QF05/0408-4.0 E	Course Plan for Bachelor program - Study Plan Development and Updating Procedures/ Management Department

Study plan No.	**2022/2021**		**University Specialization**	**MIS**	
Course No.	**0506416**		**Course name**	**Business Intelligence and Big Data**	
Credit Hours			**Prerequisite/ Co-requisite**	**0506221**	
Course type	☐ MANDATORY UNIVERSITY REQUIREMENT	☐ UNIVERSITY ELECTIVE REQUIREMENTS	☐ FACULTY MANDATORY REQUIREMENT / ☐ Support course family requirements	☑ Mandatory requirements	☐ Elective Requirements
Teaching style	☐ **Full online learning**		☑ **Blended learning**	☐ **Traditional learning**	
Teaching model	☐ **1 Synchronous: 1 asynchronous**		☑**1 face to face : 1 asynchronous**	☐ **2 Traditional**	

Faculty member and study divisions' information (to be filled in each semester by the subject instructor)

Name	Academic rank	Office No.	Phone No.	E-mail	
Division number	**Time**	**Place**	**Number of students**	**Teaching style**	**Approved model**

Brief description

The objectives of this course are: to understand business intelligence systems, tools and techniques, business intelligence concepts and methodologies, understand the issues in implementing BI. This course will examine Business Intelligence (BI) technologies that help a company to improve its business. It discusses BI topics from both managerial and technical perspectives. Managerial perspectives discuss how BI affects the organization's decision-making process, while technical perspectives discuss the foundation for an intelligent system. The course will discuss key issues starting from BI as a process and architecture, Warehousing, Online Analytical Processing, Data Mining, different data mining algorithms such as decision tress, etc.

Learning resources

Course book information (Title, author, date of issue, publisher ... etc.)	Sharada R., Delen D. and Turban E. Business Intelligence, Analytics, and Data Science: A Managerial Perspective. Pearson, 4th Edition (2017). ISBN: 978-0134633282			
Supportive learning resources (Books, databases, periodicals, software, applications, others)	Microsoft Power BI			
Supporting websites	https://powerbi.microsoft.com/en-us/			
The physical environment for teaching	☐ Class room	☑ labs	☑ Virtual educational platform	☐ Others
Necessary equipment and software	Microsoft Power BI Microsoft 365			
Supporting people with special needs				
For technical support				

QF05/0408-4.0 E	Course Plan for Bachelor program - Study Plan Development and Updating Procedures/ Management Department

Course learning outcomes (S= *Skills, C= Competences K= Knowledge,)*

No.	Course learning outcomes	The associated program learning output code
	Knowledge	
K1	Help Understand today's turbulent business environment and the need for computerized support managerial decision making	**MK1**
K2	Describe the business intelligence methodology and concepts and the major implementation issues	**MK2**
K3	Help understand basic Concepts, Architectures, Processes and Operation of Data Warehousing	**MK2**
K4	Define Data Mining Technologies, Objectives, Benefits and Applications	**MK1**
K5	To articulate the standardized Data Mining Processes, and Pitfalls	**MK3**
K6	Describe Text Mining and different Application Areas	**MK2**
K7	Explain the need for connecting BI systems with other IS	**MK3**
	Skills	
S1	Develop skills to use business intelligence tools and techniques in making decisions	**MS2**
S2	Develop teamwork and presentation skills	**MS1**
	Competences	
C1	To deeply describe the challenges in today's business environment To appreciate the role of IT in the decision-making process	**MC2**
C2	To clearly present the business intelligence concepts and methodology To appreciate the major implementation issues	**MC1**
C3	To articulate the concepts of Data warehousing To clearly describe the architectures, processes and operations of Data Warehousing To explore the local market in Data Warehousing Technology	**MC1**
C4	To identify the Big Data and Data Mining Technologies, Objectives benefits and applications To have hands on some Data Mining tools To explore the local market in the Data Mining Technology	**MC2**
C5	To understand the Data Mining Processes To clearly express the Data Mining Pitfalls.	**MC1**

Mechanisms for direct evaluation of learning outcomes

Type of assessment / learning style	Fully electronic learning	Blended learning	Traditional Learning (Theory Learning)	Traditional Learning (Practical Learning)
Midterm exam		**30%**		
Participation / practical applications		**0**		
Asynchronous interactive activities		**30%**		
Final exam		**40%**		

QF05/0408-4.0 E	Course Plan for Bachelor program - Study Plan Development and Updating Procedures/ Management Department

Note 1: Asynchronous interactive activities are activities, tasks, projects, assignments, research, studies, projects, work within student groups ... etc, which the student carries out on his own, through the virtual platform without a direct encounter with the subject teacher.

Note 2: According to the Regulations of granting Master's degree at Al-Zaytoonah University of Jordan, 40% of final evaluation goes for the final exam, and 60% for the semester work (examinations, reports, research or any scientific activity assigned to the student).

Schedule of simultaneous / face-to-face encounters and their topics

Week	Subject	learning style*	Reference **
1	Chapter 1: Introduction to Business Intelligence Changing Business Environment and Computerized Decision Support A Framework for Business Intelligence: Definition, History, Architecture, and Benefits	Lecture	
2	Chapter 1 : Introduction to Business Intelligence Intelligence Creation and Use Transaction Process versus Analytic processing	Lecture	
3	Chapter 1 : Introduction to Business Intelligence Successful BI Implementation Major BI Tools and Techniques	Lecture, learning through projects, learning through problem solving	
4	Chapter 2 : Data Warehousing DW definitions and concepts DW process DW Architectures	Lecture, learning through projects, learning through problem solving	
5	Chapter 2 : Data Warehousing Data Integration and the Extraction, Transformation, and Load	Lecture, learning through projects, learning through problem solving	
6	Chapter 2 : Data Warehousing Data Warehousing Development DW vendors, DW development approaches OLAP versus OLTP	Lecture, learning through projects, learning through problem solving	
7	Chapter 4 : Data Mining DM concepts and definitions DM applications DM process	Lecture	
	Mid Exam		
8	Chapter 4 : Data Mining DM methods	Lecture, learning through projects,	

	Artificial Neural Networks for Data Mining DM Software Tools	learning through problem solving	
9	Chapter 5 : Text and Web Mining Text Mining definitions and concept Natural Language processing	Lecture, learning through projects, learning through problem solving	
10	Chapter 5 : Text and Web Mining Text Mining Applications Text Mining Tools	Lecture, learning through projects, learning through problem solving	
11	Chapter 5 : Text and Web mining Web Content Mining and Web Structure Web Mining success Stories	Lecture, learning through projects, learning through problem solving	
12	Chapter 6 : Business Intelligence Implementation: Integration and Emerging Trends Implementation Overview Implementation Factors Managerial Issues in Implementation	Lecture, learning through projects, learning through problem solving	
13	Chapter 6 : Business Intelligence Implementation: Integration and Emerging Trends BI and Integration Types of Integration	Lecture, learning through projects, learning through problem solving	
14-15	Chapter 6 : Business Intelligence Implementation: Integration and Emerging Trends Connecting BI systems to Database Connecting BI to other Enterprise Systems	Lecture, learning through projects, learning through problem solving	
16	**Final Exam**		

*** Learning styles: Lecture, flipped learning, learning through projects, learning through problem solving, participatory learning ... etc.**
**** Reference: Pages in a book, database, recorded lecture, content on the e-learning platform, video, website ... etc.**

Schedule of asynchronous interactive activities (in the case of e-learning and blended learning)

Week	Task / activity	Reference	Expected results
1	From business perspective, provide the Definition, History, Architecture, and Benefits of Business Intelligence	Search Engines Books	Report
2	Explain how BI changing Business Environment and Computerized Decision Support	Search Engines Books	Report
3	Example about using	Search Engines	Use cases

QF05/0408-4.0 E	Course Plan for Bachelor program - Study Plan Development and Updating Procedures/ Management Department

	Transaction Process versus Analytic processing	Books	
4	Provide real case about the successful BI Implementation.	Search Engines Books	Use cases
5	What are the major BI Tools and Techniques		Report
6	What are the difference between Data Warehousing, DW process, and DW Architectures	Search Engines Books	Report
7	Explain the Data Warehousing Data Integration and the Extraction, Transformation, and Load	Search Engines Books	Report
8	Data Warehousing Development DW vendors, DW development approaches OLAP versus OLTP	Search Engines Books	Report
9	Data Mining DM concepts and definitions DM applications DM process	Search Engines Books	Report
10	Explain: Data Mining DM methods Artificial Neural Networks for Data Mining DM Software Tools	Search Engines Books	Report
11	Text and Web Mining Text Mining definitions and concept Natural Language processing	Search Engines Books	Report
12	Provide examples about the Text and Web Mining Text Mining Applications Text Mining Tools	Search Engines Books	Case studies
13	Provide a real case studies about the Web Mining success Stories	Search Engines Books	Case studies
14	Real case studies about the Managerial Issues in Implementation	Search Engines Books	Case studies
15	What are the Integration and Emerging Trends BI and Integration Types of Integration	Search Engines Books	Report
16	Critical success factors for Business Intelligence Implementation: Integration and Emerging Trends	Search Engines Books	Report