

CPIS-320 Syllabus

Catalog Description

CPIS-320 Decision Support Systems and Theory

Credit: 3 (Theory: 3, Lab: 2, Practical: 1)

Prerequisite: CPIS-250 , CPIS-220

Classification: Elective

The objective of this course is to study how Decision Support Systems (DSS) work and the theory behind different DSS techniques, thereby enabling them to understand today's turbulent business environment and how organizations survive and even excel in such environments (particularly solving problems and exploiting opportunities). This course provides the required skills and knowledge of the various decision-making models so that decisions can be based on logical and mathematical foundations under different circumstances, such as in cases of uncertainty, lack of information, or certainty. This course studies the design of computerized systems to support individual or organizational decisions. Moreover, the course aims at understanding the need for computerized support of managerial decision making and what was an early framework for managerial decision making.

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 %
2	Homework Assignments 1	5
3	Graded Lab Work 1	3
4	Quiz 1	3
6	Exam 1	15
6	Graded Lab Work 2	3
8	Project (Individual)	15
8	Graded Lab Work 3	3
10	Quiz 2	3
11	Homework Assignments 2	5
12	Exam 2	15
16	Comprehensive Final Exam	30

Last Articulated

October 24, 2017

Relationship to Student Outcomes

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

Course Learning Outcomes (CLO)

By completion of the course the students should be able to

1. Explain today's turbulent business environment and describe how organizations survive and even excel in such an environment. (i)
2. Appraise the need for computerized support of managerial decision making (i)
3. Describe the conceptual foundation of the decision support system (DSS) and business intelligence (BI) methodology and relate them each other. (i)
4. Appraise the major tools of computerized decision support and major issues in implementing computerized decision support systems. (j)
5. Apply conceptual foundations of decision making. (h)
6. **Apply Simon's four phases for decision making: Intelligence, Design, Choice, and Implementation. (j)**
7. **Develop major DSS components: the data management subsystem, the model management subsystem, the user interface subsystem, and the knowledge-based management subsystem. (c)**
8. Explain internet impacts on DSS and vice versa also describe DSS hardware and software platforms and DSS modeling language: Planners Lab. (j)
9. Describe the basic concepts of management support system modeling. (h)
10. **Use of spreadsheet for Management Support Systems modeling and solutions. (c)**
11. Apply the basic concept of optimization, simulation, linear programming and heuristic, and when to use them using several examples. (c)
12. **Define and explain (with practical examples) sensitivity analysis, what-if analysis, and goal seeking. (c)**
13. Explain the basic concepts of data warehousing, its architectures, and operations. (c)
14. **Describe the processes used in developing and managing data warehouses. (j)**

Coordinator(s)

Dr. Azrilah Abdulaziz, Assistant Professor

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Topics Coverage Durations

Topics	Weeks
Decision Support System and Business Intelligence	3
Decision Making, Systems, Modeling, and Support	3
DSS Concepts, Methodologies, and Technologies: An Overview	3
Modeling and Analysis	3
Data Warehousing for Business Intelligence	2