**ARTIFICIAL INTELLIGENCE (SUBJECT CODE 417)**
**CLASS X (SESSION 2026-2027)**
**Total Marks : 100 (Theory-50 + Practical-50)**

| Week/Month | Chapters/ Topics | Subtopics | No. of Periods |
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| 6th April – 26TH April | **PART-B – SUBJECT SPECIFIC SKILLS**<br>**UNIT 1: Revisiting AI Project Cycle & Ethical Frameworks for AI**<br>(To be assessed through Theory) | • What is AI?<br>• Understanding the stages of the AI Project Cycle.<br>• Understanding the concept of Artificial Intelligence (AI) domains and the illustrations of practical applications within each AI domain.<br>• Learn about the ethical framework for AI and its category.<br>• Explore Bioethics, a popular framework that is used in the healthcare industry.<br>• Principles of Bioethics | 10<br>Theory |
| 27st April – 31st May | **UNIT 2: Advance Concepts of Modeling in AI**<br>(To be assessed through Theory) | • Understand and differentiate between AI, ML and DL using Venn Diagram<br>• Common terminologies used with data<br>• Types of AI Models: Rule Based Approach, Learning Based Approach<br>• Familiarize with supervised, unsupervised and reinforcement learning based approach<br>• Understand subcategories of Supervised, Unsupervised and deep learning models.<br>• Understand Neural Networks<br>• Understand how AI makes a decision | 15<br>Theory |
| 1st July– 20th July | **UNIT 3: Evaluating Models**<br>(To be assessed through Theory) | • Understand the role of evaluation in the development and implementation of AI systems.<br>• Understand Train-test split method for evaluating the performance of a machine learning algorithm.<br>• Understand Accuracy and Error for effectively evaluating and improving AI models.<br>• Learn about the different types of evaluation techniques in AI, such as Accuracy, Precision, Recall and F1 Score, and their significance.<br>• Build the confusion matrix from scratch.<br>• Understand ethical concerns around model evaluation | 10<br>Theory |

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| 21st July– 16th august | **UNIT 5: Computer Vision**<br><br>(To be assessed through Theory) | • Define the concept of Computer Vision and understand its applications in various fields.<br>• Understand the basic concepts of image representation, feature extraction, object detection, and segmentation.<br>• Apply the convolution operator to process images and extract useful features.<br>• Understand the basic architecture of a CNN and its applications in computer vision and image recognition. | 10<br>Theory |
| 17th August – 31th August | **UNIT 6: Natural Language Processing**<br><br>(To be assessed through Theory) | • Comprehend the complexities of natural languages.<br>and elaborate on the need for NLP techniques for machines to understand various natural languages effectively.<br>• Explore the various applications of NLP in everyday life, such as, voice assistants, auto generated captions, language translation, sentiment analysis, text classification and keyword extraction.<br>• Understand the concepts like lexicon, syntax, semantics, and logical analysis of input text.<br>• Understand the concept of chatbot and the differences between smart-bots and script bots.<br>• Learn about the Text Normalization technique used in NLP and the popular NLP model- Bag-of-Words | 12<br>Theory |
| 1th Septemb er – 6th Septemb er | **UNIT 4: Statistical Data**<br><br>(To be assessed through Practical's) | ► Define the concept of Statistical Data and understand its applications in various fields.<br>► Define No-Code and Low- Code AI.<br>► Identify the differences between Code and No-Code AI concerning Statistical Data.<br>► Able to use no-code tool Orange Data Mining.<br>► To perform data exploration, modelling and evaluation with Orange data mining. | 4<br>Practical |
| 7th Sept – 12th Sept | **PART A** | **Methods of communication** – Verbal, Non-verbal, Visual<br>Descriptive and specific feedback<br>1. Communication cycle and importance of feedback | 4<br>Theory |

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| | **EMPLOYABILITY SKILLS**<br><br>**Unit 1 Communication Skills - II** | 2. Meaning and importance of feedback<br>3. Descriptive feedback - written comments or conversations<br>4. Specific and non-specific feedback<br>**Measures to overcome barriers in communication**<br>1. Barriers to effective communication – types and factors<br>2. Measures to overcome barriers in effective communication<br>**Principles of communication**<br>1. Principles of effective communication<br>2. 7 Cs of effective communication<br>**Basic writing skills**<br>Writing skills to the following: Sentence, Phrase, Kinds of<br>Sentences, Parts of Sentence, Parts of Speech, Articles,<br>Construction of a Paragraph | |
| 14th Sept – 16th Sept | **Unit 2 Self Management Skills - II** | **Stress management techniques**<br>1. Meaning and importance of stress management<br>2. Stress management techniques – Physical exercise, yoga,<br>meditation<br>3. Enjoying, going to vacations and holidays with family and<br>friends<br>4. Taking nature walks<br>**Ability to work independently**<br>1. Importance of the ability to work independently<br>2. Describe the types of self-awareness<br>3. Describe the meaning of self-motivation and self-regulation. | 3<br>Theory |
| 18th Sept-23th Sept | **Unit 3 ICT Skills II** | **OPERATING SYSTEM:**<br>1. Classes of operating systems<br>2. Menu, icons and task bar on the desktop<br>3. File concept, file operations, file organization, directory<br>structures, and file-system structures<br>4. Creating and managing files and folders<br>**Importance and need of care and maintenance of computer:**<br>Cleaning computer components, | 3<br>Theory |

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| | | Preparing maintenance schedule,<br>Protecting computer against viruses,<br>Scanning and cleaning viruses and removing SPAM files, temporary files and folders. | |
| 24th Sept– 27th Sept | **Unit IV Entrepreneurial Skills - II** | **Characteristics of successful entrepreneur**<br>1. Entrepreneurship and society<br>2. Qualities and functions of an entrepreneur<br>3. Role and importance of an entrepreneur<br>4. Myth about entrepreneurship<br>5. Entrepreneurship as a career option | 3 Theory |
| 28th Sept– 1st October | **Unit V Green Skills- II** | Importance, problems and solutions related to sustainable development<br>1. Definition of sustainable development<br>2. Importance of sustainable development<br>3. Problems related to sustainable development | 3 Theory |
| **I Pre-Board Examination (1 st pre board November 13,2026 to November 30,2026) (Entire syllabus will be considered)** | | | |
| **II Pre-Board Examination (December 14,2026 to January 10,2027) (Entire syllabus will be considered)** | | | |