



Academic Course Specification Form

استمارة توصيف المقرر الأكاديمي

القسم الخاص بالطالب Section Concerning the Student

1. Course Code:	ITIS 414	1. رمز المقرر:
2. Course Title	Business Intelligence	2. اسم المقرر:
3. College:	College of Science	3. الكلية:
4. Department:	Department of Mathematics	4. القسم:
5. Academic Program:	Bachelor of Science in Statistics and Data Science	5. البرنامج الأكاديمي:
6. Course Credits:	3-0-3	6. عدد الساعات المعتمدة:
7. Course NQF Level	8	7. مستوى المقرر وفقاً للإطار الوطني للمؤهلات:
8. Notional Hours:	117.5	8. عدد الساعات الافتراضية:
9. NQF Credits	12	9. عدد الساعات المعتمدة للمقرر وفقاً للإطار الوطني للمؤهلات:
10. Prerequisite:	STAT 481 or ITIS 310	10. المتطلب المسبق للمقرر:
11. Lectures Timing & Location:	TBA	11. وقت المحاضرة ومكانها:
12. General Mode of Teaching and Learning	تقليدي Traditional	12. النمط العام للتعليم والتعلم:
13. Course Coordinator:	TBA	13. منسق المقرر:
14. Course Instructor:	TBA	14. مدرس المقرر:
15. Office Hours and Location:	TBA	15. الساعات المكتبية ومكانها:
16. Instructor's Email:	TBA	16. البريد الإلكتروني لمدرس المقرر:
17. Academic Year:	Click or tap here to enter text.	17. السنة الأكاديمية:
18. Semester:	First Semester الفصل الأول	18. الفصل الدراسي:

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University of Bahrain – Quality Assurance & Accreditation Center - Academic Course
Specification Form
May 2024

Changing any elements of the form is strictly prohibited.
يرجى عدم تغيير أي عنصر من عناصر الاستمارة

19. Textbook(s):	19. الكتب الدراسية للمقرر:
Sharda, R., Delen, D., and Turban, E. (2023). Business Intelligence Analytics, Data Science, and AI, 5 th ed. Pearson.	
20. References:	20. المراجع:
<ul style="list-style-type: none"> ■ Sharda, R., Delen, D., and Turban, E. (2018). Business Intelligence, Analytics, and Data Science: A Managerial Perspective, 4th ed., Pearson. ■ Shards, R., Delen, D., and Turban, E. (2015). Business Intelligence Analytics: Systems for Decision Support, 10th ed., Pearson. ■ Williams, S. (2016). Business Intelligence Strategy and Big Data Analytics: A General Management Perspective, Morgan Kaufmann. ■ Jaursen, G. and Thorlund, J. (2017). Business Analytics for Managers: Taking Business Intelligence Beyond Reporting, 2nd ed., Wiley. 	
21. Other learning resources used (e.g. e-Learning, field visits, periodicals, software, etc.):	21. مصادر أخرى (مثال : التعلم الالكتروني، زيارات ميدانية، دورات، برامج كمبيوتر، الخ....)
<ul style="list-style-type: none"> ■ BI Software, Research & Articles: https://www.softwareadvice.com/resources/bi/ ■ BI Case Studies and White Papers: https://www.sisense.com/resources/ ■ Open Source BI Tools: <ul style="list-style-type: none"> - Knowage: https://www.knowage-suite.com/site/home/ - Metabase: https://github.com/metabase/metabase - Blazer: https://github.com/ankane/blazer 	
22. Course Description (as published in the College Catalogue):	22. توصيف المقرر (حسبما ورد في دليل الكلية):
<p>This course introduces Business Intelligence (BI) and its components. The course shows how BI transforms the output from large data collections into intelligence leading to strategic and tactical business decisions. Topics covered include: BI technologies, data gathering, storing, accessing and analysis, BI application to the organization, data quality and validity, data privacy and security, data warehousing, analytical reporting, data visualization, and ethical and legal issues.</p>	
23. Course Intended Learning Outcomes (3 to 5 CILOs):	23. مخرجات التعلم للمقرر (CILOs) (3 إلى 5 مخرجات تعلمية):
<ol style="list-style-type: none"> 1. Describe detailed Business Intelligence (BI) concepts and methods. 2. Identify, model, and solve real world problems using BI in different settings. 3. Apply BI enabling technologies in organizational settings. 4. Interpret and assess BI results and identify appropriate courses of action. 5. Identify the major ethical, social, and legal issues related to BI. 	
24. Course Assessment Percentages (As per Regulations of Study and Examination at the University of Bahrain):	24. أساليب التقويم ونسبها المئوية (بحسب نظام الدراسة والامتحانات في جامعة البحرين):
Practical Assignments	20%
Midterm Exam	20%
Course Project	20%
Final Exam	40%
Total	100%

25. Description of Topics Covered:	25. وصف الموضوعات التي ينبغي تناولها:
Topic Title (e.g. chapter/experiment title) الموضوع	Description التفصيل
Introduction to the course	Introduction to the course
The need for BI	The importance of BI and applications
BI framework	BI definition, scope, and architecture
History of BI	Historical overview
Data analytics, types of data analytics	Meaning of data analytics. Types of data analytics: descriptive, predictive, and prescriptive
Descriptive analytics	Understanding what has happened in the past and providing businesses the perfect base to track trends
Descriptive analytics tools: visualization, reporting, dashboards, OLAP, and OLTP	Tools used to describe and understand what has happened
Business performance management and measurement	Collection, tabulation, and reporting of data relevant to a company's goals to support decision making
Predictive analytics	Techniques used to attempt answering the question: what might happen next?
Predictive techniques	Data mining: process, algorithms, and tools. Text mining, web mining, social media analytics, natural language processing, biomedical applications, sentiment analysis
Prescriptive analytics	Suggesting decision options, how to take advantage of a future opportunity, how to mitigate a future risk, studying the implication of each decision option
Prescriptive analytics tools and techniques	Model-based decision making, certainty and uncertainty, risk, multiple goals, sensitivity analysis, what-if analysis
Big Data	Big data concepts and tools
Privacy and managerial considerations in analytics	Privacy, ethical, legal, and managerial issues

26. Weekly Schedule			26. الجدول الأسبوعي:	
Week الإسبوع	Date التاريخ	Topics Covered المواضيع المعروضة	CIOs المخرجات التعلمية للمقرر (CIOs)	Teaching/Assessment Mode and Method منهجية ونمط التدريس/التقييم
01		Introduction to the Course. Need for BI in the new Business Environment	1	Traditional Teaching تدريس تقليدي
02		BI Framework: Definition, History, Architecture, Real time and On-demand BI	1	
03		Analytics: Descriptive, Predictive, Domains, Analytics Ecosystem In-class Practical Session	1, 2	
04		Descriptive Analytics: Nature of Data, Statistical Modeling	1, 2	
05		(Cont.) Visualization, Reporting, Dashboards In-class Practical Session	2, 4	
06		(Cont.) BI, Data Warehouse, Data Integration, Extraction, Transformation and Load, OLAP, OLTP	2, 4	
07		(Cont.) Business Performance Management and Measurement In-class Practical Session	2, 3, 4	
08		Predictive Analytics: Data Mining, Algorithms, Process, Tools, DM Privacy In-class Practical Session	2, 4, 5	
09		(Cont.) Text, Web, Social Media Analytics, Natural Language Processing, Biomedical Applications, Sentiment Analytic	2, 4	
10		Prescriptive Analytics: Optimization and Simulation In-class Practical Session	2, 4	
11		(Cont.) Model-based Decision Making, Certainty, Uncertainty and Risk In-class Practical Session	2, 4	
12		(Cont.) Decision Modeling, Multiple Goals, Sensitivity Analysis, What-if Analysis	2, 4	
13		Big Data Concepts and Tools: Definition, Fundamentals of Big Data Analytics, Big Data Technologies, Stream Analytics	1, 2, 4	
14		Privacy and Managerial Considerations in Analytics: Internet of Things, Cloud Computing, Location-based Analytics	1, 5	
15		Projects Presentations	2, 3, 4	

27. Academic Integrity Statement:	27. بيان النزاهة الأكاديمية:
Students are to observe the highest level of honesty and academic ethics in pursuit of their academic goals as per UOB Regulations of Student Conduct and Academic Integrity, Anti-plagiarism Policies , and Students' Rights and Responsibilities Handbook . The consequences for cheating, plagiarism, unauthorized collaboration, and other forms of academic dishonesty can be very serious and will be dealt with as per the aforementioned policies and regulations.	يعتبر الصدق والنزاهة عنصراً أساسياً في العملية الأكاديمية. حيث يُتوقع من الطلاب خلال سعيهم لتحقيق أهدافهم الأكاديمية التحلي بالأمانة والأخلاق في جميع الأوقات، وذلك وفقاً للوائح والأنظمة الخاصة بطلبة جامعة البحرين، بالإضافة إلى دليل حقوق الطلبة وواجباتهم ، وكما جاء في سياسة الانتحال الخاصة بجامعة البحرين : حيث سيتم التعامل مع أي انتهاك للنزاهة الأكاديمية بحسب ما تنص عليه السياسات والأنظمة السابق ذكرها.
28. Attendance and Absence Regulations:	28. نظام الحضور والغياب:
Students are required to adhere to regular attendance for class lectures and practical sessions, as determined by the nature of the course, as per Article (33), of Regulations of Study and Examination at the University of Bahrain .	يُتوقع من الطلاب الالتزام بالحضور المنتظم للساعات الصفية والعملية بحسب طبيعة المقرر، وفقاً للمادة (33)، من نظام الدراسة والامتحانات في جامعة البحرين .