# EN844203 - Artificial Intelligence - 2566/2

## Syllabus

*Note: some changes to this syllabus may be made during the semester.*

**Course Description:**

Artificial Intelligence (AI) for computer games, AI design in computer games, deterministic AI, non-deterministic AI, searching, decision tree, finite state machine, fuzzy logic, rule-based system, scripted AI, planning, bayesian networks, genetic algorithm, natural language processing, neural networks, stochastic model, pathfinding by using A* and F* algorithm, strategies in games

**Prerequisites:**

None, but solid background in data structures, discrete math and programming in Python is strongly recommended

**Class Meeting:**

Mondays, 13:00 - 16:00 (and Fridays, 14:30 - 16:00 for makeup classes)
Room EN16201-S (and EN4303 for makeup classes)

**Google Classroom:**

TBA

**Instructor:**

Sarun Paisarnsrisomsuk ( sarunpa@kku.ac.th )
Please include [EN844203] in the email subject line for a prompt response

Office Hours

- Room EN4512
- Available by appointment via email

Anonymous feedback to the instructor:

- https://forms.gle/XzMAGCfnAsnE9gb58

**Textbooks** (**OPTIONAL**):

- Artificial Intelligence: A Modern Approach, 4th (or 3rd) edition, by Stuart Russell and Peter Norvig

**Grading:**

| | |
|---|---|
| In-Class Quizzes and participation | 14% |
| Programming Assignments | 36% |
| Exams | 50% |

*** Note: please review Academic Honesty Policy below ***

**Class Schedule:**

| Week | Date | **DUE** | Topic |
|---|---|---|---|
| 1 | Nov 13 | - | Introduction to AI |
| 2 | Nov 20 | - | Search Problems |
| 3 | ~~Nov 27~~<br>Makeup: Dec 1 | Quiz1 | Heuristic Searches |
| 4 | Dec 4 | - | Adversarial Searches |
| 5 | ~~Dec 11~~<br>Makeup: Dec 15 | Quiz2 | Constraint Satisfaction Problem |
| 6 | ~~Dec 18~~<br>Makeup: Dec 22 | - | Propositional Logic |
| 7 | Dec 25 | HW1 | First-Order Logic |
| 8 | ~~Jan 1~~<br>Makeup: Jan 5 | Quiz3 | Logic Inference |
| - | TBA | Midterm Exam | |
| 9 | Jan 15 | - | Classical Planning |
| 10 | Jan 22 | Quiz4 | Probability, Bayes' Theorem |
| 11 | Jan 29 | HW2 | Bayesian Networks |
| 12 | Feb 5 | Quiz5 | Temporal Probability Models |
| 13 | Feb 12 | - | Learning |
| 14 | Feb 19 | Quiz6 | Statistical Learning |
| - | ~~Feb 26~~ | - | - |
| 15 | Mar 4 | HW3 | Course Summary |
| | TBA | Final Exam | |

# Academic Honesty Policy

Academic honesty is a fundamental principle of learning. A student deserves to be credited for and only the work that he/she has done. Academic dishonesty is an act that interferes with the evaluation of academic performance and creates a misrepresentation of one's knowledge.

Academic dishonesty includes (**but not limit to**) the following examples:

- **Cheating**: using or attempting to use unauthorized materials to aid in academic work
  - Copying another student's academic work
  - Unauthorized communication during exams
  - Unauthorized use of materials or sources of information, such as cheat sheets, phones, preprogrammed calculators
- **Fabrication**: Falsification of information, data, or citation in academic work
  - Changing laboratory data
  - Altering grades
  - Citing a reference in bibliography that was not used
  - Changing answers and/or exam solution without permission
- **Facilitation**: Helping or attempting to help another student to commit an act of academic dishonesty
  - Sharing test questions or answers from exams, homeworks, or labs with another student
  - Doing academic work for another student
  - Allowing another student to copy a solution to homework problems, exams, or labs
  - Making previously used academic work available to another student who intends to submit for credit
- **Plagiarism**: Using the words, ideas, data, code, or other forms of material of another person without providing proper citation
  - Misrepresenting the work of another as one's own
  - Paraphrasing without citation
  - Inaccurately or inadequately citing sources

In this class, any act of academic dishonesty will be taken very seriously. Code plagiarism tools will be used. The instructor(s) reserves the right to fail a student who gets caught committing or attempting to commit academic dishonesty acts without giving any warning.