

UNITED INTERNATIONAL UNIVERSITY
Department of Computer Science and Engineering (CSE)
Course Syllabus

1	Course Title	Artificial Intelligence Laboratory
2	Course Code	CSI 342 / CSE 3812
3	Trimester and Year	Spring 2025
4	Pre-requisites	CSI 228: Algorithms Laboratory
5	Credit Hours	1.00
6	Section	E
7	Class Hours	13:51 - 16:30 (Sun).
8	Classroom	#422
9	Faculty Name	Shekh. Md. Saifur Rahman
10	Email	saifur@cse.uiu.ac.bd
11	Office	#837 D
12	Counselling Hours	Will be provided in ELMS
13	Text Book	Artificial Intelligence - A Modern Approach (3 rd edition) by Stuart Russel and Peter Norvig
14	Reference	None
15	Course Contents (approved by UGC)	Basics of data science with Python programming, Informed search strategy, Local search and variants, Dataset preprocessing, Supervised learning algorithm, Unsupervised learning algorithm, Concept of training and validation
16	Course Outcomes (COs) and Mapping	

CO	Statement	Bloom's Domain	Program Outcome	Knowledge Profile	Complex Problem	Engineering Activities																																								
CO1	Demonstrate application of modern tools for data preprocessing and analysis.	P	PO5 Modern Tool Usage	Engineering fundamentals (K3)	Depth of Knowledge (P1)	-																																								
CO2	Understand and apply search strategies for solutions of problems with complete information.	C	PO2 Problem Analysis	Specialist knowledge (K4)	Conflicting requirements (P2)																																									
CO3	Understand and apply reasoning strategies for inference in the presence of incomplete information.	C	PO2 Problem Analysis	Engineering practice (K6)																																										
CO4	Understand and develop intelligent algorithm capable of learning from data	C	PO1 Engineering Knowledge																																											
17	Teaching Methods	Lecture, demonstration																																												
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19	Lab Outline																																													
	<table><tr><th>Class</th><th>Topics</th><th>COs</th><th>Activities</th></tr><tr><td>1</td><td>Intro</td><td>1</td><td>Lecture</td></tr><tr><td>2</td><td>Python Tutorial</td><td>1</td><td>Lecture</td></tr><tr><td>3</td><td>A* search</td><td>2</td><td>Lecture</td></tr><tr><td>4</td><td>A* search viva</td><td>-</td><td>evaluation</td></tr><tr><td>5</td><td>Hill Climbing Search</td><td>3</td><td>Lecture</td></tr><tr><td>6</td><td>Hill Climbing viva</td><td>-</td><td>evaluation</td></tr><tr><td>7</td><td>Dataset basics and K Nearest Neighbour (KNN) algorithm</td><td>4</td><td>Lecture</td></tr><tr><td>8</td><td>KNN viva</td><td>-</td><td>evaluation</td></tr><tr><td>9</td><td>Logistic regression + Sklearn library</td><td>1, 4</td><td>Lecture</td></tr></table>						Class	Topics	COs	Activities	1	Intro	1	Lecture	2	Python Tutorial	1	Lecture	3	A* search	2	Lecture	4	A* search viva	-	evaluation	5	Hill Climbing Search	3	Lecture	6	Hill Climbing viva	-	evaluation	7	Dataset basics and K Nearest Neighbour (KNN) algorithm	4	Lecture	8	KNN viva	-	evaluation	9	Logistic regression + Sklearn library	1, 4	Lecture
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		10	Logistic regression viva	-	evaluation	
		11	K means Clustering	4	Lecture	
		12	K means clustering viva	-	evaluation	

Appendix 1: Assessment Methods

Assessment Types	Marks
Attendance	10%
Class Test Assignment	15% 40%
Mid	10%
Project	25%

Appendix 2: Grading Policy

Letter Grade	Marks %	Grade Point	Letter Grade	Marks%	Grade Point
A (Plain)	90-100	4.00	C+ (Plus)	70-73	2.33
A- (Minus)	86-89	3.67	C (Plain)	66-69	2.00
B+ (Plus)	82-85	3.33	C- (Minus)	62-65	1.67
B (Plain)	78-81	3.00	D+ (Plus)	58-61	1.33
B- (Minus)	74-77	2.67	D (Plain)	55-57	1.00
			F (Fail)	<55	0.00

Appendix-3: Program outcomes

POs	Program Outcomes
P01	An ability to apply knowledge of mathematics, science, and engineering
P02	An ability to identify, formulate, and solve engineering problems
P03	An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
P04	An ability to design and conduct experiments, as well as to analyze and interpret data
P05	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice
P06	The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
P07	A knowledge of contemporary issues
P08	An understanding of professional and ethical responsibility
P09	An ability to function on multidisciplinary teams
P010	An ability to communicate effectively
P011	Project Management and Finance
P012	A recognition of the need for, and an ability to engage in life-long learning