

ECTS Code			
Title	Artificial Intelligence (1)		
Instructor	L. State		
Type (Compulsory, Elective, Optional)	Compulsory		
Structure	The number of weeks		
	Lectures	2	hours/week
	Seminars	0	hours/week
	Laboratory	2	hours/week
Period (semester 1-6)	5		
ECTS Credits	6		

Content:

- Knowledge modelling in first-order logic: the language of first-order logic - syntax and semantics;
- Formulas; Predicate calculus; Skolem normal form; Translating formulas to clausal form; Herbrand Models; Semantic Trees;
- Resolution in first order logic; SLD Resolution;
- Knowledge-based systems, Rules-based expert systems;
- Semantic Networks;
- Prolog;

References:

1. State, L., *Introducere în programarea logica*, Editura Fundatiei Romania de Maine, 2004.
2. Sterling, L., Shapiro, E., *The Art of PROLOG*, MIT Press, Cambridge, 1999.
3. Bratko, I., *PROLOG programming for artificial Intelligence*, Addison Wesley, 2001.
4. Nilsson, N., *Artificial Intelligence: A New Synthesis*, Morgan, Kaufmann, 1998.
5. Russell, S., Norvig, P., *Artificial Intelligence: A Modern Approach*, Prentice Hall, 1995.
6. Hein, J. L., *Prolog Experiments in Discrete Mathematics, Logic, and Computability*, Portland State University, 2005.
7. Bramer, M., *Logic Programming with Prolog*, Springer, 2005.