

ARTIFICIAL INTELLIGENCE1 COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

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| 1. Teaching Institution | University of Baghdad/ College of science for women |
| 2. University Department/Centre | Computer Science department |
| 3. Course title/code | Artificial Intelligence 1\306 CAI1 |
| 4. Programme(s) to which it contributes | |
| 5. Modes of Attendance offered | Actual attendance required for all students even in the case of (passed) student, and there is no study remotely and according to the ordered laws. |

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| 6. Semester/Year | Third class / First semester |
| 7. Number of hours tuition (total) | 60 hours (30 theoretical part, 30 practical part) |
| 8. Date of production/revision of this specification | 14 - 4 - 2016 |
| 9. Aims of the Course | |
| This course aims to introduce students to the field of artificial intelligence and its relationship with the knowledge of computers in a logical and practical manner | |
| To explain and clarify the challenges we face when building intelligent systems. | |
| It gives models and examples of intelligent systems and what are the basic techniques used in these systems. | |
| To study what are the artificial intelligence algorithms. | |
| As well as the identification of a modern programming environment .VISUAL PROLOG PROGRAMMING LANGUAGE, characteristics and advantages of the former and its programming. | |

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| 10. Learning Outcomes, Teaching ,Learning and Assessment Methode |
| <p>FF-Knowledge and Understanding</p> <p>A1. Understand the concept of intelligence, how do you characterize intelligent behavior and assessment, and what is artificial intelligence</p> <p>A2. Learn about the history of artificial intelligence and what are the other fields of knowledge associated with it.</p> <p>A3. Understand the concept of the knowledge base, importance, types, and methods of construction and representation.</p> <p>A4. Also you may have the ability to know which to assess the systems that have been built, its validity, and areas of weaknesses</p> <p>A5. Identification of intelligent agents and what are its components, their types and how they work and what are the most important applications in this area.</p> |

A6 . To identify the state space.

A7. Understand the methods of search and search strategies characteristic of each layer and when to use them.

A8. Identify new programming language visual prolog and how to apply them and put them in solving the problems above.

B. Subject-specific skills

B1. Choose the appropriate way to represent knowledge on specific application and depending on the volume this knowledge (information) and the nature and components and how connections between them.

B2. Choose the optimal way to represent the state space graph according to certain criteria regarding the nature of the issue or problem to be solved.

B3. Choosing the best way to search and search according to certain criteria.

Teaching and Learning Methods

- Education: provide printed lectures or modern sources and diverse and rich including examples.
- Education: Harnessing the blackboard to the goal of teaching students and explain the steps the solution and extraction results.
- Education: resolving some questions, with intent to contain mistakes and make the students extracted error.
- Learning: asking questions and inquiries and making the student turn into a teaching explanation and solution on the blackboard at that point.
- Learning: questions and direct all students to graduate to learn the extent of interaction and the rest to be paid attention to.

Assessment methods

- Quizzes (quiz) semi-weekly
- Reporting and in the form of aggregates by a report for each set and distributed it over students
- Asking questions sudden that overlapping with the explained Article
- laboratory tests on the computer and is written to enable the student to the solution without a computer

- monthly and quarterly tests

C. Thinking Skills

C1. Ask a group solutions to the same problem and discussed both individually and determine the appropriate method of solution to the problem at hand with a stand on the disadvantages of the rest of the methods

C2. Put forward solutions contain inaccuracies and identifying these mistakes After discussion and processed

C3. Asked oral exceptional questions that need exceptional answers as be of a specific weight in terms of grades, which are a strong incentive for student's participation and competition.

Teaching and Learning Methods

Discussions that arise in the course of the lecture, and an attempt to involve the largest possible number of students, and touched on the details of things and discussed objectively and targeted discussion.

Assessment methods

Oral evaluated by involving students in discussions

- Quizzes (quiz)
- laboratory tests on the computer and is written
- exams monthly and quarterly

D. General and Transferable Skills (other skills relevant to employability and personal development)

D1. Alert errors in students' oral answers and discuss to find out its mistake

D2. Alert on errors students' editorial answers and marking them to clarify to

the students

| 11. Course Structure | | | | | |
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| Week | Hours | ILOs | Unit/Module or Topic Title | Teaching Method | Assessment Method |
| 1 | 5 | An Introduction To AI | An Introduction To AI | According to point 10 above and as needed | According to point 10 above and as needed |
| 2 | 5 | AI application in various area | AI application in various area | According to point 10 above and as needed | According to point 10 above and as needed |
| 3 | 5 | Search Space and Strategies | Search Space and Strategies | According to point 10 above and as needed | According to point 10 above and as needed |
| 4 | 5 | Depth first Search Algorithm | Depth first Search Algorithm | According to point 10 above and as needed | According to point 10 above and as needed |
| 5 | 5 | Breadth first Search Algorithm | Breadth first Search Algorithm | According to point 10 above and as needed | According to point 10 above and as needed |
| 6 | 5 | Introduction to Search Space and Game Playing | Introduction to Search Space and Game Playing | According to point 10 above and as needed | According to point 10 above and as needed |
| 7 | 5 | Hill Climbing and Best First Search Algorithm | Hill Climbing and Best First Search Algorithm | According to point 10 above and as needed | According to point 10 above and as needed |
| 8 | 5 | Best first Search Algorithm | Best first Search Algorithm with Cost (A*) | According to point 10 above and as needed | According to point 10 above and as needed |

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| | | with Cost (A*) | | | |
| 9 | 5 | First exam | | | |
| 10 | 5 | | | According to point 10 above and as needed | According to point 10 above and as needed |
| 11 | 5 | Introduction To Knowledge Representation | Introduction To Knowledge Representation | According to point 10 above and as needed | According to point 10 above and as needed |
| 12 | 5 | Logic Representation: Propositional Logic | Logic Representation: Propositional Logic | According to point 10 above and as needed | According to point 10 above and as needed |
| 13 | 5 | Logic Representation: Predicate Logic | Logic Representation: Predicate Logic | According to point 10 above and as needed | According to point 10 above and as needed |
| 14 | 5 | Student presentations and class discussions | Student presentations and class discussions | According to point 10 above and as needed | According to point 10 above and as needed |
| 15 | 5 | Second seasonal exam | | | |

12. Infrastructure

Required reading:

• CORE TEXTS

1. George Luger, *Artificial Intelligence: Structures and Strategies for Complex Problem Solving*, Addison-Wesley, 2008
2. Stuart Russell and Peter Norvig, *Artificial Intelligence: A Modern Approach*, Prentice Hall, Englewood Cliffs, New

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| <ul style="list-style-type: none"> · COURSE MATERIALS · OTHER | <p>Jersey, 2010. 3. Visual Prolog Version 5.0: Get Started, Prolog Development Center, 1997</p> |
| Special requirements (include for example workshops, periodicals, IT software, websites) | |
| Community-based facilities (include for example, guest Lectures , internship , field studies) | |

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| 13. Admissions | |
| Pre-requisites | |
| Minimum number of students | Depending on the size of the classroom, according to the division of the people, 20 students |
| Maximum number of students | Depending on the size of the classroom, according to the division of the people, 30 students. |