Department of Mathematics
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Course	**Course Name**	**: Artificial Intelligence**
	Course Code	**: KM184724**
	Credit	**: 2**
	Semester	**: 7**

Description of Course
Artificial Intelligence is one of the branches of Science related to the use of computers to do the work normally done by humans. This is usually done by following / modeling the characteristics and analogy of thinking of human intelligence, and applying it as an algorithm known by computers. With a more flexible and efficient approach can be taken depending on the needs, which affect how the behavior of artificial intelligence arises.

Learning Outcome	
PLO 2	[C3] Students are able to solve simple and practical problems by applying basic mathematical statements, methods and computations
PLO 3	[C4] Students are able to analyze simple and practical problems in at least one field of analysis, algebra, modeling, system optimizations and computing sciences
PLO 4	[C5] Students are able to work on a simple and clearly defined scientific task and explain the results, both written and verbally either on the area of pure mathematics or applied mathematics or computing sciences

Course Learning Outcome
1. Students mamapu understand the definition of artificial curiosity, and history of development of artificial intelligence to the latest technology. 2. Students are able to understand how the concept of problem solving with heuristic search

3. Students are able to understand and instruct first-order logic
4. Students are able to understand and solve uncertainty problems through reasoning
5. Students understand the workings of rule-based expert systems, and implement on a small scale
6. Students are able to understand the heuristic method (MH)
7. Students are able to understand Swarm Intelligence method
8. Students are able to understand the concept of Natural Language Processing
9. Students understand practical examples of machine learning (machine learning)

Main Subject

1. History and Development of the present artificial intelligence
2. Method Searching
3. Inference Logic order 1
4. Inference in uncertainty (probabilistic)
5. Rule-based systems and expert systems
6. Heuristic Methods and Swarm Intelligence
7. Natural language processing

Prerequisites

Mathematical Logic

Reference

1. S. Russel and P. Norvig, "Artificial Intelliegence: A Modern Approach 3ed, Penerbit Person Education, 2010

Supporting Reference

1. Ian Millington, "Artificial Intelligencence for games:", Penerbit Elsevier, 2006
2. Andre Popov, "Genetic Algorithm for Optimization using MATLAB"Penerbit Wolfram, 2005