Course Specification
(Bachelor)

Course Title:	Applied Project
Course Code:	**BIDA 271**
Program:	**Business Intelligence and Data Analysis**
Department:	**Computer**
College:	**Applied Collage**
Institution:	**Najran University**
Version:	**1**
Last Revision Date:	**7 July 2025**

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: (3 houres)					
2. Course type					
A.	☐University	☐College	☒ Department	☐Track	☐Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (1st Year, Term 3)					
4. Course General Description:					
This course enables students to apply data analysis, business intelligence tools, and visualization techniques to solve real-world business problems. Students will work in teams to design, develop, and present a data-driven solution or research project, demonstrating analytical thinking, technical proficiency, and business communication skills.					
5. Pre-requirements for this course:					
All the previous courses					
6. Co-requisites for this course (if any)**:**					
N/A					
7. Course Main Objective(s):					
Apply data analysis, business intelligence tools, and visualization techniques to solve real-world business problems. **Work in teams to design, develop, and present a data-driven solution or research project.** **Demonstrating analytical thinking, technical proficiency.** **Business communication skills.** **To develop presentation skills and to speak with audience.**					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	3 hours per week	100%
2	E-learning		
3	Hybrid • Traditional classroom • E-learning		

No	Mode of Instruction	Contact Hours	Percentage
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	0
2.	**Laboratory/Studio**	48
3.	**Field**	
4.	**Tutorial**	
5.	**Others (specify)**	
Total		48

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	Identify a real-world business problem and define a BI/Data Analysis project scope.	K2	Seminar Discussion Presentation Searching Teamwork	Weekly Report
1.2	Understand the basic concepts of scientific research methodology	K1	Discussion	Follow up Form. periodic evaluation
1.3				
2.0	**Skills**			
2.1	Apply statistical, machine learning, or BI techniques to derive insights.	**S2**	Seminar Discussion Presentations Brainstorming	Follow up Form. periodic evaluation
2.2	Visualize and communicate findings using professional tools	**S3**	Discussion Presentations Lab work	Final Presentation

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
2.3	Produce a structured technical report and deliver a formal oral presentation	**S2**	Teamwork	Final repor
3.0	**Values, autonomy, and responsibility**			
3.1	Demonstrate teamwork, project management, and ethical handling of data	V2	Small group work Group Presentation	Projects Group report

C. Course Content

No	List of Topics	Contact Hours
1.	Problem definition **and** Project idea submission	**3**
2.	Literature review and proposal development	**3**
3.	Data collection and preparation – Dataset documentation & preprocessing	**6**
4.	Exploratory data analysis (EDA) – EDA report	**6**
5.	Application of BI tools and analytics methods – Midterm report & demonstration	**9**
6.	Insight extraction and visualization design	**6**
7.	Final implementation and testing – Final model **-** Testing the software as one unit	**9**
8.	Report writing and formatting – Final report	**6**
9.	Presentation and defense – Oral presentation	
Total		**48**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	**Project Proposal and Plan**		**10**
2.	**Midterm Report & Demo**		**20**
3.	**Data Analysis & visualization**		**25**
4.	**Final Reprt**		**15**
5.	**Final Discussion**		**30**

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Information Technology Project Management , Kathy Schwalbe, 7th edition, 2014
Supportive References	Modern System Analysis & Design- Jeffrey Hpffer, Joey George, Joseph Valacich, 6th edition, Pearson • Benjamin Rosenzwing, Elena Silvestrova, Oracle PL/SQL by Example, Printice Hall, Latest Edition. • Sommerville, Software Engineering, Edition 8, 2007 • Herbert Schildt The Complete Reference, JAVA 2, Latest Edition, McGraw Hill Publishing Company Ltd . • Data Structures and Algorithms in Java, 5th Edition, by Michael Goodrich and Roberto Tamassia. • B.A. Forouzan, Data Communications and Networking, fourth edition, McGraw – Hill • Electronic Commerce 2010, A Managerial Perspective, Prentice Hall, (latest edition). Efraim Turban, Jae Lee, David King and Michel Chung Ethical and Social Issues in the Information Age, Joseph M. Kizza Springer; 4th Edition, 2010. "Data Science for Business" – Foster Provost & Tom Fawcett."Storytelling with Data" – Cole Nussbaumer Knaflic. "Business Intelligence Guidebook" – Rick Sherman
Electronic Materials	http://www.nu.edu.sa/web/guest/979. Najran University E.Library Saudi Digital Library
Other Learning Materials	• Microsoft Excel / Power BI • Tableau • Python (Pandas, Matplotlib, Scikit-learn) • SQL (MySQL / PostgreSQL)

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	General Lab Depending on the individual projects
Technology equipment (projector, smart board, software)	Smartboard Presentation Technology Computer with MS Office
Other equipment (depending on the nature of the specialty)	Depending on the individual projects, computational facilities will vary

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Student	Direct: Questioners
Effectiveness of Students assessment	Teacher Audit and review committees	**Reports evaluation**
Quality of learning resources	Teachers and course description committees	Indirect: Benchmarking Self-evaluation External evaluation
The extent to which CLOs have been achieved	Teacher	Direct: Measuring the learning outcomes
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	
REFERENCE NO.	
DATE	