

# Global Learning Semesters

## Course Syllabus

Course: COMP-405 Artificial Intelligence

Department: Computer Science

Host Institution: University of Nicosia, Nicosia, Cyprus



| Course Summary   |                         |   |
|------------------|-------------------------|---|
| Course Code      | Course Title            | Recommended Credit Hours                      |
| COMP-405         | Artificial Intelligence | 3   |
| Semester Offered | Contact Hours           | Prerequisites                                 |
| Fall             | 42                      | COMP-301 Data Structures and Senior Standing. |
| Department       | Level of Course         | Language of Instruction                       |
| Computer Science | Upper Division          | English                                       |

### Course Description

Topics to be covered: Problems and search, heuristic search techniques, semantic networks, predicate logic, representing knowledge using rules, reasoning under uncertainty (certainty factors, Bayesian Networks, Dumpster-Shaffer theory, Fuzzy Logic), game playing, expert systems, neural networks.

### Instructor

Dr Athena Stassopoulou

### Course Aims and Objectives

To provide an introduction to the theory and practice of Artificial Intelligence. To develop an understanding of the fundamental issues associated with the field such as problems and search, knowledge representation and reasoning, game playing, expert systems etc.

### Teaching Methods

The course is delivered through a mixture of lectures and assignments.

### Course Teaching Hours

42 hours. The course is delivered during the fall semester in 14-weeks (3 hours/week)

### Evaluation and Grading

|                                    |     |
|------------------------------------|-----|
| Homework/Attendance/Participation: | 5%  |
| Quizzes/ Projects/Assignments:     | 10% |
| Tests:                             | 35% |
| Final Exam:                        | 50% |

## Readings and Resources

### Required Textbook

E. Rich and K. Knight, Artificial Intelligence, McGraw Hill Inc

S. Russel and P. Norvig, Artificial Intelligence A Modern Approach, Prentice Hall, 2<sup>nd</sup> edition, 2003.

### Recommended Reading

G. F. Luger and W. A. Stubblefield, Artificial Intelligence Structures and Strategies for Complex Problem Solving, 3<sup>rd</sup> ed., Addison-Wesley, 1998.