Division of Physical Sciences and Mathematics
College of Arts and Sciences
University of the Philippines Visayas
Miagao, Iloilo

Course : **CMSC 170**
Course Description : **Introduction to Artificial Intelligence**
Prerequisite : CMSC 123
Time & Room : TF 8:30 - 10:00 CL2
Instructor : John Roy Daradal
Consultation Time : MTThF 2:00 - 4:00, TF 10:00 - 11:00

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1. **Introduction to Artificial Intelligence**
    a. History
    b. Agents and Environments
2. **Planning and Search**
    a. Problem Solving as Search
    b. Uninformed Search
        i. Depth-First Search
        ii. Breadth-First Search
        iii. Uniform-Cost Search
    c. Informed Search
        i. Heuristics
        ii. Greedy Search
        iii. A* Search
    d. Constraint Satisfaction Problems
        i. Backtracking Algorithm
        ii. Filtering
        iii. Variable and Value Ordering
    e. Local Search
        i. Hill Climbing
        ii. Simulated Annealing
        iii. Tabu Search
    f. Population-Based Search
        i. Genetic Algorithms
        ii. Swarm Optimization
    g. Adversarial Search
        i. Minimax Search
        ii. Alpha-Beta Pruning
    h. Search in Uncertainty
        i. Uncertainty
        ii. Expectimax Search
3. **Machine Learning**
    a. Supervised Learning
        i. Naive Bayes
        ii. K-Nearest Neighbors
        iii. Decision Trees
        iv. Support Vector Machines
        v. Ensemble of Classifiers
        vi. Neural Networks
        vii. Deep Learning
    b. Unsupervised Learning
    c. Reinforcement Learning

REFERENCES

1. Russell, S. and Norvig, P. *Artificial Intelligence: A Modern Approach, 3rd edition,* 2010.
2. Poole, D. and Mackworth A. *Artificial Intelligence: Foundations of Computational Agents,* 2010.
3. Segaran, T. *Programming Collective Intelligence,* 2007.

COURSE REQUIREMENTS

70% Machine Problems
20% Final Project
10% Assignments and Quizzes

***PASSING GRADE*: 60%**

GRADING SYSTEM

Range	**Equivalent**
100-96	1.0
95-91	1.25
90-86	1.5
85-80	1.75
79-75	2.0
74-71	2.25
70-67	2.5
66-63	2.75
62-60	3.0
59-50	4.0
49-0	5.0