



COURSE / MODULE / BLOCK DETAILS

ACADEMIC YEAR / SEMESTER

Offered by: BUSINESS ADMINISTRATION			
Course Title: INTELLIGENT SYSTEMS		Course Org. Title: INTELLIGENT SYSTEMS	
Course Level: Bachelor's Degree		Course Code: QMT 4220	
Language of Instruction: English		Form Submitting/Renewal Date 22/01/2019	
Weekly Course Hours: 3		Course Coordinator: DOÇ.DR. GÜZİN ÖZDAĞOĞLU	
Theory	Application	Laboratory	National Credit: 3
3	0	0	ECTS Credit: 5



DOKUZ EYLUL UNIVERSITY



FACULTY OF BUSINESS ADMINISTRATION OFFICE OF THE DEAN

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Offered to:	Course Status: Compulsory/Elective
Name of the Department:	
BUSINESS ADMINISTRATION	Elective Course

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Instructor/s:

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Course Objective:

This course aims at developing the students' knowledge of business intelligence, basic concepts of intelligent systems and the basics of modeling approaches.

Learning Outcomes:

- 1 Demonstrate understanding of the basic topics of intelligent systems,
- 2 Practice business intelligence tools,
- 3 Demonstrate understanding of the basic concepts of data mining,
- 4 Build basic applications of expert and fuzzy systems
- 5 Apply intelligent system based models.

Learning and Teaching Strategies:**1. Lectures**

Class lecture is highly interactive and format is direct. The instructor prompts students for response to questions posed and solicits their thoughts on issues discussed. Lectures will focus on the transfer of basic intelligent system concepts and techniques where comprehension is substantially enhanced by additional elaboration and illustration. The emphasis is on business applications rather than rigorous mathematics.

2. Review Sessions and Class Discussions

Review sessions will be handled by the instructor each week in the last session of a lecture. In-class assignments and homework assignments are the basis of problems to be solved in these sessions. Individual participation by students in classroom discussion is strongly encouraged.

3. Computer Applications

In the laboratory component, Spreadsheet Software and a particular Intelligent System packages will be employed to perform analyses of problem domain. Instruction on the use of this software as it relates to decision making problems will be provided in class and in the book.

Assessment Methods:

Name	Code	Calculation formula
MIDTERM EXAM	MTE	
PARTICIPATION	PAR	



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CASE STUDY	CAS		
FINAL EXAM	FIN		
FINAL COURSE GRADE	FCG	MTE* 030 + PAR* 010 +CAS* 030 +FIN* 030	
RESIT	RST		
FINAL COURSE GRADE (RESIT)	FCGR	MTE* 030 + PAR* 010 +CAS* 030 +RST*030	

Further Notes about Assessment Methods:

1. Lab Assignments, Presentation, and Participation (20%)

Application problems will be assigned frequently. It is imperative that you work and understand these problems to successfully complete the course. It is strongly recommended the students to work all problems as a study tool for the exams.

By completing lab assignments, each student will enhance analytical skills, as well as, improve competency utilizing Spreadsheet Software and a appropriate package for decision analysis. By actively participating in class discussions and in-class assignments, each student will improve communication and analytical skills through learning decision theory concepts and business applications.

2. Termwork: Case Analysis (30%) and Real World Application (30%)

Case studies and real world applications will offer an excellent opportunity for students to perform operational analysis and develop solutions to realistic situations.

For the real world applications, a group including three students should be formed. Any deviation from this target number requires approval of the instructor. The cases will be assigned to each group by the instructor by the beginning of the semester. Topics consist of the case analysis of a decision making problems found in managing a business, government, or non-profit organization, whether product or service oriented.

Case and application reports will be submitted to the instructor prior to the end of the midterm week as both a handout and a digital file named as course, departmentname and groupname (for example, IntelligentSystems_Business_GroupOne). Each application report should be typed by using Microsoft Word and/or Excel and comprises the following: (i) a title page with the case title and full names of the authors, (ii) the main body of the report starting on the second page, and (iii) the report appendix.

Assessment Criteria:

1. Grade for Student Participation will depend on (i) your class attendance, (ii) the quality of the answers you provide to questions posed by the instructor during class, and (iii) the general contribution you make to the creation of a positive learning environment.



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2. A good attendance record may bring the grade up one level, for grades on the boundary between two grade levels.

3. The case analysis and real world applications require a cooperative effort. It is the responsibility of the team to assure that each team member has contributed approximately equally to the group work. Cases will be graded by the instructor and by the team members. Each member of the group will be asked at the end of the semester to evaluate his or her own contribution, and those of other team members. A peer evaluation form will be supplied during the last week of class.

4. Case reports and real world application reports will be evaluated for such factors as apparent understanding of the topic, originality of treatment and discussion, accuracy of results, comprehensiveness of the report's content and depth of the analysis, clarity and mechanics of presentation such as organization, format, punctuation, grammar, and quality of exhibits and charts.

Textbook(s)/References/Materials:

1. Text Books:

-Business Intelligence: Managerial Approach, Efraim Turban, Prentice Hall, 2011.

-Introduction to Data Mining , Pang-Ning Tan, Michael Steinbach, Vipin Kumar, Prentice Hall.

2. Lecture Slides:

Complementary of the text books.

3. Software tools:

MS Excel

Rapidminer

Course Policies and Rules:

1. Attending at least 70 percent of lectures is mandatory.

2. Plagiarism of any type will result in disciplinary action.

3. Absence will not be considered as an excuse for submitting homework assignments late.

4. Delayed case reports will suffer grade decay equivalent to one letter grade per day late.

5. Students are required to have their own calculator for this course. It will not be allowed to share a calculator during exams. Cellular phones cannot be used as a



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calculator during an exam.

Contact Details for the Instructor:

Assoc.Prof.Dr.Guzin Ozdagoglu
Dept.of Business Administration
Division of Quantitative Methods
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Office Hours:

TBA

Course Outline:

Week	Topics:	Notes:
1	Introduction and Basic Concepts	
2	Data, Data types, data warehouses	
3	Introduction to Data Mining Data Summarization, Visualization, Pivot Tables, OLAP Cubes	
4	Data Summarization, Visualization, Pivot Tables, OLAP Cubes	
5	Data Preprocessing Classification	
6	Classification	
7	Clustering	
8	Association Rules and Basket Analysis	
9	Text and Web Mining	
10	BI Implementation and Current Trends	
11	BI Implementation and Current Trends	
12	Presentations	

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ECTS Table

Course Activities	Number	Duration (hour)	Total Work Load (hour)
In Class Activities			
Lectures	10	3	30
Tutorials	2	3	6

Exams

Final	1	5	5
Midterm	1	2	2
Quiz etc.	0	0	0

Out of Class activities

Preparations before/after weekly lectures	8	1	8
Preparation for midterm exam	0	0	0
Preparation for final exam	1	10	10
Preparing assignments	8	5	40
Preparing presentations	1	5	5
Project Preparation	1	20	20
Total Work Load (hour)			126
ECTS Credits of the Course= Total Work Load (hour) / 25			5