

# MLDM Introduction to Artificial Intelligence

**Course code: MLDM IAI**  
**ECTS Credits: 6.00**

**Course level:** Master



**Course instructors:** Fromont Elisa (UJM, Saint- Etienne),

**Education period (Dates):** 1st semester

**Language of instruction:** English

**Expected prior-knowledge:** Basis on graph theory and propositional logic.

## **Aim and learning outcomes:**

This course presents a basic introduction to AI tools: logic, prolog programming and operational research (search algorithms and linear optimization)

## **Topics to be taught (may be modified)~42h**

- Introduction to Logic (Propositional and First order logics and inference system) :10h
- Introduction to AI (history, problems' representation, heuristic and exhaustive search algorithms (depth, breadth, minimum cost, A\*, AO, AO\*): 12h
- Linear Optimization (SIMPLEX) : 8h
- Prolog and Constraint Programming : 12h

## **Practical Laboratory Sessions~18h:**

- Prolog Programming and CLP

**Teaching methods:** Lectures and lab classes.

**Form(s) of Assessment:** written exam (2/3), practical work (1/3)

**Examination support:** None

## **Literature and study materials:**

Basic textbook:

- *Artificial Intelligence: A Modern Approach, 3rd Edition*, Stuart Russell, Peter Norvig, Prentice Hall, 2010
- *The Art of Prolog, Second Edition: Advanced Programming Techniques (Logic Programming)*, Ehud Sterling, Leon Shapiro, 1994.

## **Additional information:**

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