Module Layout
COS512 / Introduction to Artificial Intelligence

Faculty	*ΣΘΕΕ*	*Faculty of Pure and Applied Science*		
Programme of Study	*COS*	*M.Sc. in Cognitive Systems*		
Module	*COS512*	*Introduction to Artificial Intelligence*		
Level of Study	**Undergraduate**	**Graduate**		
		Master	**Doctoral**	
		x		
Language of Instruction	English			
Mode of Delivery	Distance			
Module Type	**Required**	**Electives**		
	x			
Number of Group Consulting Meetings	***Total***	***Physical Presence***	***Online***	
	12 + 1 revision	-	12 + 1 revision	
Number of Assignments	1 Assignment / Project and 12 Interactive Activities			
Final Grade Calculation	**Interactive Activities**	**Assignment / Project**	**Final Exam**	
	24 **%**	*26* **%**	*50* **%**	
Number of European Credit Transfer System (ECTS)	*10*			

Module Description

The course covers fundamental notions from Artificial Intelligence, as a basis for subsequent courses. It introduces the notion of an autonomous agent, and presents basic architectures, elaborating on the role of perception, learning, and reasoning in these architectures. It discusses formal logics such as the Propositional and Predicate Calculi as a tool for representing cognitive (or common sense) knowledge in a symbolic form. It also discusses search in state spaces as a fundamental mechanism for problem solving and introduces blind search, heuristic search as well as search topics in constraints and in games. It then discusses learning as a process of induction from past experiences, and presents simple frameworks (such as learning in the limit) that formalize this and learning tools that can be developed according to this theory to help us acquire automatically common sense knowledge. The course will also introduce some preliminary aspects of Prolog programming, using Prolog as an induction approach to programming and other AI concepts.

Pre-requisite Modules

Co-requisite Modules

Grading Scheme

Assessment Method	***Percentage on Final Grade***	***Workload***	
		Hours	***ECTS***
Interactive Activities	*24* **%**	*25-30*	*1*
Assignment / Project	*26* **%**	*50-50*	*2*
Final/Repeat Examination	*50* **%**	*3*	-
Total	**100%**	***Total***	***Total***

Grading Rules and Assessment methods

- Passing rate
  - 50% of the Interactive Activities
  - 50% of the Assignment / Project
  - Students are allowed to participate in the final exam of a Module if they have overall earned the minimum grade (≥ 50 %) in both their Assignment / Project and Interactive Activities
  - 50% of the Final Exam

If a student earns a grade with decimal points, then it is rounded to the nearest half unit.