i>Deep Learning</i>. MIT Press.</li> </ol>	

<b><u>Reference Books:</u></b>	<ol style="list-style-type: none"> <li>1. Russell, S., &amp; Norvig, P. (2020). <i>Artificial Intelligence: A Modern Approach</i> (4th ed.). Pearson Education.</li> <li>2. Manning, C. D., &amp; Schütze, H. (1999). <i>Foundations of Statistical Natural Language Processing</i>. MIT Press.</li> <li>3. Bishop, C. M. (2006). <i>Pattern Recognition and Machine Learning</i>. Springer.</li> </ol>	
<b><u>Additional Electronics Materials</u></b>	NLP and ML tutorials, research papers, ChatGPT documentation.	

### Specialization - Artificial Intelligence & Prompt Engineering (IDMAP)

<b>Course Code:</b> <b>IDMAP240401</b>	<b>Semester-IV</b>  <b>Generative AI Tools for Research Writing</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be:</b>	
<b>CO1.</b>	Understanding the differentiation between various research methodologies.	
<b>CO2.</b>	Understanding effective writing skills, including ethical considerations in AI-assisted research and writing.	
<b>CO3.</b>	Analyzing strategies for leveraging AI to gather and analyze information effectively.	
<b>CO4.</b>	Applying generative AI tools to enhance research and writing capabilities.	
<b>CO5.</b>	Applying comprehensive understanding and application of course concepts in the final project.	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Introduction to Research and Writing:</b> Overview of research methodologies, Introduction to the research process, Basics of effective writing techniques, Ethical considerations in research and writing with AI tools.	<b>8</b> <b>Hours</b>
<b>Unit II</b>	<b>Understanding Generative AI Tools:</b> Introduction to generative AI and its applications in writing, Types of generative AI tools available for research and writing, Hands-on exploration of popular AI writing tools, Practical exercises on generating content with AI assistance.	<b>8</b> <b>Hours</b>
<b>Unit III</b>	<b>Conducting Research with AI Assistance:</b> Strategies for using AI to gather and analyze information, Evaluating the credibility and reliability of AI-generated content, Incorporating AI-generated insights into research papers, Practice exercises on using AI for data analysis and interpretation	<b>8</b> <b>Hours</b>
<b>Unit IV</b>	<b>Writing with AI Assistance:</b> Techniques for generating content with AI tools, Refining and editing AI-generated content for clarity and coherence, Best practices for integrating human creativity with AI assistance, Practical exercises on writing with AI assistance	<b>8</b> <b>Hours</b>
<b>Unit V</b>	<b>Polishing Your Writing:</b> Editing and proofreading techniques for AI-generated content, Improving readability and flow in writing, Peer review and feedback on written assignments, Final project: Applying research and writing skills with AI tools to a real-world scenario <b>Introduction to Matlab:</b> Overview of functionality of Matlab.	<b>8</b> <b>Hours</b>
<b><u>Text Books:</u></b>	1. Smith, J. (2024). <i>AI-Generated Writing: How to Use Artificial Intelligence Tools to Enhance Your Writing Process</i> . Springer.	
<b><u>Reference Books:</u></b>	2. Jones, E. (2024). <i>The AI Writer's Handbook: A Comprehensive Guide to Using Generative AI in Research and Writing</i> . Routledge. 3. Johnson, M. (2024). <i>Generative AI for Researchers and Writers: A Step-by-Step Guide</i> . Springer. 4. Lee, J. (2024). <i>The Future of Writing: How AI is Revolutionizing Research and Content Creation</i> . MIT Press.	
<b><u>Additional Electronics Materials</u></b>	YouTube, NLP and ML tutorials, research papers and writing , AI documentation.	

## Multidisciplinary Minor Courses

Offered Under NEP-2020

From the Academic Session 2024-25

**Specialization-** Painting

**Offering College -** Fine Arts

No. of Courses	Course Code	Course Name	L-T-P	Evaluation Int. Ext.
1	IDMPA240151	Fundamentals of Drawing	0-0-8=4	50:50
2	IDMPA240251	Drawings & Sketching	0-0-8=4	50:50
3	IDMPA240351	Basics of Colour Theory	0-0-8=4	50:50
4	IDMPA240451	Drawing for Painting	0-0-8=4	50:50

### Specialization - Painting (IDMPA)

<b><u>Course Code</u></b> <b>IDMPA240151</b>	<b>BFA (I Semester)</b>  <b>Fundamentals of Drawing</b>	<b>L-0</b> <b>T-0</b> <b>P-8</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On Completion of the course the students will be able to:</b>	
<b>CO1.</b>	Understanding the live sketching.	
<b>CO2.</b>	Demonstrating the still life.	
<b>CO3.</b>	Developing the drawing of objects.	
<b>CO4.</b>	Applying the drawing of human figures.	
<b>CO5.</b>	Creating the animal drawings.	
<b>Course Content:</b>		
<b>Unit I</b>	Live Sketching, Study of Rapid sketch, study of gestures and Postures	<b>16 Hours</b>
<b>Unit II</b>	Still life, Study of light & shadow	<b>16 Hours</b>
<b>Unit III</b>	Drawing objects with simple geometrical shapes and lines	<b>16 Hours</b>
<b>Unit IV</b>	Drawing human Figures, study of positions	<b>16 Hours</b>
<b>Unit V</b>	Drawing Animals and study of positions.	<b>16 Hours</b>
<b><u>Reference Books:</u></b>	<ol style="list-style-type: none"> <li>1. Foster, V. (2004). <i>Anatomy &amp; Figure Drawing</i>. 1st ed. Oceania Books, London.</li> <li>2. Roberts, D. (1991). <i>Drawing Workshop</i> (Reprint). HarperCollins Publishers.</li> </ol>	
<b>Web Links:</b>	<ol style="list-style-type: none"> <li>1. <a href="https://www.youtube.com/watch?v=74HR59yFZ7Y&amp;list=PLtG4P3lq8RHFRfdirLJKk822fwOxR6Zn6&amp;index=6">https://www.youtube.com/watch?v=74HR59yFZ7Y&amp;list=PLtG4P3lq8RHFRfdirLJKk822fwOxR6Zn6&amp;index=6</a></li> <li>2. <a href="https://www.youtube.com/watch?v=tx5kJvI14Jg&amp;list=PLtG4P3lq8RHFRfdirLJKk822fwOxR6Zn6&amp;index=17">https://www.youtube.com/watch?v=tx5kJvI14Jg&amp;list=PLtG4P3lq8RHFRfdirLJKk822fwOxR6Zn6&amp;index=17</a></li> <li>3. <a href="https://www.youtube.com/watch?v=2szSyXx8cZQ&amp;list=PLtG4P3lq8RHFrfdirLJKk822fwOxR6Zn6&amp;index=18">https://www.youtube.com/watch?v=2szSyXx8cZQ&amp;list=PLtG4P3lq8RHFrfdirLJKk822fwOxR6Zn6&amp;index=18</a></li> </ol>	
<b>NOTE:</b>	<b>In each Unit, 8 Hours Practical Sessions and 8 Hours Self Practice Sessions will be Introduced</b>	



### Specialization - Painting (IDMPA)

<b><u>Course Code</u></b> <b>IDMPA240251</b>	<b>BFA (II Semester)</b>  <b>Drawing &amp; Sketching</b>	<b>L-0</b> <b>T-0</b> <b>P-8</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On Completion of the course the students will be able to:</b>	
<b>CO1.</b>	Understanding drawing.	
<b>CO2.</b>	Demonstrating sketching.	
<b>CO3.</b>	Developing drawings.	
<b>CO4.</b>	Applying understanding of drawing in live sketching	
<b>CO5.</b>	Creating Composition for drawing.	
<b>Course Content:</b>		
<b>Unit I</b>	Understanding light,shade.	<b>16 hours</b>
<b>Unit II</b>	Making Potato, onion, lady Finger, Leaf Etc. Prints drawing.	<b>16 hours</b>
<b>Unit III</b>	Making Sketch.	<b>16 hours</b>
<b>Unit IV</b>	Making Drawing-objects	<b>16 hours</b>
<b>Unit V</b>	Making composition of drawing	<b>16 hours</b>
<b><u>Reference Books:</u></b>	<ol style="list-style-type: none"> <li>1. Kumar, S. (2000). <i>Bhartiye Chhapa Chitrakala Aadi Se Aadhunik Kal</i>. Bhartiye Kala Prakashan .</li> <li>2. Sharma, S. (2002). <i>Prachinkashath</i>. Hindi Granth Academy .</li> </ol>	
<b>Web Links:</b>	<ol style="list-style-type: none"> <li>1. <a href="https://www.youtube.com/watch?v=ER2WVwUweaU">https://www.youtube.com/watch?v=ER2WVwUweaU</a></li> <li>2. <a href="https://youtu.be/YsAao7RgwuU">https://youtu.be/YsAao7RgwuU</a></li> </ol>	
<b>NOTE:</b>	<b>In each Unit, 8 Hours Practical Sessions and 8 Hours Self Practice Sessions will be Introduced</b>	

### Specialization - Painting (IDMPA)

<b>Course Code</b> <b>IDMPA240351</b>	<b>BFA (III Semester)</b>  <b>Basics of Color heory</b>	<b>L-0</b> <b>T-0</b> <b>P-8</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On Completion of the course the students will be able to :</b>	
<b>CO1.</b>	Understanding the color wheel.	
<b>CO2.</b>	Demonstrating opposite & complementary colors	
<b>CO3.</b>	Developing the warm & cool colors.	
<b>CO4.</b>	Applying primary,secondary,tertiary colors.	
<b>CO5.</b>	Creating Tones,tint,shade,hue.	
<b>Course Content:</b>		
<b>Unit I</b>	Types of Color wheel.	<b>16 hours</b>
<b>Unit II</b>	Opposite colours. complementary colors.	<b>16 hours</b>
<b>Unit III</b>	Warm colors,cool colors.	<b>16 hours</b>
<b>Unit IV</b>	Primary , secondary, tertiary colors .	<b>16 hours</b>
<b>Unit V</b>	Tones,tint,shade,hue,light,dark.	<b>16 hours</b>
<b>Reference Books:</b>	<ol style="list-style-type: none"> <li>1. Foster, V. (2004). <i>Anatomy &amp; Figure Drawing</i>. 1st ed. Oceania Books, London.</li> <li>2. Roberts, D. (1991). <i>Drawing Workshop</i> (Reprint). Harper Collins Publishers, London.</li> </ol>	
<b>Web Links:</b>	<ol style="list-style-type: none"> <li>1. <a href="https://www.youtube.com/watch?v=74HR59yFZ7Y&amp;list=PLtG4P3lq8RHFRfdirLJKk822fwOxR6Zn6&amp;index=6">https://www.youtube.com/watch?v=74HR59yFZ7Y&amp;list=PLtG4P3lq8RHFRfdirLJKk822fwOxR6Zn6&amp;index=6</a></li> <li>2. <a href="https://www.youtube.com/watch?v=tx5kJvI14Jg&amp;list=PLtG4P3lq8RHFRfdirLJKk822fwOxR6Zn6&amp;index=17">https://www.youtube.com/watch?v=tx5kJvI14Jg&amp;list=PLtG4P3lq8RHFRfdirLJKk822fwOxR6Zn6&amp;index=17</a></li> <li>3. <a href="https://www.youtube.com/watch?v=2szSyXx8cZQ&amp;list=PLtG4P3lq8RHFRfdirLJKk822fwOxR6Zn6&amp;index=18">https://www.youtube.com/watch?v=2szSyXx8cZQ&amp;list=PLtG4P3lq8RHFRfdirLJKk822fwOxR6Zn6&amp;index=18</a></li> </ol>	
<b>NOTE:</b>	<b>In each Unit, 8 Hours Practical Sessions and 8 Hours Self Practice Sessions will be Introduced</b>	

### Specialization - Painting (IDMPA)

<b><u>Course Code</u></b> <b>IDMPA240451</b>	<b>BFA (IV Semester)</b>  <b>Drawing for Painting</b>	<b>L-0</b> <b>T-0</b> <b>P-8</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On Completion of the course the students will be:</b>	
<b>CO1.</b>	Understanding the basic shapes.	
<b>CO2.</b>	Demonstrating the geometrical shapes.	
<b>CO3.</b>	Developing Opaque objects with pencil shades.	
<b>CO4.</b>	Applying geometrical shapes in pencil shades.	
<b>CO5.</b>	Creating the transparent objects with pencil shades.	
<b>Course Content:</b>		
<b>Unit I</b>	Draw Basic Shapes – ( Cone, Square, Circle )	<b>16 hours</b>
<b>Unit II</b>	Draw Shapes of ( Cone, Rectangular Pyramid, Cylinder )	<b>16 hours</b>
<b>Unit III</b>	Draw Opaque Objects with pencil shade.	<b>16 hours</b>
<b>Unit IV</b>	Draw a Transparent Objects with pencil shade	<b>16 hours</b>
<b>Unit V</b>	Sketching in Classroom	<b>16 hours</b>
<b><u>Reference Books:</u></b>	<ol style="list-style-type: none"> <li>1. Taylor, R. (2006). <i>Fundamentals of Drawing &amp; Painting</i>. 1st ed. Amber Books Ltd, London.</li> <li>2. Hayek, M. (1975). <i>Seeing &amp; Drawing</i>. 1st Reprint. Sterling Publishing Co., New York.</li> <li>3. Mulick, M. (2014). <i>Sketch Book</i>. 1st Reprint. Jyotsana Prakashan, Pune.</li> <li>4. Sovek, C. (1996). <i>Oil Painting: Develop Your Natural Ability</i>. 1st ed. North Light Books, Ohio</li> </ol>	
<b>Web Links:</b>	<ol style="list-style-type: none"> <li>1. <a href="https://youtu.be/IyVe5nnitOk">https://youtu.be/IyVe5nnitOk</a></li> <li>2. <a href="https://youtu.be/GD_gLAtWUCA">https://youtu.be/GD_gLAtWUCA</a></li> </ol>	
<b>NOTE:</b>	<b>In each Unit, 8 Hours Practical Sessions and 8 Hours Self Practice Sessions will be Introduced</b>	

## Multidisciplinary Minor Courses

Offered Under NEP-2020

From the Academic Session 2024-25

**Specialization-** Law & Governance  
**Offering College -** Law & Legal Studies

<b>No. of Courses</b>	<b>Course Code</b>	<b>Course Name</b>	<b>L-T-P</b>	<b>Evaluation Int. Ext.</b>
1	IDMLG240101	Introduction to Laws & Legal System	4-0-0=4	40:60
2	IDMLG240201	An Introduction to Indian Constitution	4-0-0=4	40:60
3	IDMLG240301	Consumer Protection Laws	4-0-0=4	40:60
4	IDMLG240401	Right To Information	4-0-0=4	40:60

**Specialization- Law & Governance (IDMLG)**

<b><u>COURSE CODE</u></b> <b>IDMLG240101</b>	<b>Semester-I</b> <b>Introduction to Laws and Legal System</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On Completion of the course the students will be:</b>	
<b>CO1.</b>	Understanding the basic concept of Law and Indian Legal System.	
<b>CO2.</b>	Understanding basic Concept of Indian Legal system.	
<b>CO3.</b>	Analysing the various Foundations of Indian Law.	
<b>CO4.</b>	Analysing the Vital features of Indian Legal System.	
<b>CO5.</b>	Analysing the Summary & Importance of Substantive and Procedural Laws.	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Introduction to Law and Indian Legal System:</b> An introduction to Law and Indian Legal system, Nature and functions of Law; Major divisions of Law; Legal systems-Common law system.	<b>8 Hours</b>
<b>Unit II</b>	<b>History of Indian Legal System:</b> Judicial system during the Ancient Hindu Period, Law and judicial system during the Mughal Empire, Indian Legal system during the British reign, Issues with the Indian legal system.	<b>8 Hours</b>
<b>Unit III</b>	<b>Sources of Indian Law:</b> Law made by Parliament and State Legislature-Statutory Law; Law Made by Executive Authorities: Regulation and by-Laws, parts of statute, brief introduction to rules of statutory interpretation, General Clauses Act, 1897, Judge-made Law: Case Laws, International law	<b>8 Hours</b>
<b>Unit IV</b>	<b>Fundamental features of Indian Legal System:</b> Organization of Courts, Legal Profession, Legal Education, Challenges to Indian Judicial System, Alternative Dispute Resolution, Legal Aid System	<b>8 Hours</b>
<b>Unit V</b>	<b>Overview of Some Important Substantive and Procedural Laws:</b> Code of Civil Procedure, Code of Criminal Procedure( Bhartiya Nagarik Suraksha Sanhita 2023) , Indian Evidence Act ( Bhartiya Sakshya Adhiniyam 2023), Indian Contract Act, Companies Act, Hindu Marriage Act, Indian Penal Code( Bhartiya Nyaya Sanhita 2023), Industrial Dispute Act, Arbitration and Conciliation Act, Family Courts Act, Legal Services Authorities Act	<b>8 Hours</b>
<b><u>Text Books:</u></b>	<ol style="list-style-type: none"> <li>1. Shukla, V. N. (2018). <i>Constitution of India</i>. Eastern Book Company, Lucknow.</li> <li>2. Paylee, M. D. (2017). <i>Constitution of World</i>. Universal Law Publishing Company, Delhi.</li> <li>3. Singh, A. (2015). <i>The Law of Evidence</i>. Central Law Agency, Allahabad..</li> </ol>	
<b><u>Reference Books:</u></b>	<ol style="list-style-type: none"> <li>1. Myneni, S. R. (2020). <i>The Law of Evidence</i>. Asia Law House, Hyderabad.</li> <li>2. Jain, M. P. (2019). <i>Outline of Indian Constitution</i>. LexisNexis Butterworths Wadhwa, Nagpur.</li> <li>3. Seervai, H. M. (2015). <i>Constitutional Law of India</i>. Universal Law Publishing Company, Delhi.</li> </ol>	

### Specialization- - Law & Governance (IDMLG)

<b><u>Course Code</u></b> IDMLG240201	<b>Semester-II</b> <b>An Introduction to Indian Constitution</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On Completion of the course the students will be:</b>	
<b>CO1.</b>	Remembering the Nature & Basic concepts of Constitution and System of Government	
<b>CO2.</b>	Understanding Fundamental Rights and Directives Principles of State policy including skills for filing of Writs Petition in HC & SC.	
<b>CO3.</b>	Analyzing the Organs of the Government.	
<b>CO4.</b>	Analyzing the Process of Election and formation of Government in Indian Constitution.	
<b>CO5.</b>	Analyzing The Emergency & Amendment Provisions of Indian Constitution.	
<b>Course Content:</b>		
<b>Unit I</b>	Framing of the Constitution, Preamble of the Constitution and Nature of the Constitution	<b>8 Hours</b>
<b>Unit II</b>	Fundamental Rights and Duties - Status and importance, Directive Principles of State Policy, Interrelation between Human Rights & Indian Constitution, Writ Petitions	<b>8 Hours</b>
<b>Unit III</b>	Organs of the Government - Executive, Judiciary and Legislature.	<b>8 Hours</b>
<b>Unit IV</b>	Election Commission - Superintendence, Direction and Control of Elections	<b>8 Hours</b>
<b>Unit V</b>	Emergency Provisions and Amendment of the Constitution	<b>8 Hours</b>
<b><u>Text Books:</u></b>	<ol style="list-style-type: none"> <li>1. Mamta, &amp; Rao. (2021). <i>Constitutional law</i>. Eastern Book Company.</li> <li>2. Pandey, J. N. (2020). <i>Constitution of India</i>. Central Law Agency.</li> <li>3. Bakshi, P. M. (2021). <i>Constitution of India</i>. Universal Law Publishing.</li> <li>4. Basu, D. D. (2020). <i>Constitutional law of India</i>. Lexis Nexis.</li> </ol>	

**Specialization- - Law & Governance (IDMLG)**

<b><u>Course Code</u></b> IDMLG240301	<b>Semester-III</b> <b>Consumer Protection Laws</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On Completion of the course the students will be:</b>	
<b>CO1</b>	Remembering the Concept & Nature of Consumer and Markets.	
<b>CO2</b>	Understanding the Consumer movement, its formation and their role in Consumer Protection.	
<b>CO3</b>	Analyzing the Objectives and Basic Concepts of Consumer Protection In India.	
<b>CO4</b>	Analyzing the Role of Consumer Protection Council.	
<b>CO5</b>	Analyzing the E- commerce under the Consumer Protection Law	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Consumer and Markets:</b> Concept of Consumer, Nature of markets: Liberalization and Globalization of markets with special reference to Indian Consumer Markets	<b>8</b> <b>Hours</b>
<b>Unit II</b>	<b>Consumer Movement in India:</b> Evolution of Consumer Movement in India, Formation of consumer organizations and their role in consumer protection, Misleading Advertisements and sustainable consumption, National Consumer Helpline, Comparative Product testing, Sustainable consumption and energy ratings.	<b>8</b> <b>Hours</b>
<b>Unit III</b>	<b>Consumer Protection Law in India:</b> Objectives and Basic Concepts: Consumer rights and UN Guidelines on consumer protection, Consumer goods, advertisement, defect in goods, spurious goods and services, service, deficiency in service, unfair trade Practice, and restrictive trade practice.	<b>8</b> <b>Hours</b>
<b>Unit IV</b>	<b>Organizational Set-up:</b> Consumer Protection Council; Central Consumer Protection Authority; Consumer Disputes Redressal Commission; consumer mediation; Product liability; Offences and Penalties.	<b>8</b> <b>Hours</b>
<b>Unit V</b>	<b>E-Commerce</b> With reference to Indian Market, Concept of Price in Retail and Wholesale, Maximum Retail Price (MRP), Fair Price, GST, labeling and packaging along with relevant laws, Legal Metrology.	<b>8</b> <b>Hours</b>
<b>Suggested Readings:</b> <ol style="list-style-type: none"> <li>1. Gambhir, C. (2021). <i>Consumer protection administration: Organisation and working</i>. Deep &amp; Deep Publications.</li> <li>2. Tripathi, S. C. (2022). <i>Consumer protection act</i>. Central Law Publications.</li> </ol>		

### Specialization- - Law & Governance (IDMLG)

<b>Course Code</b> IDMLG240401	<b>Semester-IV</b>  <b>Right to Information</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On Completion of the course the students will be:</b>	
<b>CO1</b>	Remembering the Concept, Nature, Historical Background & Evolution of RTI at National & International Level.	
<b>CO2</b>	Understanding the Skill of Making of Applications of RTI	
<b>CO3</b>	Analyzing the Institutional frame work Under Right to Information Act.	
<b>CO4</b>	Analyzing the procedure & mechanism of Accessing Information under the Right to Information Act.	
<b>CO5</b>	Analyzing the Appellate Procedure under the Right to Information.	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Introduction to Right to Information:</b> Origin of RTI at Global Level; Evolution of RTI as fundamental right in India; History, Background, Objectives, Preamble of Right to Information Act, 2005; Right to Information: Concept Meaning, Scope and Nature; Right to Information: Need and Importance.	<b>8 Hours</b>
<b>Unit II</b>	<b>Public Authority: Role and Obligations:</b> Public Authority: Definition; 'Public Authority' vis-a-vis 'State in Article 12'; Obligations of Public Authorities under Act, Making Application: Procedural.	<b>8 Hours</b>
<b>Unit III</b>	<b>Right to Information:</b> Institutional Framework Central Information Commission: Constitution, Eligibility, Appointment and Removal; State Information Commission: Constitution, Eligibility, Appointment and Removal; Judicial Review of the Committee's Recommendation; Powers and Functions of Information Commissions.	<b>8 Hours</b>
<b>Unit IV</b>	<b>Accessing Information under the Right to Information Act:</b> Requirements; RTI Application- Contents and Limits; Response from Public Information Officer Exemption from Disclosure;	<b>8 Hours</b>
<b>Unit V</b>	<b>Appellate Procedure:</b> First and Second Appeal; Penalties and Remedies	<b>8 Hours</b>
<b><u>Suggested Readings:</u></b> <ol style="list-style-type: none"> <li>1. Narayan, J. P. S., &amp; Reddy, G. B. (2015). <i>Right to information and law</i>. Vikas Publishing House.</li> <li>2. Verma, R. K. (2016). <i>Right to information law and practice</i>. Jain Publishing Agency.</li> <li>3. Barowalia, D. N. (2007). <i>Commentary on the right to information: Right to Information Act, 2000</i>. Universal Law Publishing.</li> </ol>		





## Multidisciplinary Minor Courses

Offered Under NEP-2020

From the Academic Session 2024-25

**Specialization-** Quality Health Care Practice  
**Offering College** – Nursing & Physiotherapy

No. of Courses	Course Code	Course Name	L-T-P	Evaluation Int. Ext.
1	IDMQH240101	Emergency Care and Management	4-0-0=4	40:60
2	IDMQH240201	Good Health and Wellness I	4-0-0=4	40:60
3	IDMQH240301	Good Health and Wellness II	4-0-0=4	40:60
4	IDMQH240401	Awareness to Healthcare System	4-0-0=4	40:60

**Specialization- Quality Health Care Practice (IDMQH)**

<b>Course Code</b> IDMQH240101	<b>Semester-I</b>  <b>Emergency Care and Management</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On Completion of the course the students will be:</b>	
<b>CO1</b>	Remembering the basic concepts, principles, techniques, and systemic emergency disorders.	
<b>CO2</b>	Understanding the policies, legislation, and programs relevant to emergency management.	
<b>CO3</b>	Apply skills in emergency care by performing top to toe assessments, managing systemic conditions and executing practical techniques such as CPR, airway management and wound dressing in various emergency settings.	
<b>CO4</b>	Analyzing patient condition in relation to therapeutic process so as to improve the health care outcomes.	
<b>CO5</b>	Evaluate the effectiveness of emergency care procedures, including patient assessment, documentation, and management techniques, across various medical conditions and scenarios.	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Introduction to Emergency Care</b> <ul style="list-style-type: none"> <li>• Overview of Emergency Medical Services (EMS)</li> <li>• Various methods used to access the EMS system</li> <li>• Legal and Ethical Considerations in Emergency Care</li> <li>• Initial Patient Assessment (Head to toe and systemic)</li> <li>• Rapid Evaluation for the emergency care</li> <li>• Documentation of essential elements of patient assessment, care and transport</li> </ul>	<b>8 hours</b>
<b>Unit II</b>	<b>Management of cardiovascular, respiratory and Hematological conditions</b> <ul style="list-style-type: none"> <li>• Choking</li> <li>• Suffocation by smoke</li> <li>• Chest discomfort/pain</li> <li>• Bleeding</li> <li>• Airway Management Techniques</li> <li>• Respiratory Distress and Failure</li> </ul>	<b>8 hours</b>
<b>Unit III</b>	<b>Management of Musculoskeletal conditions</b> <ul style="list-style-type: none"> <li>• Injuries &amp; fractures to bone, joints, and muscles</li> <li>• Dislocations</li> <li>• Strains &amp; Sprains</li> <li>• Immobilization techniques : Splints and braces</li> </ul>	<b>6 Hours</b>
<b>Unit IV</b>	<b>Management of Gastrointestinal and endocrine conditions</b> <ul style="list-style-type: none"> <li>• Gastritis</li> <li>• Diarrhea</li> <li>• Diabetes</li> <li>• Allergic Reactions and Anaphylaxis</li> <li>• Infectious Diseases</li> <li>• Food poisoning</li> </ul>	<b>8 Hours</b>

<b>Unit V</b>	<b>Management of common conditions</b> <ul style="list-style-type: none"> <li>• Fever</li> <li>• Hypothermia</li> <li>• Shock</li> <li>• Heat stroke</li> <li>• Burns</li> <li>• Strangulation &amp; hanging</li> <li>• Drowning</li> <li>• Poisoning</li> <li>• Bites &amp; stings <ul style="list-style-type: none"> <li>○ Animal bites, insect stings &amp; bites</li> <li>○ Snake bites</li> </ul> </li> <li>• Foreign bodies in eye, ear, nose, or skin and Swallowed foreign objects</li> <li>• Emergency situations and disaster management</li> </ul>	<b>10 Hours</b>
<b>Unit: VI</b>	<b>Practical Skills</b> <ul style="list-style-type: none"> <li>• Hand washing technique</li> <li>• Initial top-to-toe assessment</li> <li>• Cardio-Pulmonary Resuscitation (CPR)</li> <li>• Airway Management</li> <li>• Trauma Assessment and Management</li> <li>• Mobility and immobilization techniques</li> <li>• Application of splints and bandaging</li> <li>• Wound dressing</li> </ul>	<b>20 Hours</b>
<b><u>Text books:</u></b>	<ol style="list-style-type: none"> <li>1. David, S. (2021). <i>Textbook of emergency medicine</i>. Jaypee Brothers Medical Publishers.</li> <li>2. Tintinalli, J. E. (2020). <i>Tintinalli's emergency medicine: A comprehensive study guide</i> (9th ed.). McGraw-Hill Education.</li> <li>3. Adams, J. G. (2021). <i>Emergency medicine: Clinical essentials</i> (5th ed.). Elsevier.</li> <li>4. Marx, J., Hockberger, R., &amp; Walls, R. (2022). <i>Rosen's emergency medicine: Concepts and clinical practice</i> (10th ed.). Elsevier.</li> <li>5. Roberts, J. R., &amp; Hedges, J. R. (2019). <i>Clinical procedures in emergency medicine</i> (7th ed.). Elsevier.</li> </ol>	
<b><u>Reference Books:</u></b>	<ol style="list-style-type: none"> <li>1. American College of Surgeons. (2021). Advanced trauma life support (ATLS) student course manual. American College of Surgeons.</li> <li>2. Ma, O. J., Cline, D. M., &amp; Tintinalli, J. E. (2023). The emergency medicine manual. McGraw-Hill Education.</li> <li>3. Pines, J. M., &amp; Carpenter, C. R. (2018). Evidence-based emergency care: Diagnostic testing and clinical decision rules. Springer.</li> <li>4. Walls, R., Murphy, M., &amp; Luten, R. (2020). Manual of emergency airway management. Wolters Kluwer.</li> <li>5. Field, J. M. (2020). The textbook of emergency cardiovascular care and CPR. Wiley.</li> </ol>	

**Specialization- Quality Health Care Practice (IDMQH)**

<u>Course Code</u> IDMQH240201	<b>Semester-II</b>  <b>Course Title: Good Health and Wellness I</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On Completion of the course the students will be:</b>	
<b>CO1</b>	Remembering the concepts, principles, theories, models, protocols for different health settings.	
<b>CO2</b>	Understanding the legislation, dimensions of health & wellness, integrative and holistic approaches in different health settings.	
<b>CO3</b>	Applying skills and planning for health promotion, including balanced meals, exercise, stress management, and therapies, using a holistic approach in various settings.	
<b>CO4</b>	Analysing the various dimensions and determinants of health and wellness to ensure quality care of people and integrative wellness practices across different health settings.	
<b>CO5</b>	Evaluating the effectiveness of various health promotion strategies, including physical fitness, nutrition, mental and emotional well-being, social and environmental health, and integrative wellness practices, in diverse health settings.	
<b>Course Content:</b>	<b>Total Hours: 60</b>	
<b>Unit I</b>	<b>Foundations of Health and Wellness</b> <ul style="list-style-type: none"> <li>• Definition and Dimensions of Health and Wellness</li> <li>• Determinants of Health: Biological, Environmental, Social, and Behavioral Factors</li> <li>• Health Promotion and Disease Prevention</li> <li>• Theories and Models of Health Behavior Change</li> <li>• Global Health and Wellness Trends</li> </ul>	<b>8 Hours</b>
<b>Unit II</b>	<b>Physical Health and Nutrition</b> <ul style="list-style-type: none"> <li>• Principles of Physical Fitness and Exercise</li> <li>• Benefits of Regular Physical Activity</li> <li>• Nutrition: Macronutrients, Micronutrients, and Hydration</li> <li>• Dietary Guidelines and Healthy Eating Habits</li> <li>• Managing Weight and Preventing Obesity</li> </ul>	<b>8 Hours</b>
<b>Unit III</b>	<b>Mental and Emotional Well-being</b> <ul style="list-style-type: none"> <li>• Understanding Mental Health and Emotional Well-being</li> <li>• Stress Management Techniques</li> <li>• Building Resilience and Coping Strategies</li> <li>• Mindfulness and Meditation Practices</li> <li>• Addressing Anxiety, Depression, and Other Mental Health Issues</li> </ul>	<b>8 Hours</b>
<b>Unit IV</b>	<b>Social and Environmental Health</b> <ul style="list-style-type: none"> <li>• Importance of Social Connections and Relationships</li> <li>• Effective Communication and Interpersonal Skills</li> </ul>	<b>8 Hours</b>

	<ul style="list-style-type: none"> <li>• Community Health and Social Support Systems</li> <li>• Environmental Health: Impact of Pollution and Climate Change</li> <li>• Creating Healthy Living Environments</li> </ul>	
<b>Unit V</b>	<b>Integrative and Holistic Approaches to Wellness</b> <ul style="list-style-type: none"> <li>• Overview of Complementary and Alternative Medicine (CAM)</li> <li>• Integrating Yoga, Tai Chi, and Other Mind-Body Practices</li> <li>• Role of Sleep and Rest in Health</li> <li>• Preventive Healthcare and Regular Screenings</li> <li>• Developing a Personal Wellness Plan</li> </ul>	<b>8 Hours</b>
<b>Unit: VI</b>	<b>Practical Skills</b> <ul style="list-style-type: none"> <li>• Physical Fitness and Exercise</li> <li>• Nutritional Planning and Healthy Cooking</li> <li>• Mental and Emotional Well-being Practices</li> <li>• Social Health Activities</li> <li>• Integrative Wellness Practices</li> </ul>	<b>20 hours</b>
<b><u>Text books:</u></b>	<ol style="list-style-type: none"> <li>1. Sharma, V. K. (2018). <i>Textbook of health and physical education</i>. Kalyani Publishers.</li> <li>2. Dhaar, G. M., &amp; Robbani, I. (2021). <i>Foundations of community medicine</i>. CBS Publishers &amp; Distributors.</li> <li>3. Prasad, S. K. (2019). <i>Yoga and health</i>. Anmol Publications.</li> <li>4. Sharma, M., &amp; Sharma, V. K. (2020). <i>Essentials of public health and sanitation</i>. AITBS Publishers.</li> <li>5. Joshi, S. A. (2021). <i>Nutrition and dietetics</i>. Tata McGraw-Hill Education.</li> </ol>	
<b><u>Reference Books:</u></b>	<ol style="list-style-type: none"> <li>1. Park, K. (2022). <i>Preventive and social medicine</i>. Banarsidas Bhanot Publishers.</li> <li>2. Karpovich, V. L., &amp; Sinning, W. H. (2019). <i>Principles of exercise physiology</i> (Indian ed.). Jaypee Brothers Medical Publishers.</li> <li>3. Khokhar, C. P. (2017). <i>Mental health and well-being</i>. Jaypee Brothers Medical Publishers.</li> <li>4. Lad, V. (2020). <i>Ayurveda: Science of self-healing</i>. Ayurvedic Press.</li> <li>5. Mahajan, B. K., &amp; Gupta, M. C. (2021). <i>Public health and community medicine</i>. Jaypee Brothers Medical Publishers.</li> </ol>	

**Specialization- Quality Health Care Practice (IDMQH)**

<b>Course Code:</b> IDMQH240301	<b>Semester-III</b>  <b>Good Health &amp; Wellness II</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be:</b>	
<b>CO1.</b>	Remembering about the various lifestyle diseases, their causes and risk factors, various ways to prevent and manage them	
<b>CO2.</b>	Understanding about the various lifestyle diseases, their causes and risk factors, various ways to prevent and manage the different lifestyle diseases	
<b>CO3.</b>	Analyzing the various lifestyle diseases, their causes and risk factors, various ways to prevent and manage the different lifestyle diseases	
<b>CO4.</b>	Applying the knowledge and understanding of various lifestyle diseases, their causes and risk factors.	
<b>CO5.</b>	Applying the knowledge and understanding of various ways to prevent and manage the different lifestyle diseases	
<b>Course Content:</b>	<b>Total Hours: 60</b>	
<b>Unit I</b>	<b>INTRODUCTION TO LIFESTYLE DISEASES</b> Atherosclerosis, Hypertension, Cancer, Nephritis, Liver diseases, Stroke, Polycystic ovarian syndrome, Female triad, Hypokinesia associated obesity, coronary artery disease, diabetes mellitus, low back pain	<b>10 Hours</b>
<b>Unit II</b>	<b>ROLE OF YOGA, ASANAS AND MEDITATION IN MAINTAINING HEALTH AND WELLNESS</b>	<b>10 Hours</b>
<b>Unit III</b>	Ergonomics - good posture, bad posture to activities of daily living & in relation to job/occupation, Ergonomic corrective interventions	<b>10 Hours</b>
<b>Unit IV</b>	Postural abnormalities to tonic and phasic muscles imbalance - upper crossed syndrome, lower crossed syndrome, Role of posture in developing musculoskeletal pain, Postural correction exercises	<b>10 Hours</b>
<b>Unit V</b>	<b>PRACTICAL DEMONSTRATIONS OF:</b> <ul style="list-style-type: none"> <li>• Yoga, asanas and meditation</li> <li>• Good posture and bad posture</li> <li>• Posture correction exercises</li> <li>• Care of pressure ulcers in stroke</li> <li>• Care of oedema in lifestyle diseases</li> <li>• Basic fitness exercises for healthy living</li> </ul>	<b>20 Hours</b>
<b>Text Books:</b>	1. Jnanananda, Swami. (1931). <i>Philosophy of Yoga</i> . Madras, India: Sri Ramakrishna Sharma Publications. 2. Dasgupta, S. N. (2013). <i>Yoga as Philosophy and Religion</i> . Calcutta, India: Routledge.	
<b>Reference Books:</b>	1. Ark, K. (2021). <i>Preventive and Social Medicine</i> . Jabalpur, India: Banarsidas Bhanot Publishers. 2. Karpovich, V.L., & Sinning, W.H. (1971). <i>Principles of Exercise Physiology</i> (Indian Edition). Philadelphia, PA: Lea & Febiger.	

### Specialization- Quality Health Care Practice (IDMQH)

<b>Course Code:</b> IDMQH240401	<b>Semester-IV</b>  <b>Awareness to Healthcare System</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be:</b>	
<b>CO1.</b>	Remembering about the global and national healthcare system, management initiatives and schemes	
<b>CO2.</b>	Understanding about the global and national healthcare system, management initiatives and schemes	
<b>CO3.</b>	Remembering and understanding about the employment opportunities in healthcare sector	
<b>CO4.</b>	Analyzing the knowledge obtained about the global and national healthcare system, management initiatives and schemes as well as the non-clinical employment opportunities in healthcare sector	
<b>CO5.</b>	Apply the knowledge obtained about the global and national healthcare system, management initiatives and schemes as well as the non-clinical employment opportunities in healthcare sector	
<b>Course Content:</b>	<b>Total Hours: 60</b>	
<b>Unit I</b>	<b>Introduction to international organizations for global health</b> WHO, UNICEF, UNDP, UNESCO, UNODC, UNFPA, ILO	<b>10 Hours</b>
<b>Unit II</b>	<b>Health care system in India</b> Indian public health system, NRHM, Poshanabhiyan, PMSSY, Ayushman Bharat, AMRIT, PM national dialysis programme, National digital health mission	<b>10 Hours</b>
<b>Unit III</b>	<b>Health insurance schemes by Government of India</b> Ayushman Bharat Yojna, Pradhanmantri Surakshya Bima Yojna, Aam Aadmi Bima Yojna, Janshree Bima Yojna, Mukhyamantri Amrutam Yojna, Rashtriya Swasthya Bima Yojna, Central Government Health Scheme, Universal Health Insurance Scheme, Employment State Insurance Scheme	<b>10 Hours</b>
<b>Unit IV</b>	<b>Non clinical employment opportunities in healthcare sector</b> - Hospital administrator & manager, medical record holder, pharmaceutical salesperson, social and community service manager etc. Education and training in health and FW institutes, IEC training schemes	<b>10 Hours</b>
<b>Unit V</b>	<b>Practical Activity Session (including class discussions, role play, debates etc) ON -</b> <ul style="list-style-type: none"> <li>Global health organizations</li> <li>Healthcare system in India</li> </ul>	<b>20 Hours</b>

	<ul style="list-style-type: none"> <li>• Healthcare schemes in India</li> <li>• Employment opportunities in healthcare sector</li> </ul>	
<b><u>Text books:</u></b>	1. Chakraborty, B. (2021). <i>Healthcare administration &amp; management</i> (1st ed.). Oxford University Press, New Delhi. 2. Suryakatha, A. H. (2019). <i>Community medicine with recent advances</i> (3rd ed.). Jaypee Brothers Medical Publishers, Mumbai. 3. Roy, R. N., & Saha, I. (2020). <i>Textbook of preventive and social medicine</i> . Elsevier, Kolkata.	
<b><u>Reference Books:</u></b>	1. Shi, L., & Singh, D. A. (2019). <i>Essentials of the U.S. health care system</i> (5th ed.). Jones & Bartlett Learning. ISBN: 978-1284156720 2. Bodenheimer, T., & Grumbach, K. (2016). <i>Understanding health policy: A clinical approach</i> (7th ed.). McGraw-Hill Education. ISBN: 978-1259584756 3. Jonas, S., Goldsteen, R., & Goldsteen, K. (2013). <i>An introduction to the U.S. health care system</i> (7th ed.). Springer Publishing Company. ISBN: 978-0826125279 4. Kovner, A. R., Knickman, J. R., & Jonas, S. (2011). <i>Jonas and Kovner's health care delivery in the United States</i> (10th ed.). Springer Publishing Company. ISBN: 978-0826106872 5. Johnson, J. A., & Stoskopf, C. H. (2020). <i>Comparative health systems: Global perspectives</i> (2nd ed.). Jones & Bartlett Learning. ISBN: 978-1284194944 6. Shi, L. (2014). <i>Introduction to health policy</i> (1st ed.). Health Administration Press. ISBN: 978-1567936458	





## Multidisciplinary Minor Courses

Offered Under NEP-2020

From the Academic Session 2024-25

**Specialization-** Yoga and Meditation  
**Offering College –** Physical Education

No. of Courses	Course Code	Course Name	L-T-P	Evaluation Int. Ext.
1	IDMYM240101	Yoga Education	4-0-0=4	40:60
2	IDMYM240201	Schools of Yoga & Yogic Treatment	4-0-0=4	40:60
3	IDMYM240301	Yogic Life Style	4-0-0=4	40:60
4	IDMYM240401	Yogic Meditation	4-0-0=4	40:60

### Specialization -Yoga and Meditation (IDMYM)

<b>Course Code:</b> <b>IDMYM240101</b>	<b>Semester- I</b>  <b>Yoga Education</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the student will be:</b>	
<b>CO1.</b>	Remembering the meaning and definition of yoga, its aim and objectives, and why it is important in physical education and sports.	
<b>CO2.</b>	Understanding the components of Ashtanga Yoga, including Bahiranga Yoga (Yama, Niyama, Asana, Pranayama, Pratyahara) and Antaranga Yoga (Dharana, Dhyana, Samadhi).	
<b>CO3.</b>	Applying the concepts of yoga education.	
<b>CO4.</b>	Applying the concepts of chakras.	
<b>CO5.</b>	Analysing the roles of yoga in physical education, sports & all.	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Introduction</b> <ul style="list-style-type: none"><li>Meaning and Definition of Yoga</li><li>Aims and Objectives of Yoga</li><li>Need and Importance of Yoga in Physical Education and Sports</li></ul>	<b>8 Hours</b>
<b>Unit II</b>	<b>Yogic History</b> <ul style="list-style-type: none"><li>Origin of Yoga</li><li>History of yoga</li><li>Classification of yoga</li></ul>	<b>8 Hours</b>
<b>Unit III</b>	<b>Ashtanga Yoga</b> <ul style="list-style-type: none"><li>Bahiranga Yoga: Yama, Niyama, Asana, Pranayama, Pratyahara.</li><li>Antaranga Yoga: Dharana, Dhyana and Samadhi.</li></ul>	<b>8 Hours</b>
<b>Unit IV</b>	<b>Chakras</b> <ul style="list-style-type: none"><li>Meaning of ‘Chakras’</li><li>Importance of ‘Chakras’</li><li>Types of ‘Chakras’</li><li>Location of ‘Chakras’</li></ul>	<b>8 Hours</b>
<b>Unit V</b>	<ul style="list-style-type: none"><li>Yoga Education</li><li>Differences between Yogic practices and physical exercises</li><li>Need &amp; Importance of Yoga education for everyone.</li><li>Competitions in Yogasanas</li></ul>	<b>8 Hours</b>
<b><u>Text books:</u></b>	1. Sharma, S. K. (2007). Yoga. New Delhi: Sports. 2. Yadav, Y. P., & Yadav, R. (2006). Art of yoga. New Delhi: Friends. 3. Sharma, J. P. (2008). Teaching of yoga. New Delhi: Friends. 4. Gore, C. S. (2005). Yoga and Health. New Delhi: Sports.	

Specialization -Yoga and Meditation (IDMYM)		
Course Code: IDMYM240201	Semester- II  Schools of Yoga & Yogic Treatment	L-4 T-0 P-0 C-4
Course Outcomes:	On completion of the course, the student will be:	
CO1.	Remembering different schools of yoga	
CO2.	Remembering the concepts of yogic treatment	
CO3.	Understanding the concepts of different schools of yoga	
CO4.	Understanding the process of different yogic treatment	
CO5.	Applying the concept of yogic treatment to different physiological and psychological problems.	
Course Content:		
Unit I	Introduction to Different Schools of Yoga <ul style="list-style-type: none"><li>• Raj Yoga</li><li>• Karma Yoga</li><li>• Bhakti Yoga</li><li>• Hath Yoga</li><li>• Jnana Yoga</li></ul>	8 Hours
Unit II	Process of practicing different Schools of Yoga <ul style="list-style-type: none"><li>• Process of Practicing Jnana Yoga</li><li>• Process of Practicing Raj Yoga</li><li>• Process of Practicing Karma Yoga</li><li>• Process of Practicing Bhakti Yoga</li><li>• Process of Practicing Hath Yoga</li></ul>	8 Hours
Unit III	Treatment of General Psychological Problems <ul style="list-style-type: none"><li>• Yogic Treatment for Stress</li><li>• Yogic Treatment for Anxiety</li><li>• Yogic Treatment for Depression</li><li>• Yogic Treatment for Insomnia</li></ul>	8 Hours
Unit IV	Treatment of General Physical Problems <ul style="list-style-type: none"><li>• Yogic Treatment for Back Pain</li><li>• Yogic Treatment for Asthma</li><li>• Yogic Treatment for Gastrointestinal diseases.</li></ul>	8 Hours
Unit V	Treatment of common postural deformities <ul style="list-style-type: none"><li>• Kyphosis</li><li>• Lordosis</li><li>• Scoliosis</li><li>• Knock knees</li><li>• Bow leg</li></ul>	8 Hours
Text books:	5. Sharma, S. K. (2007). <i>Yoga</i> . New Delhi: Sports. 6. Yadav, Y. P., & Yadav, R. (2006). <i>Art of yoga</i> . New Delhi: Friends.	
Reference Books:	1. Sharma, J. P. (2008). <i>Teaching of yoga</i> . New Delhi: Friends. 2. Gore, C. S. (2005). <i>Yoga and Health</i> . New Delhi: Sports.	

### Specialization -Yoga and Meditation (IDMYM)

<b>Course Code:</b> <b>IDMYM240301</b>	<b>Semester- III</b>  <b>Yogic Lifestyle</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the student will be:</b>	
<b>CO1.</b>	Remembering the concepts of disease and its remedial measures.	
<b>CO2.</b>	Remembering the yogic principles of healthy living	
<b>CO3.</b>	Understanding the concepts of ‘panch-mahabhutas’, ‘panchaprana’ & ‘Pancha-kosha’.	
<b>CO4.</b>	Understanding the process of dietary regulation and psycho-social implications of yoga.	
<b>CO5.</b>	Applying the knowledge of yoga to a healthy living.	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Concept of Body, Health And Disease</b> <ul style="list-style-type: none"> <li>• Yogic Concept of Health and Disease: Meaning and definitions</li> <li>• Pancha-mahabhutas, Panchapрана and their role in Health and Healing</li> <li>• Concept of Pancha-koshas and their role in Health and Healing</li> </ul>	<b>8 Hours</b>
<b>Unit II</b>	<b>Causes Of Ill Health And Remedial Measures According To Patanjali</b> <ul style="list-style-type: none"> <li>• Potential causes of Ill-health: Mental and Emotional ill Health</li> <li>• Role of Shuddhi Prakriyas in preventive and curative Health,</li> <li>• Karma Shuddhi (Yama, Niyama), Snayu Shuddhi (Asana), Prana Shuddhi (Pranayama)</li> <li>• Indriya and Mano Shuddhi (Pratyahara), Mana, Buddhi, Ahamkar and Chitta Shuddhi (Dharana, Dhyana and Samadhi)</li> </ul>	<b>8 Hours</b>
<b>Unit III</b>	<b>Yogic principles and practices of healthy living - i</b> <ul style="list-style-type: none"> <li>• Dietary regulation according to Hatha yoga and Bhagavad Gita</li> <li>• Asana for mind body and spirit</li> <li>• Psycho-Social Implications of yoga</li> </ul>	<b>8 Hours</b>
<b>Unit IV</b>	<b>Yogic principles and practices of healthy living - ii</b> <ul style="list-style-type: none"> <li>• Role of yoga in stress management</li> <li>• Role of yogain life management</li> <li>• Attitude change towards yoga through individualized counselling.</li> </ul>	<b>8 Hours</b>
<b>Unit V</b>	<b>Yogic ‘Aahar’</b> <ul style="list-style-type: none"> <li>• Concept of yogic diet</li> <li>• Types of Yogic diet – ‘Rajasik’, ‘Tamasik’ and ‘Sattavik’</li> <li>• Significance of ‘Sattavik’ diet.</li> </ul>	<b>8 Hours</b>
<b>Text books:</b>	1. Sharma, S. K. (2007). Yoga. New Delhi: Sports. 2. Yadav, Y. P., & Yadav, R. (2006). Art of yoga. New Delhi: Friends.	
<b>Reference Books:</b>	1. Sharma, J. P. (2008). <i>Teaching of yoga</i> . New Delhi: Friends. 2. Gore, C. S. (2005). <i>Yoga and Health</i> . New Delhi: Sports.	

### Specialization -Yoga and Meditation (IDMYM)

<u>Course Code:</u> <b>IDMYM240401</b>	<b>Semester- IV</b>  <b>Yogic Meditation</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the student will be:</b>	
<b>CO1.</b>	Remembering the meaning and origin of meditation in yoga, students will be able to identify different types of meditation practices and their historical development through ancient texts and scriptures.	
<b>CO2.</b>	Understanding the physical, mental, and spiritual benefits of meditation, students will learn how meditation contributes to achieving Samadhi and the fundamental principles of mindfulness and concentration techniques.	
<b>CO3.</b>	Understanding the preparatory practices such as Asanas, Pranayama, and relaxation techniques, students will practice concentrative and mindfulness meditation techniques like Trataka, Japa, Vipassana, and body scan meditation.	
<b>CO4.</b>	Applying the role of Chakras in meditation, students will explore the psychological states associated with each Chakra and learn techniques to activate and balance Chakras using sounds and visualization.	
<b>CO5.</b>	Applying the philosophical foundations of yogic meditation, students will compare meditation practices across different philosophies such as Patanjali’s Yoga Sutras, Bhagavad Gita, and Upanishads, and apply these practices to modern meditation techniques.	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Introduction to Yogic Meditation</b> <ul style="list-style-type: none"><li>• Definition and Meaning of Meditation</li><li>• Historical Development of Yogic Meditation</li><li>• Importance of Meditation in Yoga</li><li>• Fundamental Principles of Yogic Meditation</li></ul>	<b>8 Hours</b>
<b>Unit II</b>	<b>Techniques and Practices of Yogic Meditation</b> <ul style="list-style-type: none"><li>• Preparatory Practices</li><li>• Concentrative Meditation Techniques</li><li>• Mindfulness Meditation Techniques</li><li>• Advanced Meditation Techniques</li></ul>	<b>8 Hours</b>
<b>Unit III</b>	<b>The Role of Chakras in Meditation</b> <ul style="list-style-type: none"><li>• Introduction to Chakras</li><li>• Balancing and healing Chakras through meditation</li><li>• Techniques to Activate and Balance Chakras</li><li>• Kundalini and Chakra Meditation</li></ul>	<b>8 Hours</b>
<b>Unit IV</b>	<b>Philosophical Foundations of Yogic Meditation</b> <ul style="list-style-type: none"><li>• Meditation in Patanjali’s Yoga Sutras</li><li>• Meditation in Bhagavad Gita</li><li>• Meditation in Upanishads.</li></ul>	<b>8 Hours</b>

<b>Unit V:</b>	<b>Modern Applications and Benefits of Yogic Meditation</b> <ul style="list-style-type: none"> <li>• Modern Applications and Benefits of Yogic Meditation</li> <li>• Meditation for Physical Health</li> <li>• Integrating Meditation into Daily Life</li> <li>• Yogic Meditation in Therapeutic Settings</li> </ul>	<b>8 Hours</b>
<b><u>Text books:</u></b>	<ol style="list-style-type: none"> <li>1. Sharma, S. K. (2007). <i>Yoga</i>. New Delhi: Sports.</li> <li>2. Yadav, Y. P., &amp; Yadav, R. (2006). <i>Art of yoga</i>. New Delhi: Friends.</li> <li>3. Sharma, J. P. (2008). <i>Teaching of yoga</i>. New Delhi: Friends.</li> <li>4. Gore, C. S. (2005). <i>Yoga and Health</i>. New Delhi: Sports.</li> <li>5. Feuerstein, G. (1998). <i>The Yoga Tradition: Its History, Literature, Philosophy, and Practice</i>. Hohm Press.</li> <li>6. Swami Vivekananda. (2007). <i>Raja Yoga</i>. Advaita Ashrama.</li> <li>7. Goleman, D. (1988). <i>The Meditative Mind: The Varieties of Meditative Experience</i>. Tarcher Perigee.</li> <li>8. Sivananda, S. (2009). <i>The Science of Pranayama</i>. Divine Life Society.</li> <li>9. Judith, A. (2004). <i>Wheels of Life: A User's Guide to the Chakra System</i>. Llewellyn Publications.</li> </ol>	
<b><u>Reference Books:</u></b>	<ol style="list-style-type: none"> <li>1. Satyananda, S. (2009). <i>Kundalini Tantra</i>. Bihar School of Yoga.</li> <li>2. Bryant, E. (2009). <i>The Yoga Sutras of Patañjali: A New Edition, Translation, and Commentary</i>. North Point Press.</li> <li>3. Easwaran, E. (2007). <i>The Bhagavad Gita</i>. Nilgiri Press.</li> <li>4. Kabat-Zinn, J. (2013). <i>Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain, and Illness</i>. Bantam.</li> <li>5. Davidson, R. J., &amp; Begley, S. (2012). <i>The Emotional Life of Your Brain</i>. Penguin Books.</li> <li>6. Iyengar, B. K. S. (2005). <i>Light on Life: The Yoga Journey to Wholeness, Inner Peace, and Ultimate Freedom</i>. Rodale. Freedom. Rodale Books. Desikachar, T.K.V. (1999). <i>The Heart of Yoga: Developing a Personal Practice</i>. Inner Traditions International.</li> </ol>	



## Multidisciplinary Minor Courses

Offered Under NEP-2020

From the Academic Session 2024-25

**Specialization-** Digital Marketing  
**Offering College** – Management College TMIMT

No. of Courses	Course Code	Course Name	L-T-P	Evaluation Int. Ext.
1	IDMDM240101	Introduction of Digital Marketing	4-0-0=4	40:60
2	IDMDM240201	Content Marketing	4-0-0=4	40:60
3	IDMDM240301	Social Media Marketing	4-0-0=4	40:60
4	IDMDM240401	Search Engine Optimization Strategies	4-0-0=4	40:60

Specialization- Digital Marketing (IDMDM)		
<u>Course Code:</u> IDMDM240101	Semester –I  Introduction of Digital Marketing	L-4 T-0 P-0 C-4
Course Outcomes:	On completion of the course, the students will be:	
CO1.	Understand the fundamental principles and components of digital marketing.	
CO2.	Understanding the various digital marketing channels and platforms.	
CO3.	Analyzing and implementing digital marketing campaigns effectively.	
CO4.	Analyzing social media marketing techniques to engage and connect with target audiences.	
CO5.	Applying basic SEO and content marketing strategies for enhancing online visibility.	
Course Content:		
Unit I	<b>Fundamentals of Digital Marketing:</b> Definition and scope of digital marketing; Evolution of digital marketing and its impact on traditional marketing; Key components of a digital marketing strategy; Understanding the digital marketing funnel.	8 Hours
Unit II	<b>Digital Marketing Channels and Platforms:</b> Overview of various digital marketing channels (social media, search engines, email, etc.); Introduction to popular digital marketing platforms (Google Ads, Facebook Ads, etc.); Identifying target audiences and selecting appropriate channels; Integrating online and offline marketing efforts.	8 Hours
Unit III	<b>Creating Digital Marketing Campaigns:</b> Setting marketing objectives and KPIs; Crafting compelling marketing messages and content; Implementing storytelling techniques in digital campaigns; Planning and executing successful digital marketing campaigns.	8 Hours
Unit IV	<b>Social Media Marketing:</b> Strategies for effective social media marketing; Creating engaging social media content; Social media advertising and targeting; Monitoring and measuring social media performance.	8 Hours
Unit V:	<b>Search Engine Optimization (SEO) and Content Marketing:</b> Understanding the importance of SEO in digital marketing; Keyword research and on-page SEO techniques; Content marketing strategies for driving organic traffic; Measuring SEO success and optimizing content for search engines.	8 Hours
<u>Text books:</u>	1. Chaffey, D., & Ellis-Chadwick, F. (2019). <i>Digital Marketing: Strategy, Implementation and Practice</i> . Pearson. 2. Deiss, R., & Henneberry, R. (2020). <i>Digital Marketing for Dummies</i> . For Dummies.	
<u>Reference Books:</u>	1. Scott, D. M. (2020). <i>The New Rules of Marketing and PR: How to Use Social Media, Online Video, Mobile Applications, Blogs, News Releases, and Viral Marketing to Reach Buyers Directly</i> . Wiley. 2. Pulizzi, J. (2013). <i>Epic Content Marketing: How to Tell a Different Story, Break through the Clutter, and Win More Customers by Marketing Less</i> . McGraw-Hill Education.* <b>Latest editions of all the suggested books are recommended.</b>	



**Specialization- Digital Marketing (IDMDM)**

<b>Course Code:</b> <b>IDMDM240201</b>	<b>Semester –II</b>  <b>Content Marketing</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be:</b>	
<b>CO1.</b>	Understand the fundamental concepts and importance of content marketing	
<b>CO2.</b>	Understand techniques for creating compelling written and visual content	
<b>CO3.</b>	Understand various content distribution channels and promotion strategies	
<b>CO4.</b>	Apply audience segmentation techniques in content marketing	
<b>CO5.</b>	Apply social media and email marketing campaigns for content promotion	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Introduction to Content Marketing</b> Definition and scope of content marketing; Importance and benefits of content marketing; Evolution and trends in content marketing; Role of content marketing in digital marketing strategy; Key concepts and principles of content marketing.	<b>8 Hours</b>
<b>Unit II</b>	<b>Content Strategy Development</b> Target audience identification and persona development; Content marketing objectives and goal setting; Content ideation and planning; Content types and formats: articles, blogs, videos, infographics, etc.; Content calendar and scheduling.	<b>8 Hours</b>
<b>Unit III</b>	<b>Content Creation and Production</b> Writing compelling and engaging content; Visual content creation: graphics, images, and videos; Content optimization for SEO and discoverability; Content authenticity and brand voice; Collaboration and workflow in content production.	<b>8 Hours</b>
<b>Unit IV</b>	<b>Content Distribution and Promotion</b> Content distribution channels: owned, earned, and paid media; Social media marketing and content amplification; Email marketing and newsletter strategies; Influencer marketing and partnerships; Analytics and measurement of content performance.	<b>8 Hours</b>
<b>Unit V:</b>	<b>Managing and Optimizing Content Marketing</b> Content marketing ROI and performance metrics; Content repurposing and lifecycle management; Continuous improvement and optimization techniques; Crisis management in content marketing; Legal and ethical considerations in content creation and distribution.	<b>8 Hours</b>
<b>Text books:</b>	Pulizzi, J. (2013). <i>Epic Content Marketing: How to Tell a Different Story, Break through the Clutter, and Win More Customers</i> . McGraw-Hill Education.	
<b>Reference Books:</b>	<ol style="list-style-type: none"> <li>1. Schaefer, M. W. (2015). <i>The Content Code: Six Essential Strategies to Ignite Your Content, Your Marketing, and Your Business</i>. Mark W. Schaefer.</li> <li>2. Pulizzi, J. (2015). <i>Content Inc.: How Entrepreneurs Use Content to Build Massive Audiences and Create Radically Successful Businesses</i>. McGraw-Hill Education..</li> </ol> <p><b>* Latest editions of all the suggested books are recommended.</b></p>	

**Specialization- Digital Marketing (IDMDM)**

<u>Course Code:</u> <b>IDMDM240301</b>	<b>Semester –III</b>  <b>Social Media Marketing</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be:</b>	
<b>CO1.</b>	Understand the fundamentals of social media marketing and its role in the marketing mix.	
<b>CO2.</b>	Create and implement effective social media content strategies.	
<b>CO3.</b>	Design and optimize social media advertising campaigns.	
<b>CO4.</b>	Engage with online communities and provide effective customer service on social media.	
<b>CO5.</b>	Analyze social media metrics and measure the success of social media marketing efforts	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Introduction to Social Media Marketing:</b> Definition and significance of social media marketing; Overview of major social media platforms (Facebook, Instagram, Twitter, LinkedIn, etc.); Identifying target audiences and setting marketing objectives; Role of social media in the marketing mix.	<b>8 Hours</b>
<b>Unit II</b>	<b>Social Media Content Creation and Strategy:</b> Developing a social media content strategy; Crafting engaging social media posts and visuals; Implementing storytelling techniques for brand messaging; Utilizing user-generated content and influencer marketing.	<b>8 Hours</b>
<b>Unit III</b>	<b>Social Media Advertising and Campaigns:</b> Creating and optimizing social media ad campaigns; Audience targeting and retargeting strategies; Measuring ad performance and return on investment (ROI); A/B testing and optimization techniques.	<b>8 Hours</b>
<b>Unit IV</b>	<b>Community Management and Engagement:</b> Building and managing online communities; Techniques for engaging with followers and responding to comments; Handling customer feedback and resolving issues on social media; Leveraging social media for customer service.	<b>8 Hours</b>
<b>Unit V:</b>	<b>Social Media Analytics and Performance Measurement:</b> Introduction to social media analytics tools; Key performance indicators (KPIs) for social media marketing; Using data to refine social media strategies; Reporting social media ROI to stakeholders.	<b>8 Hours</b>
<b><u>Text books:</u></b>	1. Kawasaki, G., & Fitzpatrick, P. (2014). <i>The Art of Social Media: Power Tips for Power Users</i> . Portfolio. 2. McDonald, J. (2019). <i>Social Media Marketing Workbook: How to Use Social Media for Business</i> . CreateSpace Independent Publishing Platform.	
<b><u>Reference Books:</u></b>	1. Vaynerchuk, G. (2013). <i>Jab, Jab, Jab, Right Hook: How to Tell Your Story in a Noisy Social World</i> . Harper Business. 2. Zimmerman, J., & Ng, D. (2019). <i>Social Media Marketing All-in-One For Dummies</i> . For Dummies*  <b>Latest editions of all the suggested books are recommended.</b>	

**Specialization- Digital Marketing (IDMDM)**

<u>Course Code:</u> <b>IDMDM240401</b>	<b>Semester –IV</b>  <b>Search Engine Optimization Strategies</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be:</b>	
<b>CO1.</b>	Understanding the key terminology, tools, and techniques used in search engine optimization (SEO).	
<b>CO2.</b>	Understanding the principles and best practices of SEO, including on-page and off-page optimization, keyword research, and the importance of content quality.	
<b>CO3.</b>	Applying Implement SEO techniques to improve the visibility and ranking of a website, such as optimizing meta tags, improving site structure, and creating high-quality content.	
<b>CO4.</b>	Analyzing website analytics and performance data to identify areas for improvement in SEO strategies and make data-driven decisions.	
<b>CO5.</b>	Evaluating the effectiveness of different SEO strategies and techniques, and recommend improvements based on the analysis of performance metrics and industry trends.	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Introduction to SEO</b> Definition and importance of SEO; Evolution and trends in SEO; SEO vs. SEM (Search Engine Marketing); Role of SEO in digital marketing strategy; Key concepts and terminology in SEO.	<b>8 Hours</b>
<b>Unit II</b>	<b>On-Page SEO Techniques</b> Keyword research and analysis; Content optimization strategies; Meta tags, title tags, and descriptions; URL structure optimization; Internal linking strategies.	<b>8 Hours</b>
<b>Unit III</b>	<b>Off-Page SEO Strategies</b> Link building fundamentals and techniques; Importance of back links in SEO; Guest blogging and outreach strategies; Social media and SEO; Online reputation management.	<b>8 Hours</b>
<b>Unit IV</b>	<b>Technical SEO Fundamentals</b> Website structure and navigation optimization; Page speed optimization; Mobile optimization and responsiveness; Schema markup and rich snippets; Indexing and crawl ability.	<b>8 Hours</b>
<b>Unit V:</b>	<b>SEO Analytics and Performance Measurement</b> Key SEO metrics and KPIs; Google Analytics for SEO analysis; SEO reporting and dashboard creation; Monitoring and improving SEO performance; SEO audit and continuous improvement.	<b>8 Hours</b>
<b><u>Text books:</u></b>	1. Enge, E., Spencer, S., & Stricchiola, J. (2015). The art of SEO: Mastering search engine optimization (3rd ed.). O'Reilly Media	
<b><u>Reference Books:</u></b>	1. King, A., & Teixeira, T. S. (2018). SEO like I'm 5: The ultimate beginner's guide to search engine optimization. Independently published. 2. Fishkin, R., & Moz. (2015). Inbound marketing and SEO: Insights from the Moz blog. Wiley. * <b>Latest editions of all the suggested books are recommended.</b>	



## Multidisciplinary Minor Courses

Offered Under NEP-2020

From the Academic Session 2024-25

**Specialization-** Finance  
**Offering College** – Management College TMIMT

No. of Courses	Course Code	Course Name	L-T-P	Evaluation	
				Int.	Ext.
1	IDMFN240101	Money and Banking	4-0-0=4	40:60	
2	IDMFN240201	Financial Institutions and Markets	4-0-0=4	40:60	
3	IDMFN240301	Investment Analysis and portfolio Management	4-0-0=4	40:60	
4	IDMFN240401	Financial Modelling and valuation	4-0-0=4	40:60	

**Specialization- Finance (IDMFN)**

<b>Course Code:</b> <b>IDMFN240101</b>	<b>Semester -I</b> <b>Money &amp; Banking</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be:</b>	
<b>CO1.</b>	Understanding the definition, functions, and evolution of money, as well as its role in the economy. They will understand the structure and significance of the banking system and gain an overview of financial markets and institutions.	
<b>CO2.</b>	Understanding the money creation process, the money supply, and the role of central banks in controlling the money supply. They will understand the objectives of monetary policy and the tools used for its implementation.	
<b>CO3.</b>	Applying their knowledge of the functions and operations of commercial banks, including bank regulations and supervision. They will evaluate the role of financial intermediaries and understand the importance of deposit insurance and banking reforms.	
<b>CO4.</b>	Applying their understanding of different financial markets (money market, capital market, etc.) and various financial instruments (bonds, stocks, derivatives, etc.). They will use investment and risk management strategies to navigate financial markets effectively.	
<b>CO5.</b>	Applying their knowledge of international financial institutions and global banking operations. They will analyze foreign exchange markets and exchange rate determination, understand the causes and consequences of financial crises, and develop strategies for mitigating financial risks and managing crises.	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Introduction to Money and Banking:</b> Definition and functions of money; Evolution of money and its role in the economy; The banking system and its significance; Overview of financial markets and institutions.	<b>8 Hours</b>
<b>Unit II</b>	<b>Money Supply and Monetary Policy:</b> Money creation process and the money supply; The role of central banks in controlling the money supply; Conducting monetary policy and its objectives; Tools of monetary policy implementation.	<b>8 Hours</b>
<b>Unit III</b>	<b>Commercial Banking and Financial Intermediaries:</b> Functions and operations of commercial banks; Bank regulations and supervision; Role of financial intermediaries in the economy; Deposit insurance and banking reforms.	<b>8 Hours</b>
<b>Unit IV</b>	<b>Financial Markets and Instruments:</b> Overview of different financial markets (money market, capital market, etc.); Types of financial instruments (bonds, stocks, derivatives, etc.); Investment and risk management strategies; Role of financial markets in business financing.	<b>8 Hours</b>
<b>Unit V:</b>	<b>International Banking and Financial Crises:</b> International financial institutions and global banking; Foreign exchange markets and exchange rate determination; Causes and consequences of financial crises; Mitigating financial risks and crisis management.	<b>8 Hours</b>
<b>Text books:</b>	1. Mishkin, F. S., & Serletis, A. (2019). The economics of money, banking, and financial markets. Pearson. 2. Hubbard, R. G., & O'Brien, A. P. (2018). Money, banking, and the financial system. Pearson.	
<b>Reference Books:</b>	1. Cecchetti, S. G., & Schoenholtz, K. L. (2018). Money, banking, and financial markets. McGraw-Hill Education. 2. Moenjak, T. (2020). Central banking: Theory and practice in sustaining monetary and financial stability. Routledge.	

**Specialization- Finance (IDMFN)**

<u>Course Code:</u> IDMFN240201	<b>Semester -II</b>  <b>Financial Institutions and Markets</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be:</b>	
<b>CO1.</b>	Understanding the significance of financial institutions and markets in the economy, and grasp the basic regulatory framework.	
<b>CO2.</b>	Understanding the different types of banking institutions and their specialized roles in the financial system.	
<b>CO3.</b>	Applying the importance of insurance, pension funds, and mutual funds in personal financial planning and risk management.	
<b>CO4.</b>	Analyzing the various financial instruments and their applications in investment and risk management.	
<b>CO5.</b>	Analyzing the functioning of capital markets and the complexities of international financial markets.	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Introduction to Financial Institutions and Markets:</b> Overview of Financial Institutions: Banks, Credit Unions, Insurance Companies, Investment Banks, etc. Functions of Financial Institutions: Intermediation, Risk Management, Payment Systems, and more. Role of Financial Markets: Money Market, Capital Market, Primary and Secondary Markets. Regulatory Environment: Central Banks, Securities and Exchange Commission, and other governing bodies.	<b>8 Hours</b>
<b>Unit II</b>	<b>Banking Institutions:</b> Commercial Banks: Services, Products, and Operations. Central Banks: Functions and Monetary Policy. Investment Banks: Roles in Capital Raising and Mergers & Acquisitions. Credit Unions: Structure, Membership, and Purpose.	<b>8 Hours</b>
<b>Unit III</b>	<b>Insurance and Pension Funds:</b> Insurance Companies: Types of Insurance, Risk Assessment, and Claims Management. Pension Funds: Defined Benefit vs. Defined Contribution, Pension Planning. Mutual Funds: Structure, Operations, and Investor Benefits. Hedge Funds: Strategies and Risk Management.	<b>8 Hours</b>
<b>Unit IV</b>	<b>Financial Instruments and Securities:</b> Stocks and Bonds: Types, Valuation, and Investment Strategies. Derivative Instruments: Futures, Options, Swaps, and their Uses. Commodities and Forex Markets: Trading and Risk Mitigation. Cryptocurrencies: Introduction and Market Implications. .	<b>8 Hours</b>
<b>Unit V</b>	<b>Capital Market and International Financial Markets:</b> Capital Market Efficiency: Efficient Market Hypothesis, Behavioral Finance. Stock Exchanges: Functions and Trading Mechanisms. Foreign Exchange Market: Exchange Rate Determination and Forex Trading. International Financial Institutions: IMF, World Bank, and Their Roles.	<b>8 Hours</b>
<u><b>Text books:</b></u>	1. Kidwell, D. S., Blackwell, D. W., Sias, R. W., & Whidbee, M. S. (2016). <i>Financial institutions, markets, and money</i> . Pearson.  2. Mishkin, F. S. (2019). <i>The economics of money, banking, and financial markets</i> . Pearson.  3. Madura, J. (2019). <i>Financial markets and institutions</i> . Cengage Learning.  4. Saunders, A., & Cornett, M. M. (2020). <i>Financial institutions management: A risk management approach</i> (9th ed.). McGraw-Hill Education.  5. Viney, C., & Phillips, P. D. (2016). <i>Financial institutions, instruments, and markets</i> . McGraw-	

	<p>Hill Education.</p> <p>6. Bodie, Z., Kane, A., &amp; Marcus, A. J. (2018). <i>Investments</i> (11th ed.). McGraw-Hill Education.</p>
<p><b><u>Reference</u></b> <b><u>Books:</u></b></p>	<ol style="list-style-type: none"> <li>1. Mishkin, F. S. (2019). <i>The economics of money, banking, and financial markets</i>. Pearson.</li> <li>2. Madura, J. (2019). <i>Financial markets and institutions</i>. Cengage Learning.</li> <li>3. Saunders, A., &amp; Cornett, M. M. (2020). <i>Financial institutions management: A risk management approach</i> (9th ed.). McGraw-Hill Education.</li> <li>4. de Haan, J., Oosterloo, S., &amp; Schoenmaker, D. (2015). <i>Financial markets and institutions: A European perspective</i>. Cambridge University Press.</li> </ol> <p><b>*Latest editions of all the suggested books are recommended.</b></p>

**Specialization- Finance (IDMFN)**

<b>Course Code:</b> <b><u>IDMFN240301</u></b>	<b>Semester -III</b> <b>Investment Analysis and Portfolio Management</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be:</b>	
<b>CO1.</b>	Understanding the term risk and return with the investment point of view along with the various financial products available for investment.	
<b>CO2.</b>	Analyzing the risk and return tradeoff with the view pint of investing in risky security.	
<b>CO3.</b>	Applying the various approaches to invest in equity and find out the expected returns.	
<b>CO4.</b>	Evaluating the working of SEBI regarding protect the investor.	
<b>CO5.</b>	Analyzing the significance and mode of operandi of derivative market and its future in Indian context.	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Evolution of Investment Market:</b> The investment decision process, Types of Investments- Commodities, Real Estate and Financial Assets, The Indian securities market, the market participants and trading of securities, security market indices, sources of financial information. Return and risk: Concept, Calculation, Tradeoff between return and risk, Impact of taxes and inflation on return.	<b>8 Hours</b>
<b>Unit II</b>	<b>Fixed Income Securities:</b> Bond Fundamentals, Estimating bond yields, Bond Valuation, Types of bond risks, default risk and credit rating.	<b>8 Hours</b>
<b>Unit III</b>	<b>Approaches to Equity Analysis:</b> Fundamental Analysis, Technical Analysis and Efficient Market Hypothesis. Valuation of Equity Shares using various models.	<b>8 Hours</b>
<b>Unit IV</b>	<b>Portfolio Analysis and Financial Derivatives:</b> Portfolio and Diversification, Portfolio Risk and Return, Mutual Funds, Introduction to Financial Derivatives-Forwards, Futures & Options, Financial Derivatives Markets in India.	<b>8 Hours</b>
<b>Unit V:</b>	<b>Investor Protection:</b> Roles Role of SEBI and stock exchanges in investor protection; Investor grievances and their redressal system, insider trading, investors’ awareness and activism.	<b>8 Hours</b>
<b><u>Text books:</u></b>	Prasanna, C. (2021). <i>Investment analysis and portfolio management</i> . McGraw Hill. New Delhi.	
<b><u>Reference Books:</u></b>	1. Rustogi, R. P. (2008.). <i>Fundamentals of investment</i> . Sultan Chand & Sons. 2. Vohra, N. D., & Bagri, B. R. (2007.). <i>Futures and options</i> . McGraw Hill. 3. Mayo, H. B. (2012)). <i>An introduction to investment</i> . Cengage Learning. 4. Pandian, P. (2009.). <i>Security analysis and portfolio management</i> . Vikas Publications. 5. Jones, C. P. (2021). <i>Investments analysis and management</i> . Wiley. <b>* Latest editions of all the suggested books are recommended.</b>	



**Specialization- Finance (IDMFN)**

<b>Course Code:</b> <b>IDMFN240401</b>	<b>Semester -IV</b> <b>Financial Modelling and Valuation</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be:</b>	
<b>CO1.</b>	Understanding the overview of Financial Modelling.	
<b>CO2.</b>	Understanding Forecasting and working capital schedule.	
<b>CO3.</b>	Applying the measures to working capital.	
<b>CO4.</b>	Analyzing the Long-Term items and completion of Income Statement.	
<b>CO5.</b>	Applying and Developing plans and tables.	
<b>Course Content:</b>		
<b>Unit I</b>	Overview of Financial Modeling, Best Practices, and Core Statements.	<b>8 Hours</b>
<b>Unit II</b>	Forecasting Revenue and Expenses, Scenario Analysis, Working Capital Schedule (Assets).	<b>8 Hours</b>
<b>Unit III</b>	Working Capital Schedule – (Liabilities), Depreciation Schedule, Amortization Schedule.	<b>8 Hours</b>
<b>Unit IV</b>	Long-Term Items and completion of income statement logic, Shareholder's equity Schedule Debt and Interest, Troubleshooting your Financial Model (Part A).	<b>8 Hours</b>
<b>Unit V</b>	Data Tables, Basics of Valuation, Valuation of Companies – DDM, Discounted Cash Flow Model, Recap (A).	<b>8 Hours</b>
<b><u>Text books:</u></b>	1. Benninga, S. (2014). <i>Financial modeling</i> (4th ed.). Massachusetts Institute of Technology. ISBN-13: 860-1401358411; ISBN-10: 0262027283 2. Sengupta, C. (n.d.). <i>Financial modeling using Excel and VBA</i> . Wiley Finance. ISBN-13: 978-0471267683; ISBN-10: 0471267686 3. Rees, M. (2008). <i>Financial modelling in practice</i> . Wiley Finance. ISBN: 978-0-470-99744-4 4. Jackson, M., & Staunton, M. (2001). <i>Advanced modelling in finance using Excel and VBA</i> . Wiley Finance. ISBN-13: 978-0-471-49922-0	
<b><u>Reference Books:</u></b>	<b>1.</b> Charnes, J. (2012). <i>Financial modeling with Crystal Ball and Excel</i> . Wiley Finance. ISBN 978-1-118-17544-6. <b>2.</b> Benninga, S. (2006). <i>Principles of finance with Excel</i> . Oxford University Press. ISBN-13: 978-0-19-530150-2. <b>3.</b> Gottlieb, I. (2010). <i>Next generation Excel: Modeling in Excel for analysts and MBAs</i> . John Wiley & Sons. ISBN: 978-0-470-82473-3. <b>* Latest editions of all the suggested books are recommended.</b>	



## Multidisciplinary Minor Courses

Offered Under NEP-2020

From the Academic Session 2024-25

**Specialization-** Forensic Science  
**Offering College** – Paramedical Science

No. of Courses	Course Code	Course Name	L-T-P	Evaluation	
				Int.	Ext.
1	IDMFS240101	Narcotics and Psychotropic substances	4-0-0=4	40:60	
2	IDMFS240201	Questioned Documents and Fingerprint	4-0-0=4	40:60	
3	IDMFS240301	Crime Scene Investigation	4-0-0=4	40:60	
4	IDMFS240401	Digital Forensic and Cybercrime	4-0-0=4	40:60	

### Specialization- Forensic Science (IDMFS)

<b><u>Course Code:</u></b> <b>IDMFS240101</b>	<b>Semester-I</b>  <b>Narcotics And Psychotropic Substances</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be:</b>	<b>40 hours</b>
<b>CO1.</b>	Understanding the narcotics and psychotropic substances, drugs of abuse, sedatives, Stimulates and hallucinations drugs rave drugs, Doping and their classifications.	
<b>CO2.</b>	Understanding the Route of exposure of narcotics drugs, drugs trafficking, effects of drugs on livings.	
<b>CO3.</b>	Applying the Methods to identify the drugs addicted person and detection of drugs e.g. alcohol, barbiturates, heroin LSD, NPS and steroids.	
<b>CO4.</b>	Analyzing the Effects of Narcotics drugs, steroids, Alcohols, RAVE drugs on Human beings, Action of Drugs and role of drugs monitoring agencies.	
<b>CO5.</b>	Evaluating the adverse health effects of narcotics drugs and psychotropic substances.	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Narcotics Drugs</b> Narcotics and Psychotropic Substances, Narcotics, Drug and Cosmetics Act, Classification and Characteristics of Narcotics Drugs.	<b>8 Hours</b>
<b>Unit II</b>	<b>Drug of Abuse</b> Drugs and Classification of Drugs, Drugs of Abuse, Drug Addiction, Drug Dependency; Synergistic Effect of Drugs, Drug Trafficking.	<b>8 Hours</b>
<b>Unit III</b>	<b>ADME</b> Pharmacological Studies: Absorption, Distribution, Metabolism, Pathways of Drug Metabolism, Mechanism of Action of Drugs,	<b>8 Hours</b>
<b>Unit IV</b>	<b>Common drugs</b> Barbiturates, alcohol, Amphetamines, LDS, Heroin.	<b>8 Hours</b>
<b>Unit V</b>	<b>Recent Advancement in Drugs-</b> Rave Drugs, Doping, Drug Discovery Program, Structural Modification In Drugs, Drug Monitoring Agencies.	<b>8 Hours</b>
<b><u>Text books:</u></b>	1. Aggrawal, A. (2020). <i>Textbook of forensic medicine and toxicology</i> . Jaypee Brothers Medical Publishers.	
<b><u>Reference Books:</u></b>	1. Preliminary Examination of Drugs Used for Committing Drug Facilitated Sexual Assaults. 2. Systematic Extraction and Identification of Narcotic/ Sedative/ Tranquilizer Drugs from Viscera/ Blood/ Urine (Simulated Sample). 3. Reddy K.S.N. (2014). <i>Forensic Medicine</i> 3rd edit. India, Jaypee Brothers	

### Specialization- Forensic Science (IDMFS)

<b>Course Code:</b> <b>IDMFS240201</b>	<b>Semester-II</b>  <b>Questioned Documents and Fingerprint</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be:</b>	
<b>CO1.</b>	Understanding the document and their types, alteration of documents, formation of handwriting, Use of photography, fingerprints and their types.	
<b>CO2.</b>	Understanding collection and handling of documents, alteration of documents, individual and class characteristics of handwriting, modern developments in photography.	
<b>CO3.</b>	Applying the Principles of handwriting, methods to collect the documents and fingerprints, Alteration of documents, Detection of forgery, Class and individual characteristics handwriting and alteration in documents, Secret writing.	
<b>CO4.</b>	Analyzing the Tools, Invisible writing, forgery and natural variations in handwriting, seal impressions and other mechanical impressions, standard, filter used in photography, Fingerprint classification Chart.	
<b>CO5.</b>	Evaluating the calculation of Henry's classification ten-digit system, rolled and plain fingerprint, lifting of fingerprint.	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Document:</b> Definition, Types of documents, collection handling preservation of document. Basic Tools needed for Forensic Document Examination and their use.	<b>8</b> <b>Hours</b>
<b>Unit II</b>	<b>Alteration in the Document:</b> Examination of Erasures, Additions, Overwriting and Obliteration. Decipherment of Secret Writing, Indented and Invisible Writing, Charred Documents. Examination of Seal Impression and other Mechanical Impression	<b>8</b> <b>Hours</b>
<b>Unit III</b>	<b>Handwriting:</b> Basic Principle of Handwriting Identification, Handwriting Characteristics- General and Individual. Development of Individuality in Handwriting, Comparison of Handwriting, Natural Variations, Standard for Comparison.	<b>8</b> <b>Hours</b>
<b>Unit IV</b>	<b>Photography:</b> Basic Principles and Techniques, Exposing, Developing and Printing, Modern Developments in Photography, Digital Photography, Videography/High Speed Videography, Crime Scene and Laboratory Photography	<b>8</b> <b>Hours</b>
<b>Unit V:</b>	<b>Fingerprints:</b> History and Development of Fingerprints, Formation of Ridges, Pattern Types, Pattern areas, Classification of Fingerprints- Henry System of Classification, Methods of development of Fingerprint	<b>8</b> <b>Hours</b>
<b>Text books:</b>	1. Saxena, B.L. (1963): Law & Techniques Relating to Finger Prints, Foot Prints & Detection of Forgery. Central Law Agency, Allahabad	
<b>Reference Books:</b>	1. Osborn, A. S.(1929): Questioned Documents. Boyd Printing, Chicago. 2. Saferstein, R.(1990): Criminalistics. Prentice Hall, New York. 3 .Hilton, O. (1982): The Scientific Examination of Questioned Document. Elsevier North Holland Inc., New York.	

### Specialization- Forensic Science (IDMFS)

<b>Course Code</b> <b>IDMFS240301</b>	<b>Semester-III</b> <b>Crime Scene Investigation</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be:</b>	
<b>CO1.</b>	Understanding the crime scene and types of crime scene, Protection and photography, Physical evidences videography, importance of crime scene and chain of custody.	
<b>CO2.</b>	Understanding the Team formation, Requirement to protection of crime scene, marking of evidences, Sketch preparation.	
<b>CO3.</b>	Applying the Precaution taken at crime scene, method of photography and videography, methods of evidence collection and preservation, packaging and forwarding, precaution for maintaining the COC.	
<b>CO4.</b>	Analyzing the crime scene, Physical Evidences, crime scene reconstruction process, and integrity of COC.	
<b>CO5.</b>	Evaluating the Crime scene, physical evidences, Chain of custody.	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Crime Scene:</b> Definition, type of crime scene, forensic requirement for visiting a crime scene including different kits and mobile forensic van, team formation and other preparation.	<b>8 Hours</b>
<b>Unit II</b>	<b>Crime Scene protection and inspection:</b> Protection of crime scene, requirement to protection of crime scene, precautions taken at crime scene, walkthrough the crime scene, and marking of evidence.	<b>8 Hours</b>
<b>Unit III</b>	<b>Recording of crime scene:</b> forensic Photography & videography: types and manner, Notes preparation, Sketch preparation, process of taking statement, and other information relevant to the crime scene.	<b>8 Hours</b>
<b>Unit IV</b>	<b>Searching of Evidence and Collection:</b> Searching of physical evidences using different techniques as required, identification of physical evidence according to the case and collection and preservation of physical evidence as per their property using appropriate method, and crime scene reconstruction.	<b>8 Hours</b>
<b>Unit V:</b>	<b>Chain of custody (CoC):</b> Definition, requirement of chain of custody, how to prevent contamination and integrity for maintaining CoC, precautions for maintaining chain of custody, and role of chain of custody in court.	<b>8 Hours</b>
<b>Text books:</b>	1. James, S.H. and Nordby, J.J. Forensic Science: An Introduction to Scientific and Investigative Techniques, CRC press, USA (2003)	
<b>Reference Books:</b>	1. Sharma, B.R. Forensic Science in Criminal Investigation and Trails, Universal Publishing Co. (2016) 2. Ahuja, R. Criminology, Rawat Publication, Jaipur (2000) 3. Saferstein, R. Criminalistics -An introduction to Forensic Science, Prentice Hall Inc, USA(1995)	

### Specialization- Forensic Science (IDMFS)

<b><u>Course Code:</u></b> <b>IDMFS240401</b>	<b>Semester-IV</b> <b>Digital Forensic and Cybercrime</b>	<b>L-4</b> <b>T-0</b> <b>P-0</b> <b>C-4</b>
<b>Course Outcomes:</b>	<b>On completion of the course, the students will be:</b>	
<b>CO1.</b>	Understanding the Digital and cyber forensic, goals of investigator, classification of cybercrime, mode of cybercrime, Investigation process and evidence collection and preservation in digital forensic	
<b>CO2.</b>	Understanding the use of internet, Crime against human, Working email and Ip.	
<b>CO3.</b>	Applying the methods to detect the cybercrime, digital evidences, scams and frauds, investigation tools, imaging techniques, tracking and tracing methods for IP and email.	
<b>CO4.</b>	Analyzing the Cyber Crime and Digital evidences, spywares, viruses' worms and attacks, deleted evidences, volatile and nonvolatile evidences.	
<b>CO5.</b>	Evaluating the tools and methods used in collection, preservation and analysis.	
<b>Course Content:</b>		
<b>Unit I</b>	<b>Introduction:</b> Introduction to Cyber Forensic, Investigation process. The Goal of the Forensic Investigation, Why Investigate (Internet usage exceeds norm, using e-mail inappropriately, Use of Internet, e-mail, or PC in a non-work-related manner, Theft of information.	<b>8 Hours</b>
<b>Unit II</b>	<b>Cyber crime</b> Classification of cybercrimes, Common cybercrimes- cybercrime targeting computers and mobiles, cybercrime against women and children, financial frauds, social engineering attacks, malware and ransomware attacks, Cybercriminals modus-operandi, Reporting of cybercrimes, Remedial and mitigation measures.	<b>8 Hours</b>
<b>Unit III</b>	<b>Mode of Cybercrime:</b> Cybercrimes targeting Computer systems and Mobiles- data diddling attacks, spyware, logic bombs, DoS, virus, Trojans, ransomware, data breach., Online scams and frauds- email scams, Phishing, Vishing, Smishing, Online job fraud, Online sextortion, Debit/ credit card fraud, Online payment fraud, Cyberbullying, website defacement, Cybersquatting, Pharming, Cyber espionage.	<b>8 Hours</b>
<b>Unit IV</b>	<b>Cyber Forensics Investigation:</b> Introduction to Cyber Forensic Investigation, Investigation Tools, e Discovery, Digital Evidence Collection, Evidence Preservation, E-Mail Investigation, E-Mail Tracking, IP Tracking, E-Mail Recovery, Search and Seizure of Computers, Recovering deleted evidences, Password Cracking.	<b>8 Hours</b>
<b>Unit V:</b>	<b>Evidence collection and analysis tool:</b> Evidence Collection procedure, chain of custody, imaging of data, role of hash value, use of portable tools at crime scene, Volatile and Non-volatile evidence collection, different types of digital evidences, collection and packing for forensic examination, precautions in packing and transport.	<b>8 Hours</b>
<b><u>Text books:</u></b>	1. Cheswick, W. R., Bellovin, S. M., & Rubin, A. D. (2003). <i>Firewalls and internet security: Repelling the wily hacker</i> (2nd ed.). Addison-Wesley.	
<b><u>Reference Books:</u></b>	2. Carrier, B. (2005). <i>File system forensic analysis</i> . Addison-Wesley Professional. 3. Casey, E. (2014). <i>Handbook of digital forensics &amp; investigation</i> . Elsevier Academic Press. 4. Johansen, G. (2022). <i>Digital forensics and incident response: A practical guide to deploying digital forensic techniques in response to cybersecurity incidents</i> [E-book]. CRC Press.	