



Jordan University of Science and Technology
Faculty of Computer & Information Technology
Computer Science Department

CS362 Artificial Intelligence
Second Semester 2022-2023

Course Catalog
<p>3 Credit Hours. Introduction to the types of Artificial Intelligence problems and techniques. Problem-Solving methods. Major structures used in Artificial Intelligence programs. Introduction to Machine Learning. Study of knowledge representation techniques such as predicate logic, non-monotonic logic, and probabilistic reasoning. Application areas such as game playing, expert systems, natural language understanding, and robotics. Projects using one of the Artificial Intelligence programming languages.</p>

Text Book	
Title	Artificial Intelligence: A Modern Approach
Author(s)	Stuart Russell & Peter Norvig
Edition	4th Edition
Short Name	Textbook
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
TextBook2	Data Mining: Concepts and Techniques	Jiawei Han, Micheline Kamber and Jian Pei	3rd Edition	

Instructor	
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Instructor

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Class Schedule & Room	
Section 1: Lecture Time: Sun, Tue : 11:30 - 12:30 Room: N4203 Section 2: Lecture Time: Sun, Tue : 12:30 - 13:30 Room: M2011	

Prerequisites		
Line Number	Course Name	Prerequisite Type
1732841	CS284 Analysis And Design Of Algorithms	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Introduction	Ch1 From Textbook
Week 2	Intelligent Agents	Ch2 From Textbook
Weeks 2, 3, 4	Problem Solving as Search	Ch3 From Textbook
Weeks 4, 5	Search in Complex Environments (4.1)	Ch4 From Textbook
Week 6	Constraint Satisfaction Problems	ch6 From Textbook
Week 7	Adversarial Search	ch5 From Textbook
Weeks 8, 9, 10, 11, 12, 13	Machine Learning	Selected Chapters From TextBook2
Weeks 13, 14	Extra Topics from Knowledge, reasoning, and planning (Logical Agent)	ch7 ch8 ch9 ch12 ch13 From Textbook

Mapping of Course Outcomes to Program Student Outcomes	Course Outcome Weight (Out of 100%)	Assessment method

Ability to apply fundamental AI concepts in analyzing, designing and implementation of intelligent agents that solve some of the AI problems such as problems in local search and optimization, adversarial search and games, constraint satisfaction problems, knowledge representation and reasoning and handling uncertainty and the ability to the distinguish fundamental concepts of Artificial Intelligence (AI). [1SO1]	75%	
Ability to implement a project to produce AI computing-based solutions. [1SO6]	25%	

Relationship to Program Student Outcomes (Out of 100%)					
SO1	SO2	SO3	SO4	SO5	SO6
75					25

Evaluation	
Assessment Tool	Weight
Midterm Exam	25%
Activities	25%
Final Exam	50%

Policy	
Attendance	Attendance is very important for the course. In accordance with university policy, students missing more than 10% of total classes are subject to failure. Penalties may be assessed without regard to the student's performance. Attendance will be recorded at the beginning or end of each class.
Homework/Lab	Students are expected to keep up with the material as it is presented and submit assignments on time.
Exams	All exams will be CLOSE-BOOK; necessary algorithms/equations/relations will be supplied as convenient. The date of the Exams will be scheduled later.
Note	Some adjustments in the topics timeline per week could be modified as required.

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