



Democritus University of Thrace, Kavala, Greece

School of Science
Department of Informatics

Department of European and International Programmes – Erasmus+

Agios Loukas, 654 04, Kavala University Campus, Greece
0030-2510-462221 & -290 & -308

Proposed Course for incoming Erasmus students¹

Responsible for the course (lecturer) (name, phone number, e-mail address)	Professor George A. Papakostas 0030 2510 462 321 gpapak@cs.duth.gr
Title of the Course	ARTIFICIAL INTELLIGENCE
ECTS credits	5
Short contents of the course	<ol style="list-style-type: none"> 1. Introduction to the subject. Correlation with other scientific areas. List of essential tools 2. Description (a) in state space and (b) by induction, and examples 3. Study of search algorithms, e.g. depth, breadth, "blind" search, "heuristic" search, etc. 4. Applications of search algorithms to two-opponent games 5. Consistency checking algorithms 6. Knowledge representations, reasoning and handling of uncertain knowledge 7. Probability theory with emphasis on Bayes' theorem and the Dempster-Shafer approach 8. Fuzzy sets, fuzzy logic and their applications 9. Agents and semantic web
Aim of the course and target audience	<ul style="list-style-type: none"> • The purpose of the course is to introduce the scientific area of Artificial Intelligence by presenting its historical development, studying mature technologies, and describing contemporary trends in a wide range of practical applications. Specifically, the course material aims to introduce students to basic search techniques, description, and their combination. Emphasis is placed on the identification of practical problems where search techniques can be applied such as two-opponent games, constraint satisfaction problems, etc. Also, the aim is the description of knowledge representations, various reasoning, as well as the description and distinction of various technologies/techniques for handling uncertain knowledge. Finally, the aim of the course is the recognition by the students of modern application fields of artificial intelligence methods with an emphasis on the internet. • Target audience: Undergraduate students of Informatics/Computer Science
Teaching Methods duration and Evaluation	Lectures: 39 hours Hands-on exercises: 26 hours Project: 20 hours Evaluation: 100% Individual AND/OR Group Assignments
Offered Period	Spring semester

Courses offered in English for incoming Erasmus+ students

Indicative bibliography	<ol style="list-style-type: none">1. S. Russell, P. Norvig, Artificial Intelligence: A Modern Approach, 2022.2. Artificial Intelligence
-------------------------	--

¹ Could be easily used and offered for TS movement to our Erasmus partners