University of Puerto Rico
Mayagüez Campus
College of Engineering
Department of Electrical and Computer Engineering
Bachellor of Science in Computer Engineering

Course Syllabus

1. General Information:
Alpha-numeric codification: ICOM5015 Course Title: Artificial Intelligence Number of credits: 3 Contact Period: 3 hours of lecture per week

2. Course Description:
English: An Introduction to The Field of Artificial Intelligence: LISP Language, search Techniques, Games, Vision, Representation of Knowledge, Inference and Process of Proving Theorems, Natural Language Understanding.
Spanish: Introducción al Campo de la Inteligencia Artificial: Lenguaje Lisp, Técnicas de Búsqueda, Juegos, Visión, Representacion del Conocimiento,inferencia y Proceso de Prueba de Teoremas, Entendimiento de Lenguaje Natural.

3. Pre/Co-requisites and other requirements:
Prerequisite ICOM4036

4. Course Objectives:
Introduce the students to the fundamental concepts of artificial intelligence and provide them the ability to analize and design intelligent systems.

5. Instructional Strategies:

☒conference ☐discussion ☒computation ☐laboratory

☐seminar with formal presentation ☐seminar without formal presentation ☐workshop

☐art workshop ☐practice ☐trip ☐thesis ☐special problems ☐tutoring

☐research ☐other, please specify:

6. Minimum or Required Resources Available:

7. Course time frame and thematic outline

Outline	Contact Hours
Introduction to AI	2
Programming in LISP language	6
Problem representation and search techniques	6
Search in game trees	2
Vision: scene analysis and the blocks world	7
Knowledge representation techniques including logic and semantic networks	7
Natural language understanding: grammars, parsing and natural language processing systems	7

	Quantity	Percent

Application of AI in various fields	6
Exams and discussions	2
Total hours: (equivalent to contact period)	45

8. Grading System

☒Quantifiable (letters) ☐ Not Quantifiable

9.   Evaluation Strategies

	Quantity	Percent
☒ **Exams**	**1**	**25%**
☒ **Final Exam**	**1**	**35%**
☒ **Short Quizzes**	**variable**	**10%**
☒**Oral Reports**	**1**	**5%**
☐ **Monographies**		
☐ **Portfolio**		
☒ **Projects**		**25%**
☐**Journals**		
☐**Other, specify:**		
TOTAL:		**100%**

10. Bibliography:

S. Russell and P. Norvig, Artificial Intelligence: A Modern Approach, Prentice Hall, Second Edition, 2001

Nilsson, N. J. Artificial Intelligence: A new Synthesis. Morgan Kauffman, San Francisco, 1998.

11. According to Law 51

Students will identify themselves with the Institution and the instructor of the course for purposes of assessment (exams) accommodations. For more information please call the Student with Disabilities Office which is part of the Dean of Students office (Chemistry Building, room 019) at (787)265-3862 or (787)832-4040 extensions 3250 or 3258.

12. Course Outcomes

	Map to Program Outcomes
1. Analize and apply different search techniques	(a)
2. Describe, analyze and apply techniques for constraint satisfaction problems	(a)
3. Describe, analyze and apply knowledge representation techniques including semantic networks, propositional and first-order logic	(a)
4. Describe, analyze and apply techniques for planning	(a)
5. Describe, analyze and apply uncertain reasoning techniques	(a)
6. Describe and explain learning algorithms	(a)
7. Design an application of Artificial Intelligence	(c)
8. Review and discuss current AI literature	(i)
9. Write and present a demonstration of and a technical paper about the AI system designed	(g)

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