

General Information			
Course name ÚINF/UUI1/15	Introduction to Artificial Intelligence	ECTS Credits	3
		Semester	4
Aims			
To familiarize students with basic information about artificial intelligence techniques. To give students the opportunity to study the literature of the field more deeply as required.			
Content			
Goal of artificial intelligence, natural intelligence, edges of agent machine intelligence. Knowledge representation in AI (semantic networks, frames), reasoning. Problem solving in status space: non-informed versus informed deep and wide search, A*, solving of problems described as the game, iterative enhancement algorithms, problem solving by decomposition. Planning and scheduling, constraint logic programming, machine learning; computer vision: image recognition (flag described objects recognition, structural scene analysis), image preprocessing, image representation and description, object recognition. Natural language processing, artificial neural networks, knowledge systems (structure, characteristics, direct and backward reasoning, working with vague information), genetic algorithms, distributed artificial intelligence and multi-agent systems.			
Assessment Methods and Criteria			
<p>1. Attendance - students are expected to attend each class according to the schedule. Should the student miss three or more classes, he/she will not receive credits for the course no matter what his/her overall results are on the tests(s). The student must be on time for class.</p> <p>2. Active participation - students are required to do their best with respect to active participation in seminar sessions. Students are expected to bring their own copies of the required materials and complete the assigned tasks and exercises.</p> <p>3. Assessment – students will take 2 written tests. There will not be any re-take tests for the students who failed in one or both credit tests.</p> <p>Final assessment – scores of both tests will be summed up and it must be minimum 51%, which is a pass mark for the course. Otherwise, the students will not receive credits for the course. The final grade for the course will be based on the grading scale.</p>			
<p>Grading Scale (in %):</p> <p>A 91-100%</p> <p>B 81-90%</p> <p>C 71-80%</p> <p>D 61-70%</p> <p>E 51-60%</p> <p>FX 50 and less</p> <p>Grading System:</p> <p>The University recognizes the following six degrees for the evaluation of the study results:</p> <p>a) A – excellent (excellent results) (numerical value 1)</p> <p>b) B – very good (above average results) (1.5)</p> <p>c) C – good (average results) (2)</p> <p>d) D – satisfactory (acceptable results) (2.5)</p> <p>e) E – sufficient (results meet the minimum criteria) (3)</p> <p>f) FX –failed (requires further work) (4)</p>			

Bibliography

RUSSELL, S. J., NORVIG, P: Artificial Intelligence: A Modern Approach (2nd Edition), Prentice Hall, 2002

NEGNEVITSKY, M.: Artificial Intelligence: A Guide to Intelligent Systems (2nd Edition), Addison Wesley, 2004

LUGER, G.: Artificial Intelligence: Structures and Strategies for Complex Problem Solving (5th Edition), Addison Wesley, 2004

