



T-104
2023

Course Specification

Course Title: Business Analytics

Course Code: BA3205

Program: BA Degree in Business Administration

Department: Business Administration

College: College of Business

Institution: Umm Al-Qura University

Version: 2

Last Revision Date: 8/04/2023



رئيس قسم إدارة الأعمال

د. فوزي زويد



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A. General information about the course:

Course Identification

1. Credit hours: 4

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

This course was developed to provide students with the fundamental concepts and tools to understand the important role of business analytics in organizations. Students will have an exposure to important descriptive and predictive statistical techniques and tools. The course aims to equip students with a critical understanding of data analytics, business intelligence, ethical and legal implications of data use, and machine learning in business environments; emphasize the importance of data pre-processing as the foundation of meaningful data analytics, business intelligence and machine learning pipelines; equip the students with the ability to select and apply relevant statistical and visualization tools to identify patterns and trends in large real-life datasets; and critically evaluate the results obtained. Although students will be introduced to some theoretical concepts, a much more emphasis is directed towards the practical side of gaining insights and aiding managerial decision through data analysis and interpretation. The course covers the application of multiple data analytics tools using: Excel, Tableau as well as the R programming language.

5. Pre-requirements for this course (if any):

6. Co- requirements for this course (if any):

7. Course Main Objective(s)

- Understand the different analytical tools available for data analysis (i.e. MS Excel, R)
- Determine the appropriate analysis to address the business need.
- Adopting best practices in terms of producing analytical results and reports.

1. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1.	Traditional classroom	16	40%
2.	E-learning	24	60%
3.	Hybrid - Traditional classroom - E-learning		
4.	Distance learning		

2. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	16
2.	Laboratory/Studio	
3.	Field	
4.	Tutorial	24
5.	Others (specify)	
	Total	40

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	Identify different concepts and techniques used for business analytics	K1	Lecture, Discussion	Exams, Participation
1.2	Outline the approach for understanding data types and the appropriate analytical tool to use	K3	Lecture, Discussion	Exams, Participation
1.3	Differentiate between the capabilities and use cases of different business analytics tools and techniques	K2	Lecture, Discussion	Exams, Participation
2.0	Skills			
2.1	Produce professional business analytics reports	S1	Lecture, Demonstration, Lab work	Assignments
2.2	Construct meaningful analytical dashboards	S5	Lecture, Demonstration, Lab work	Assignments
2.3	Build statistical models for aiding decision making	S6	Lecture, Demonstration, Lab work	Assignments
3.0	Values, autonomy, and responsibility			
3.1	Demonstrate values of integrity, ethical behavior, cooperation, and independence in both academic and personal contexts	V3	Course syllabus and class discussions	Assignments
3.2				
...				

C. Course Content

No	List of Topics	Contact Hours
1	Introduction to business analytics	4
2	Analytics on spreadsheets	4
3	Data exploration and visualization	4
4	Descriptive statistical measures	4
5	Probability distribution and data modeling	4
6	Sampling and estimation	4
7	Statistical inference	4
8	Trendline and regression analysis	4
9	Forecasting Techniques	4
10	Introduction to data mining	4
Total		40

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1	Attendance	Weekly	5%
2	Assignment 1: Descriptive analysis summary report	3	10%
6	Assignment 2: Data visualization dashboard and reports	5	10%
3	Midterm Exam	7	15%
4	Assignment 3: Linear regression analysis and forecasting using R	10	10%
5	Final Exam	12	50%

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Alberto Ferrari, Analyzing Data with Power BI and Power Pivot for Excel, 2016 Anil Maheshwari, Data Analytics Made Accessible, 2019 Edition R for Data Science (https://r4ds.had.co.nz/)
Supportive References	
Electronic Materials	Data files
Other Learning Materials	

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classroom, Demonstration lab
Technology equipment (projector, smart board, software)	Data Show, MS Excel, R, (Optional: Tableau)
Other equipment (depending on the nature of the specialty)	None

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



Assessment Areas/Issues	Assessor	Assessment Methods
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	8/04/2023

