CPE 371 457 640 Artificial Intelligence

Course Syllabus for the 2nd Semester in 2024

Department of Computer Engineering, KMUTT

AI-2025 at Room 1114 Thursday (Thai) & Wednesday (English & Masters) 18:30PM–21:30PM

Instructor

Asst. Prof. Jumpol Polvichai, PhD. **Tel. 02-470-9261** **email: jumpol@gmail.com**
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Course Description

At the end of this class, students should be familiar with the fundamental components of Artificial Intelligence. In addition, students should be able to design their own intelligent system and implement of such a system with their own fields of interest. The course plans to provide students hand-on experience along with theoretical knowledge in which students can learn a further framework for separating and connecting approach to the research field of Artificial Intelligence. Students will be encouraged to discuss the very broad range of AI applications especially in machine learning area. At the end of the course, the course aims to help students to take the first step toward modern approach of AI research by introducing current advanced AI topics.

Learning Outcomes

Students who have completed this course should be able to:

1. Understand about fundamental topics of artificial intelligence
2. Study how to develop a small project of AI applications
3. Study and practice basic thinking method of some machine learning techniques

Course Outline

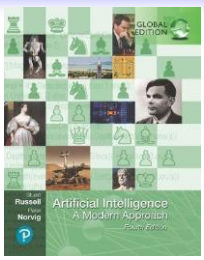
January 15/16	Introduction to AI + Intelligent Agents	Assignment 1
January 22/23	Problem Solving	Assignment 2
January 29/30	Heuristic Search	Assignment 3
February 5/6	Constraint Satisfaction Problems	Assignment 4
February 19	**(The First Exam)**	
February 26/27	Adversarial Search and Game Playing	Assignment 5
March 5/6	Logical Agent	Assignment 6
March 12/13	First Order Logic	Assignment 7
March 19/20	Planning + Uncertainty	Assignment 8 & 9
March 26/27	Bayesian Networks	Assignment 10
April 9	**(The Second Exam)**	
April 23/24	Decision Making	Assignment 11
April 30/ May 1	Reinforcement Learning	Assignment 12
May 7/8	Decision Tree Learning / Naïve Bayes Classifier	Assignment 13/14
May 14/15	Mini Project Implementation	
May 28	**(The Final Exam)**	

Evaluations

First Exam 20%, Second Exam 20%, Final Exam 25%, Assignments 20% and Mini Project 15%

Textbooks

- Stuart Russell and Peter Norvig, ***Artificial Intelligence: A Modern Approach***, Prentice Hall, 2021.
- Tom Mitchell, ***Machine Learning***, McGraw Hill, 1997.



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ก.พ. 68	Exam 1	17	18	19	20	21	22	23
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พ.ค. 68	Exam 3	19	20	21	22	23	24	25
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