Stage 3

Course Description Form

Course Description

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the available learning opportunities. It must be linked to the program description.

.1 Educational institution	Shatt al-Arab University
.2 Scientific Department/Center	Computer ScienceDepartment
.3 Course Name/Code	Intelligent Artificial Intelligence
4. Available forms of attendance	Weekly / Theoretical and practical
.5 Semester/Year	First semester / Third year
.6 Number of study hours (total)	60 hours
.7 Date this description was prepared	August 5, 2025
8. Course objectives	

9. Course outcomes, teaching, learning and assessment methods

A- Cognitive objectives A-1

The student will know some basic concepts about artificial intelligence A-2 Identify knowledge representation and its types of representations A-3 Identify the concept of clarity and some rules of inference and induction

A-4 Identify the problem spaces and research methods used in artificial intelligence. A-5 Identify how to use the Prolog programming language.

Teaching and learning methods,

assessment methods

- Participating in the classroom - Presenting activities

- Midterm and final exams and activities

C - Emotional and value-based objectives

C -1 Developing the student's ability to work on completing assignments and submitting them on time

C-2 Logical thinking to find solutions to problems Artificial intelligence and programming methods using logic language C-3 Developing the student's ability to dialogue and discuss

Teaching and learning methods

- Managing the lecture in a way that makes time feel important - Assigning the student some group activities and assignments - Allocating a percentage of Class for group activities

Evaluation methods

Commitment to the renewed appointment - Active participation in the classroom and practical laboratory is evidence of the student's commitment and responsibility - Assessment of assignments and research. Midterm and final exams reflect commitment and knowledge and skill achievement D - General and transferable qualification skills (other skills related to employability and personal development). D-1 Developing the student's ability to deal with technology D-2 Developing the student's ability to deal with the Internet D-3 Developing the student's ability to deal with various media D-4 Developing the student's ability to dialogue and discuss

10. Course structure

Evaluation method	Teaching method	Unit name/topic	Required learning outcomes	watches	The week
General questions and discussion	Theoretical and practical	Introduction to Artificial Intelligence + Introduction to Structured Programming	Introduction to Artificial Intelligence and General Concepts of Programming	4	The first
General questions and discussion	Theoretical and practical	AI characteristics, objectives, applications and issues + definition of variables, data types and variables In language Prolog	Introduction to Artificial Intelligence and General Concepts of Programming	4	the second
General questions and discussion	Theoretical and practical	The concept of a knowledge base and its representation methods + logical and mathematical	Knowledge representation and transactional study in Prolog	4	the third
General questions and discussion or exam	Theoretical and practical	operators. A study of the types of knowledge representation in AI. + Examples of logical relation	Representing knowledge and applying logical relationships	4	Fourth
General questions and discussion	Theoretical and practical	programming Study of the theorem proof in AI + Examples of mathematical	Study of the theorem proof and application of mathematical	4	Fifth
General questions , discussion and exam	Theoretical and practical	relation programming Applying the theorem proof A set of examples + Application language Prolog for solving mathematical problems and series	relationships Study of the theorem proof and application of mathematical relationships	4	Sixth
General questions Monthly discussion and exam	Theoretical and practical	Methods for studying mathematical deduction and induction Application of the language + Prolog for solving mathematical problems and sequences	Clarity and some rules of induction	4	Seventh
General questions and discussion	Theoretical and practical	Blind Search and Excavation + Introduction to Lists	Question spaces and research methods	4	The eighth

			The general structure of lists in Prolog		
General questions and discussion	Search in depth or not, theoretical and practical search in	breadth first + programming lists in Prolog	Blind search and menu programming	4	Ninth
General questions and discussion	Theoretical and practical	Hill Climbing Search, Best Search First + Programming deletion and addition operations,	Excavation and deletion/addition operations in lists	4	tenth
General questions , discussion and exam	branching and selection research , and theoretical and practical research	A* + Various programs using menus	Excavation research and various programs in the lists	4	eleventh
General questions and discussion	Theoretical and practical	Solve problems using AI methods + Member Relationship Programming	Artificial Intelligence Issues and the Concept of Belonging	4	twelfth
General questions Discussion and exam	Theoretical and practical	Solve problems using AI methods + Various programs using member	Artificial Intelligence Issues and Applications of the Belonging Relationship	4	thirteenth
General questions and discussion	Theoretical and practical	Basic concepts and components , building a knowledge hall and deduction method + Programming stuck merge lists append	Expert systems and the concept of integration relationship Lists append	4	fourteenth
General questions And a monthly exam	Theoretical and practical	Determinants in expert systems and some of their applications + various programs using append	Expert Systems and Applications append	4	fifteenth

11.Infrastructure

1. Stuart Russel, Peter Norvig, “Artificial Intelligence: A Modern Approach”, 3th edition, Prentice-Hall, 2009.	-1 Required textbooks

1. E. Charniak, D. McDermott, “Introduction to Artificial Intelligence", 4th edition, Addison Wisely, 2000. 2.Ivan Bratko, “Prolog Programming for Artificial Intelligence”, 4th edition, Pearson Education, 2011. 3. George F. Luger, “Artificial Intelligence: Structures and Strategies for Complex Problem Solving”, 6th edition, Addison Wesley 2008.	-2 Main references (sources)
https://www.journals.elsevier.com/artificial-intelligence	-3 Books and references recommended for reports (scientific journals, etc.)
https://download-internet-pdf-ebooks.com/88-1-library-books	4- Electronic references, websites

12. Curriculum development plan •
Visit the educational laboratories. • Visit the educational laboratories for smart devices. • Update the course resources and references regularly in accordance with recent developments in the specialization.