

## **Artificial Intelligence (15 hours)**

This course is about the study of the design of intelligent computational agents, and the emergence of Artificial Intelligence (AI) as an integrated science. The focus is on an intelligent agent acting in an environment and searching for solutions to her problem in the best way she can envisage given the context.

Search is an important component of problem solving in artificial intelligence and, more generally, in computer science, engineering and operations research. Combinatorial optimization, decision analysis, game playing, learning, language understanding, planning, pattern recognition, robotics and theorem proving are some of the areas in which search algorithms play a key role.

We will go through basic search technologies, and we will see their application to different contexts.

### **Syllabus:**

- Artificial Intelligence and Agents
- States and Searching
- Reasoning with Constraints
- Propositions and Inference
- Supervised Learning
- Individuals and Relations
- Natural Language Understanding

### **Textbook:**

David Poole and Alan Mackworth: Artificial Intelligence - Foundations of Computational Agents (2nd Edition). Cambridge University Press, 2017. ISBN: 9781107195394.