CPIS-420 Syllabus

Catalog Description

CPIS-420 Techniques of Decision Support Systems
Credit: 3 (Theory: 3, Lab: 2, Practical: 1)
Prerequisite: CPIS-320
Classification: Elective

The objective of this course is to extend the basic knowledge of DSS covered in the CPIS-230 by studying practical techniques and methods for DSS. Coupled with classical approaches, the course explores the latest techniques available for extracting suitable and relevant information to support making a wide range of decisions from day to day structured decisions, to complex unstructured decisions. In addition, the course also covers intelligent systems in particular relation to DSSs.

Class Schedule

Lab/Tutorial 90 minutes 1 times/week

Meet 50 minutes 3 times/week or 80 minutes 2 times/week

Textbook

Efraim Turban, Ramesh Sharda, Dursun Delen, , "Decision Support and Business Intelligence Systems", Pearson College Division; 9 edition (2010-01-26)

ISBN-13 9780136107293 **ISBN-10** 013610729X

Grade Distribution

Week	Assessment	Grade %
1	Graded Lab Work 1	1
2	Graded Lab Work 2	1
2	Homework Assignments 1	2
3	Graded Lab Work 3	1
4	Graded Lab Work 4	1
4	Quiz 1	3
5	Graded Lab Work 5	1
6	Exam 1	15
7	Homework Assignments 2	3
7	Graded Lab Work 6	1
8	Graded Lab Work 7	1
9	Quiz 2	3
10	Graded Lab Work 8	1
12	Graded Lab Work 9	1
12	Homework Assignments 3	5
12	Exam 2	15
13	Lab Exam	10
13	Quiz 3	4
14	Graded Lab Work 10	1
16	Comprehensive Final Exam	30

Last Articulated

April 17, 2018

Relationship to Student Outcomes

a	b	c	d	e	f	g	h	i	j
		x	x		x			x	x

Course Learning Outcomes (CLO)

By completion of the course the students should be able to

1. Explain the objectives and benefits of data mining for business analytics. (c)
2. **Use data mining as a tool to better understand business situations with the support of available data. (i)**
3. Describe artificial neural network and its different models (c)
4. **Use artificial neural networks to develop artificial business intelligence. (i)**
5. Implement collaborative computer-supported technologies for group DSS. (c)
6. **Apply basic concepts and processes of group work, communication, and collaboration. (f)**
7. Explain the underlying principles and capabilities of groupware, such as group support systems (GSS). (d)
8. Observe Group Support System products of the major vendors, including Lotus, Microsoft, WebEx, and Groove. (i)
9. Describe the role of emerging technologies in supporting collaboration. (c)
10. **Appraise the importance of knowledge management for decision support systems. (c)**
11. Use artificial intelligence to build expert Systems. (i)
12. **Explain basic concepts as well as tools and technologies for developing of rule-based expert systems for decision support. (j)**
13. Describe main concepts and process of machine-learning. (c)
14. Employ popular machine-learning methods to build advance intelligent systems. (j)

Coordinator(s)

Dr. Dimah Alahmadi, Associate Professor

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Topics Coverage Durations

Topics	Weeks
Data Mining for Business Intelligence	3
Artificial Neural Networks for Data Mining	3
Collaborative computer-supported technologies and group support systems	3
Artificial Intelligence and Expert Systems	3
Advanced Intelligent Systems	2