هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-104
2022

Course Specification

Course Title:	Decision Support Systems
Course Code:	BA3207
Program:	**Bachelor**
Department:	**Business**
College:	**Business**
Institution:	**Umm Al-Qura University**
Version:	**2**
Last Revision Date:	**5/2/2023**

Table of Contents:

No	List of Topics	Co Ho
1	Behavioural decision studies	8
2	Decision analysis and support	8
3	Artificial intelligence and expert systems	6
4	Decision analysis and multi-objective	6
5	Decision supporting systems	6
6	Design and evaluation of Decision supporting systems	6
...		
	Total	

#	Assessment task*	Week Due	Percentage of Assessment
1	Attendance and participation		10
2	course project	9th week	15
3	Group presentation	8th week	10
4	Quiz	4th week	10
5	Midterm	7th week	15
6	Final		40
7	Total		100
8			

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

A. General information about the course:

Course Identification					
1. Credit hours:	4 hours				
2. Course type					
a.	University ☐	College ☐	Department☒	Track☐	Others☐
b.	Required ☒	Elective☐			
3. Level/year at which this course is offered: level 10					
4. Course general Description The course provides the students with an introduction to automated business decision making processes. The course covers topics, including decision supporting systems concepts, combining qualitative and quantitative decision criteria in the decision-making process, modelling a business decision into a decision supporting system, multicriteria decision-making, and data envelope analysis.					
5. Pre-requirements for this course (if any): BA2203					
6. Co- requirements for this course (if any):					
7. Course Main Objective(s) The main aim of the decision supporting systems course is to provide the students with the skills of building decision supporting systems for various business applications in a programming language (Python).					

1. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1.	Traditional classroom	32	80%
2.	E-learning	8	20%
3.	Hybrid • Traditional classroom • E-learning		
4.	Distance learning		

2. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	40
2.	Laboratory/Studio	10
3.	Field	0
4.	Tutorial	0
5.	Others (specify) E- learning	
	Total	50

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	To be able to explain behavioural, normative and prescriptive models of decision making	K1	Lectures. Videos Class work and in class discussions.	Examinations, quizzes, presentations, assignments, analytical reports
1.2	To understand a range of modelling frameworks, methods and tools for designing prescriptive decision processes and facilitating business decisions	K3	Lectures. Videos Class work and in class discussions.	Examinations, quizzes, presentations, assignments, analytical reports
1.3	To be able to identity emerging trends in decision support technology	K1	Lectures. Videos Class work and in class discussions.	Quizzes and exams Individual projects
2.0	Skills			

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
2.1	Develop content and process skills for modelling and analysing critical decisions in prescriptive decision support	S1	Lectures. Videos Class work and in class discussions.	Examinations, quizzes, presentations, assignments, analytical reports
2.2	To combine qualitative and quantitative decision criteria in the decision-making process	S6	Lectures. Videos Class work and in class discussions.	Examinations, quizzes, presentations, assignments, analytical reports
2.3	To apply multi-criteria decision making and data envelope analysis	S5	Lectures. Videos Class work and in class discussions.	Quizzes and exams Individual projects
3.0	Values, autonomy, and responsibility			
3.1	To be able to transform real-world decisions in an automated decision-making	V3	Group discussions, assignments, case studies, group projects	Evaluation of case analysis in Teams, class presentations, Group Project evaluation & feedback on discussions

B. Course Content

No	List of Topics	Contact Hours
1	Behavioural decision studies	8
2	Decision analysis and support	8
3	Artificial intelligence and expert systems	6
4	Decision analysis and multi-objective	6
5	Decision supporting systems	6
6	Design and evaluation of Decision supporting systems	6
...		
Total		40

C. Students Assessment Activities

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Attendance and participation		10
2	course project	9th week	15
3	Group presentation	8th week	10
4	Quiz	4th week	10
5	Midterm	7th week	15
6	Final		40
7	Total		100
8			

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Simon French, Nadia Papamichail, John Maule. 'Decision Making: Behaviour, Analysis and Support' Cambridge: Cambridge University Press, 2009 Belton, V., Stewart, T. J. (2002), Multiple Criteria Decision Analysis: An Integrated Approach. Kluwer Academic Publishers: Dordrecht. Burstein, F., Holsapple, C.W. (2008) Handbook on Decision Support Systems 1, Springer, Part of the International Handbooks Information System book series (INFOSYS).
Supportive References	Xu, D. L. and Yang, J. B. (2003), Intelligent decision system for self-assessment, Journal of Multiple Criteria Decision Analysis, Vol.12, 43-60. Xu, D. L., McCarthy, G. and Yang, J. B., (2006) Intelligent decision system and its application in business innovative capability assessment, Decision Support Systems, Vol.42, pp.664-673.
Electronic Materials	
Other Learning Materials	Cooper, W. W, Seiford, L. M. and Tone, K. (2007), Data Envelopment analysis: a comprehensive text with models, applications, references and DEA Solver software. 2nd edition, Springer.

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classroom
Technology equipment (projector, smart board, software)	Blackboard collaborate – Data show- Blackboard Platform
Other equipment (depending on the nature of the specialty)	-

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Chair, Students, External Stakeholders Department and quality committee	Open discussions with the students Anonymous surveys
Effectiveness of students assessment	Chair, Students, External Stakeholders Department and quality committee	Checking marking by the students themselves if it's possible Using the help of other members in reviewing the assignments/exams
Quality of learning resources	Chair, Students, External Stakeholders Department and quality committee	Review of course portfolios Instructor assessment by students
The extent to which CLOs have been achieved	Chair, Students, External Stakeholders Department and quality committee	Course specifications are periodically reviewed at the departmental level. Courses are updated periodically and compared to the benchmark standards.
Other		

Assessor (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval Data

COUNCIL /COMMITTEE	BA DEPARTMENT
REFERENCE NO.	
DATE	5/02/ 2023