UNIVERSITI TEKNOLOGI MARA

ECE663: EXPERT SYSTEM

Course Name (English)	EXPERT SYSTEM APPROVED
Course Code	ECE663
MQF Credit	3
Course Description	This subject provides an introduction to expert system. It introduces the student to the important concepts of expert system development and provides instructions on how to build various types of expert systems.
Transferable Skills	artificial intelligence
Teaching Methodologies	Lectures, Blended Learning, Lab Work, Tutorial, Presentation
CLO	CLO1 Describe the basic knowledge, learning methods and problem solving using expert system. CLO2 Analyze expert system techniques in related engineering application. CLO3 Implement and develop expert systems.
Pre-Requisite Courses	No course recommendations

Topics
1. Introduction to Expert Systems 1.1) Introduction to Expert Systems
2. Major characteristics of expert systems. 2.1) Major characteristics of expert systems.
3. Knowledge representation. 3.1) Knowledge representation.
4. Inference techniques. 4.1) Inference techniques.
5. Rule-based expert systems. 5.1) Rule-based expert systems.
6. Applications of expert system. 6.1) Applications of expert system.
7. Miniproject 7.1) n/a

Assessment Breakdown	%
Continuous Assessment	50.00%
Final Assessment	50.00%

Details of Continuous Assessment

Assessment Type	Assessment Description	% of Total Mark	CLO
Assignment	Rule-based expert system and applications.	6%	CLO2 , CLO3
Assignment	Expert system concepts and characteristics.	7%	CLO1
Assignment	Knowledge representation and inference techniques.	7%	CLO1 , CLO2
Test	Test 1	15%	CLO1 , CLO2
Test	Test 2	15%	CLO2 , CLO3

Reading List

Recommended Text

- **L. Johnson 1988, *Expert System Technologies: A guide*, Abacus Press**

Reference Book Resources

- **L. Bielausky 1988, *Expert System Development: Building PC based Applications*, QED Information Sciences**
- **E. F. Turban 1999, *Expert Systems and Applied Artificial Intelligence*, Macmillan Pub. Co.**
- **N. C. Virgil 1985, *Expert Systems and Fuzzy Systems*, Cunnings Pub. Co.**
- **A. B. Badiver 1992, *Expert Systems Application in Engineering & Manufacturing*, Prentice Hall**

Article/Paper List: This Course does not have any article/paper resources

Other References: This Course does not have any other resources