Kingdom of Saudi Arabia

Ministry Of Higher Education

Majmaah University

Deanship of Quality assurance

and Human Development

Course Specification

Artificial Intelligence

CIS 363-Z

(Summary)

1431/1432

Course Specification

Institution : **Majmaah University**
College/Department : **College of Science in AL-Zulfi / Computer Science& Information**

A- Course Identification and General Information

1. Course title and code**: Artificial Intelligence - CIS 363-Z**
2. Credit hours: 3
4. Name of faculty member responsible for the course : **Mohammad Al-Othman**
5. Level/year at which this course is offered**: 6 level / 3 year**
6. Co-requisites for this course (if any) **: CIS 153**
7. Location if not on main campus **: College of Science in AL-Zulfi**

B- Objectives

1) Gain a historical perspective of AI and its foundations and establish the cultural background against which it has developed.
2) Know characteristics of programs that can be considered "intelligent".
3) Provide a thorough understanding of the types of problems solved using AI techniques and understand the different strategies for state space search.
4) Write LISP programs to solve AI problems.
5) Know a thorough treatment of the different types of heuristic search
6) Explore constraint satisfaction problems whose states and goal test conform to a standard, structured, and very simple representation.
7) Know classical examples of artificial intelligence such as game playing.
8) Provide a thorough treatment of the knowledge representation languages, which includes propositional calculus, predicate calculus, and first order logic.
9) The specification of different architectures for AI problem solving and inductive learning.

C- Course Description (Note: General description in the form to be used for the Bulletin or Handbook should be attached)

1. Topics to be Covered		
Topics	**No Of Week**	Contact hours
• Introduction	1	3
• Intelligent Agents	1	3
• Problem Solving • LISP programming	3	9
• Informed search methods	1	3
• Constraint Satisfaction Problems	2	6
• Adversial Search	2	6
• Logical Agents	1	3
• First-Order Logic	1	3
• Inference in First-Order Logic	1	3
• Knowledge Representation	1	3

2. Course components (total contact hours per semester):				
Lecture: 42	Tutorial:	Laboratory: 0	Practical/Field work/Internship	Other:

3. Additional private study/learning hours expected for students per week. (This should be an average: for the semester not a specific requirement in each week)

D- E-Learning Resources.

1. Required Text(s) : • **Artificial Intelligence A Modern Approach ,Stuart Russell & Peter Norvig ,Prentice Hall,2003, 3 edition .**
2. Essential References : • **Artificial Intelligence: structures and strategies for complex problem solving (2nd ed), by George F. Luger and William A. Stubblefield, Addison Wesley, 1998.** • **Essentials of Artificial Intelligence, by Matt Ginsberg, Morgan Kaufmann**
3- Recommended Books and Reference Material (Journals, Reports, etc) (Attach List) • **Common Lisp: The Language; Steele, G. L.; 2nd edition, Bedford MA, Digital Press 1990**
4-.Electronic Materials, Web Sites etc • **www.aima.cs.berkeley.edu** • **www.lispworks.com**
5- Other learning material such as computer-based programs/CD, professional standards/regulations

E- Assessment

Assessment Policy		
Assessment Type	**Week**	**Weight**
First Exam	**6**	**20%**
Second Exam	**12**	**20%**
Final Exam		**60%**
Total		**100%**