

University of Puerto Rico
 Mayagüez Campus
 College of Engineering
 Department of Electrical and Computer Engineering
 Ph.D. in Computing Information Sci Eng

Course Syllabus

1. General Information:	
Alpha-numeric codification: ICOM6215 Course Title: Expert Systems Number of credits: 3 Contact Period: 3 hours of lecture per week	
2. Course Description:	
English: The Study of The History and Foundation of Expert Systems; Its use In The Analysis and Solution of Problems.	
Spanish: El Estudio de la Historia de Los Fundamentos de Los Sistemas Expertos;su Uso en el Analisis y Solucion de Problemas.	
3. Pre/Co-requisites and other requirements:	
4. Course Objectives:	
Students will analyze, a problem and state a solution using expert systems; determine when an expert systems is an adequate solution for a given problem; specify, design and implement expert systems	
5. Instructional Strategies:	
<input checked="" type="checkbox"/> conference <input type="checkbox"/> discussion <input type="checkbox"/> computation <input type="checkbox"/> laboratory <input type="checkbox"/> seminar with formal presentation <input type="checkbox"/> seminar without formal presentation <input type="checkbox"/> workshop <input type="checkbox"/> art workshop <input type="checkbox"/> practice <input type="checkbox"/> trip <input type="checkbox"/> thesis <input type="checkbox"/> special problems <input type="checkbox"/> tutoring <input type="checkbox"/> research <input type="checkbox"/> other, please specify:	
6. Minimum or Required Resources Available:	
Materials, equipment, and physical facilities needed to fulfill the course objectives.	
7. Course time frame and thematic outline	
Outline	Contact Hours
What are expert systems?	2
Overview of Artificial Intelligence.	1
Knowledge Representation.	6
Rule-based systems.	6
Associative Networks and Frame Systems.	4
Logic Programming.	4
Uncertainty Representation.	4
Knowledge Acquisition.	4
Heuristic Classification.	4
Constructive Problem Solving.	4

Designing for Explanation.	4
Introduction to Multiagent Systems.	2
Total hours: (equivalent to contact period)	45

8. Grading System

Quantifiable (letters) Not Quantifiable

9. Evaluation Strategies

	Quantity	Percent
<input checked="" type="checkbox"/> Exams	1	30%
<input checked="" type="checkbox"/> Final Exam	1	35%
<input type="checkbox"/> Short Quizzes		
<input type="checkbox"/> Oral Reports		
<input type="checkbox"/> Monographies		
<input type="checkbox"/> Portfolio		
<input checked="" type="checkbox"/> Projects	1	25%
<input type="checkbox"/> Journals		
<input checked="" type="checkbox"/> Other, specify: Assignments		10%
TOTAL:		100%

10. Bibliography:

- Giarratano, J. C. and G. D. Riley. Expert Systems – Principles and Programming, 2005. Thomson.
- Jackson, Peter. Introduction to Expert Systems, 1998, 3rd Edition Addison-Wesley.
- Gerhardt Weiss (Editor), Multiagent Systems, 1999. MIT Press.
- Stuart Russell and Peter Norvig Artificial Intelligence, 1995. Prentice Hall.
- Selected papers from journals and conferences from IEEE/IEE, ACM.

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.