SEMESTER III

Course Code	Course name	L	T	P	C
	Elements of AIML	2	0	0	2
Total Units to be Covered: 5		**Total Contact Hours: 30**			
Prerequisite(s):	Problem Solving Techniques, Probability and Statistical Analysis	**Syllabus version: 1.0**			

Course Objectives

Students will learn the basic concepts and techniques of Artificial Intelligence and Machine Learning. They will also explore their applications.

Course Outcomes

On completion of this course, the students will be able to

CO1. Understand the basic concepts and techniques of Artificial Intelligence.

CO2. Understand the logic of AI algorithms for solving practical problems.

CO3. Understand the basics of Machine Learning and its types.

CO4. Assess and model real-world practical problems that can be handled by AI and ML.

CO-PO Mapping

Program Outcomes / Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO 1	1	1	1										1		
CO 2	1	1	1										1		
CO 3	1	1	1										1		
CO 4	1	1	1										2		

Average	1	1	1									1.25		

1 – Weakly Mapped (Low) **2 – Moderately Mapped (Medium)**

3 – Strongly Mapped (High) **"_" means there is no correlation**

EVALUATION PLAN – ELEMENTS OF AIML

UNIT-I

Lecture No.	Topics to be Covered	Mode of Evaluation	CO Mapped	Rubrics for Evaluation
1	Artificial Intelligence and its applications,	Assignment	CO1	Performance in Assignment
2	Artificial Intelligence Techniques, Level of models, criteria of success, Intelligent Agents,	Assignment	CO1	Performance in Assignment
3	Nature of Agents, Learning Agents.	Assignment	CO1	Performance in Assignment
4	AI Techniques, advantages, and limitations of AI,	Assignment	CO1	Performance in Assignment
5	Impact and Examples of AI,	Assignment	CO1	Performance in Assignment
6	Application domains of AI.	Assignment	CO1	Performance in Assignment

UNIT-II

Lecture No.	Topics to be Covered	Mode of Evaluation	CO Mapped	Rubrics for Evaluation
1	Propositional logic,	Assignment	CO2	Performance in Assignment
2	predicate logic,	Assignment	CO2	Performance in Assignment
3	Resolution,	Assignment	CO2	Performance in Assignment
4	Resolution in proportional logic and predicate logic,	Assignment	CO2	Performance in Assignment
5	Clause form,	Assignment	CO2	Performance in Assignment
6	unification algorithm	Assignment	CO2	Performance in Assignment

UNIT-III

Lecture No.	Topics to be Covered	Mode of Evaluation	CO Mapped	Rubrics for Evaluation
1	Introduction to Machine Learning, Usage of datasets and how to handle them for Machine Learning	Quiz	CO3	Performance in Quiz.
2	Feature sets,	Quiz	CO3	Performance in Quiz.

3	Dataset division: test, train and validation sets,	Quiz	CO3	Performance in Quiz.
4	cross validation,	Quiz	CO3	Performance in Quiz.
5	Dimensionality Reduction Techniques,	Quiz	CO3	Performance in Quiz.
6	PCA, LDA, ICA	Quiz	CO3	Performance in Quiz.

UNIT-IV

Lecture No.	**Topics to be Covered**	**Mode of Evaluation**	**CO Mapped**	**Rubrics for Evaluation**
1	Introduction to Machine Learning Techniques,	Quiz	CO4	Performance in Quiz.
2	Supervised Learning: Regression and its types,	Quiz	CO4	Performance in Quiz.
3	Classification,	Quiz	CO4	Performance in Quiz.
4	Unsupervised Learning: Clustering,	Quiz	CO4	Performance in Quiz.
5	Reinforcement Learning,	Quiz	CO4	Performance in Quiz.
6	Semi-supervised Machine Learning	Quiz	CO4	Performance in Quiz.

UNIT-V

Lecture No.	Topics to be Covered	Mode of Evaluation	CO Mapped	Rubrics for Evaluation
1	AI for society, women and environment,	Project	CO1	Short Review Project / Viva
2	Applications of Machine Learning in Banking, Security,	Project	CO1	Short Review Project / Viva
3	Healthcare, Education, Insurance Industry,	Project	CO2	Short Review Project / Viva
4	Retail and Supply Chain, Transportation and Logistics, Energy and Utilities	Project	CO2	Short Review Project / Viva

Textbooks

1. Artificial Intelligence by Rich and Knight, The McGraw Hill, 2017.
2. Machine Learning for Dummies, By John Paul Mueller and Luca Massaron, For Dummies, 2016.

Modes of Evaluation: Quiz/Assignment/ presentation

Examination Scheme

Components	Quiz/ Class Test	Assignment	Review Project/Viva	Total
Weightage (%)	40	40	20	100

Detailed breakup of Internal Assessment

Internal Assessment Component	Weightage in calculation of Internal Assessment (100 marks)

Quiz 1	20%
Quiz 2/ Class test	20%
Assignment 1	20%
Assignment 2	20%
Review Project/ Viva	20%