The University of Jordan

Accreditation & Quality Assurance Center

COURSE Syllabus

1	S	special Topics – Business Analytics
2	Course number	1904485
3	**Credit hours (theory, practical)**	3 theory
	Contact hours (theory, practical)	3 theory
4	Prerequisites/co requisites	
5	Program title	**Business Information Technology**
6	Program code	**3**
7	Awarding institution	**The University of Jordan**
8	**Faculty**	**King Abdullah II School for Information Technology**
9	Department	Department of Business Information Technology
10	Level of course	**Bachelor**
11	Year of study and semester (s)	**Any**
12	Final Qualification	**BSc**
13	Other department (s) involved in teaching the course	**None**
14	Language of Instruction	**English**
15	Date of production/revision	**Fall 2022-2023**
16	Required/ Elective	**Elective**

Office numbers: 310
Office Hours: Any time Teams
Office extension: 22624
o.rababah@ju.edu.jo

18. Other instructors:

None

19. Course Description:

This course covers the development, implementation, and utilization of business models for managerial decision-making. Discovered patterns, relationships and statistical findings from Data Mining efforts are often used as input in these mathematical models, which are implemented in decision support systems.

Students will learn techniques for analytical modelling including decision analysis, optimization and simulation. Examples are introduced that cover applications in strategic planning, financial management, operations, project management, and marketing research.

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Course Objectives:

At the end of this course, students should …

1. Gain an understanding of how business problems are frequently solved using decision models. SO1
2. Develop an ability to identify situations where decision modelling can be useful. SO2
3. Understand the assumptions and limitations of decision modelling. SO1
4. Demonstrate an understanding of linear and non-linear programming, transportation and transshipment modelling, simulation, decision analysis, and goal programming for making multi-criteria decisions. SO1
5. Describe the concept and evolution of artificial intelligence. SO2

Successful completion of this course should lead to the following learning outcomes

A. Students should be able to implement analytical models in the software tools. In addition, students should be able to interpret the results of business analytics and their implications to business administrations.
B. According to the data analysis results, students should be able to make data driven decisions to optimize the business process and address issues in business administrations.
C. Demonstrate skill in reading, interpreting and publishing research papers.

Teaching and Learning Methodology:

Method	Lecture	Demo	Laboratory	Case study
Learning outcomes	A+B+C	A+B+C	A+B+C	A+B+C
Assessment	Exams + Assignment	Exams + Assignments	Exams + Assignments	Exams + Assignments

21. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
Chapter 1: - Essentials of Business Analytics.	1-2	**Osama**	A + B	**T**: Lecture **L**: Reading **A: in Class questions**	Reading from (Text book) **Ch01**
Chapter 2: - Descriptive Statistics	3-4	**Osama**	A + B	**T**: Lecture and presentation **L**: Reading lecture notes and Chap 2 **A: in Class cases**	Reading from (Text book) **Ch02**
Chapter 3: - Data Visualization	5-6	**Osama**	A + B	**T**: Lecture and presentation **A:** in Class questions	Reading from (Text book) **Ch03**
Chapter 4: - **Linear Regression**	7-8	**Osama**	A + B	**T**: Lecture and presentation **A:** in Class questions	Reading from (Text book) **Ch04**

MidExam					
Chapter 5: - **Time Series Analysis and Forecasting** **Data Mining**	**9-10**	**Osama**	A + B	**T**: Lecture and presentation **L**: Reading lecture **A:** in Class questions	Reading from (Text book) **Ch05** **Ch06**
Chapter 6: Spreadsheet Modeling and Decision Analysis: - Spreadsheet Models - Linear Optimization - Monte Carlo Simulation - Decision Analysis	**11-15**	**Osama**	C	**T**: Lecture and presentation **L**: Reading lecture notes **A:** in Class questions	Reading from (Text book) **Ch07** **Ch08** **Ch09** **Ch10** **Ch11** **Ch12**
Final Exam					

22. Teaching Methods and Assignments:

Development of ILOs is promoted through the following <u>teaching and learning methods</u>:

Lecture, lab and presentation

23. Evaluation Methods and Course Requirements:

Teaching (T) Strategies
Class Contact is 3 Hours per week. The Course will be delivered using different means like lecture, presentations, seminars, discussion and case studies.

Learning (L) Methods
Students attend classes, ask questions and participate in discussions, do the home works, present the assignments and demo their works. A student will use the lab and select a programming language to implement the assignments. Students will access the e-learning platform for more instruction and supported learning materials

Assessment (A) Methods
There will be several assessment methods of evaluation the performance of the students such as attending and class participation, grading the homework, quizzes and assignments; conducting the Midterm and the Final Exams. Every student is expected to completely adhere to the assignments and project strict deadlines, absolutely no exceptions will be given.

24. Course Policies:

A- Attendance policies:

Maximum allowable absence 15% of number of Lectures/Semester

B- Absences from exams and handing in assignments on time:

It is the student's responsibility to ensure that he/she is aware of all assignments, announcements and contents of missed sessions

C- Health and safety procedures:

Practical sessions need labs which are suitable adjustable chairs, safe computers and wires should be well organized.

D- Honesty policy regarding cheating, plagiarism, misbehavior:

It is the student's responsibility to ensure that he/she is adhere with cheating, plagiarism, misbehaviour

E- Grading policy:

Intended (Tentative) Grading Scale:

Grading and Evaluation Criteria: 100 points distributed as follows:

Weight	Criteria	Comments
30%	Midterm Exam (Automated)	TBA (in due course)
10%	Assignment	TBA (in due course)
20%	Presentation	Class participation
40%	Final Exam	

F- Available university services that support achievement in the course:

Computer Labs.

25. Required equipment:

1- Personal computers in a lab.

2- Data show

3- Excel 2016

26. References:

Text Book: Essentials of Business Analytics (1 st Ed.) by Camm/Cochran/Fry/Ohlmann/Anderson/Sweeney/Williams ISBN: 978-1-285-18727-3

Reference (s):

1. Spreadsheet Modeling and Decision Analysis: A Practical Introduction to Business Analytics (7th Edition) by Cliff Ragsdale ISBN: 978-1285418681
2. Online Student Resources: http://www.prenhall.com/divisions/bp/app/turban/dss/
3. Recommended books, materials, and media: https://elearning.ju.edu.jo

27. Additional information:

1. Tardiness and/or absenteeism will have a negative impact on the course grade.
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5. Concerns or complaints should be expressed in the first instance to the module lecturer; if no resolution is forthcoming then the issue should be brought to the attention of the module coordinator (for multiple sections) who will take the concerns to the module representative meeting. Thereafter problems are dealt with by the Department Chair and if still unresolved the Dean and then ultimately the Vice President. For the final complaints, there will be a committee to review grading the final exam.

6. For more details on University regulations please visit http://www.ju.edu.jo/rules/index.htm

Name of Course Coordinator: -Dr. Mohammed Eshtay------Signature: -- --- Date:1-9-2022----

Head of curriculum committee/Department: ------------------------- Signature: --------------------------------

Head of Department: ------------------------- Signature: --------------------------------

Head of curriculum committee/Faculty: ------------------------- Signature: --------------------------------

Dean: --- -Signature: --------------------------------

Copy to:
Head of Department
Assistant Dean for Quality Assurance
Course File