

Ministry of Higher Education and Scientific Research

Supervision and Scientific Evaluation Body

Quality Assurance and Academic Accreditation Office

Course Description Sample

Subject: Advanced Intelligent Application

This course description provides a brief survey of the most important characteristics, expected learning output, showing whether students have made full use of the learning opportunities. These characteristics have to be matched with the description of the program.

1. Educational Institution	Shatt Al-Arab University College
2. Department / Center	Computer science Department
3. Course Title /Code	Advanced Intelligent Application
4. Lecturer Name	Associate professor Hayder Naser Kh.
5. Type of Teaching	Weekly / theoretical and practical
6. Academic Year /Term	By year
7. Total No. of Teaching Hours	120 hours
8. Date of Preparing this Course Description	01-10-2022

9. Course Objectives

- The aim of this course is to develop applications that use historical and real-time data from user interactions and other sources to make predictions and suggestions, delivering personalized and adaptive user experiences.
- The aim of this course to learn the artificial intelligent algorithms and the applications of these algorithms.
- This course aim to learn some applications in real life.

10. Course Output, Methodology and Evaluation

(A) Cognitive Objectives

- The student learns about intelligence programs and how they work.
- The student will identify the bugs and malfunctions that get in the software.
- The student learns about the basis for intelligence systems.

d. The student describes the progress and follow-up of technology in intelligence systems.
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(B) Skill Objectives Related to the Program:

a. The student developing the skill of experience and expertise in smart devices
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b. The student developing the skill of applying modern practical methods in the use of intelligence programs
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c. The student acquires the skill of using the best methods for AI
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Methods of Teaching and Learning

a. The presentation slides.

b. Supporting video tutorial.

c. Online International lecture.

Methods of Evaluation

a. Oral tests

b. Semester Exam

c. Daily quizzes

d. Lab

E. Final exam

(C) Sentimental and Value Objectives

A. He works in the spirit of one team

b. He abides by the ethics of the university institution.

c. Compliance with the University Instructions and the Ministry Regulations.
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d. Receives and accepts knowledge.

Methods of Teaching and Learning

a. Lectures on university instructions.

b. Educational guidance lectures.

c. Continuous directing.

d. Visiting State and private institutions.

e. Showing practical cases.

Methods of Evaluation

- a. Daily quizzes.
- b. Classroom discussions and commitment to ethics and sublime values.
- c. Special marks for class activities.
- d. Monthly and quarterly evaluation.

D) General and Qualitative Skills (other skills related to the ability of employment and personal development)

- a. Develop student work in AI laboratories
- b. Enabling students to apply the student's skills on its programs
- c. Enabling students to acquires the ability to his divisions.
- d. Enabling students to -----.

11. Course Structure

Week	No of Hours	Required Learning Output	Title of Subject	Teaching Method	Evaluation
1	4	understanding the material	Introduction to Applications in Artificial Intelligence	Tutorial and lab	-
2	4	understanding the material	Blocks World Problem-1	Tutorial and lab	-
3	4	understanding the material	Blocks World Problem-2	Tutorial and lab	Oral test
4	4	understanding the material	Example about blocks world	Tutorial and lab	Quiz
5	4	understanding the material	Introduction to genetic algorithm	Tutorial and lab	-
6	4	understanding the material	Genetic algorithm life cycle	Tutorial and lab	-
7	4	understanding the material	Genetic algorithm crossover and mutation	Tutorial and lab	-
8	4	understanding the material	Genetic algorithm example by using mathematical function (Example 1)	Tutorial and lab	-
9	4	understanding the	Genetic algorithm	Tutorial and	-

		material	example by using mathematical function (Example 2)	lab	
10	4	understanding the material	Genetic algorithm example by using travelling salesman problem (Example 1)	Tutorial and lab	Oral test
11	4	understanding the material	Genetic algorithm example by using travelling salesman problem (Example 2)	Tutorial and lab	Quiz
12	4	understanding the material	Introduction to Ant colony optimization algorithm	Tutorial and lab	-
13	4	understanding the material	Ant colony optimization algorithm life cycle	Tutorial and lab	-
14	4	understanding the material	Ant colony optimization rule construction and pheromone update	Tutorial and lab	-
15	4	understanding the material	Ant colony optimization example by using travelling salesman problem (Example 1)	Tutorial and lab	Assignment
16	4	understanding the material	Lab exam		Lab exam
17	4	understanding the material	First term exam		Written exam
18	4	understanding the material	Ant colony optimization example by using travelling salesman problem (Example 3)	Tutorial and lab	-
19	4	understanding the material	Introduction to Artificial neural networks	Tutorial and lab	-
20	4	understanding the material	Artificial Neural Networks Architecture	Tutorial and lab	-
21	4	understanding the material	The types of activation function	Tutorial and lab	-
22	4	understanding the material	Application of Artificial Neural Networks-1	Tutorial and lab	Oral test
23	4	understanding the	Application of	Tutorial and	Quiz

		material	Artificial Neural Networks-2	lab	
24	4	understanding the material	Expert systems	Tutorial and lab	-
25	4	understanding the material	Rules based expert system architecture	Tutorial and lab	-
26	4	understanding the material	Expert systems applications-1	Tutorial and lab	-
27	4	understanding the material	Expert systems applications-2	Tutorial and lab	-
28		understanding the material	Expert systems applications-3	Tutorial and lab	-
29	4	understanding the material	Lab exam		Lab exam
30	4	understanding the material	Second term exam		Written exam

12. Infrastructure

a. Textbooks	1-Applications in Artificial Intelligence. 2-Introduction to Genetic Algorithms. 3-Ant Colony Optimization. 4-Introduction to Data Mining.
b. References	Machine Learning and Artificial Intelligence
c. Recommended books and periodicals (journals, reports, etc.)	Artificial Intelligence Review – Springer Machine Learning - Springer
d. electronic references, internet websites, etc	https://www.tutorialspoint.com/matlab/matlab_overview.htm

13. The Plan of Improving the Course

a. Visiting intelligent laboratories.
b. Preparing an educational laboratory for intelligence systems.