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1. Introduction

Welcome to Analytics in Business Course in Master of Science in Business Analytics Program. The aim of this assessment is to develop your ability to appraise business analytics methods and processes and assess their values, you will be able to evaluate and apply a wide range of methodological approach to organize and analyse data, then you will critically evaluate the analytics you have developed in data management use.

In performing your tasks, carefully read each question that is in section 6 of this form.

2. Course Learning Outcomes assessed:

In this assessment you should be able to:

CLO2: Appraise projects and assess their value.

CLO3: Evaluate and apply a wide range of methodological approaches to organize and analyse social network data

CLO5: Synthesize and critically comment on a body of knowledge related to data and analytics principles and applications.

3. Program Learning Outcomes assessed:

The Course Learning Outcomes (CLOs) indicated above are mapped to your overall (MLOD) Program Learning Outcomes (PLOs). This assessment tests your achievement in the program with reference to the following PLOs:

PLO 1: Demonstrate a critical awareness of current issues in Business Analytics.

PLO 4: Apply a critical selection of appropriate research instruments and advanced analytical and problem solving skills to interrogate large data sets.

4. QFEmirates Level 9 assessed:

Please see Annex C for the detailed description.

Knowledge: KN2, KN3, KN4

Skills: SK1, SK2, SK4

Areas of Competency: AR1, AR3, RC1, RC2, SD1, SD2.

5. CoreLife Skills (Aligned to the QFEmirates)

The assessment will test the acquisition by the student of Core Life Skill (CLS) indicated by the CAA within the teaching framework of the overall course. CLS acquired on this course are the following: *Delete as appropriate*

Information	Collecting, analysing, organising and applying information in a given context
Communication	Communicating information, concepts and ideas
Mathematical/Problem Solving	Solving problems including using mathematical ideas and techniques

6. Assessment

Assessment Requirement:

Suppose your organization is facing a problem in their legacy system that analyses organization social network data. You as business analyst have to decide whether to buy a new software or upgrade their legacy system. Some influential stakeholders believe that by upgrading this software your organization can save millions, while others feel that staying with the legacy software is the safest option, the following alternatives would be taken into consideration:

- **Upgrade the legacy system:** The upgrading that is proposed to be done inside the organization itself will cost 70,000 AED and the probability of having successful upgrade is 40 % with revenue of 500,000 AED, on the other hand the unsuccessful upgrade could lead to loss only with no benefits.
- **Build new software:** To build the new software, this will lead to either a successful deployment (with probability of 40%) or an unsuccessful one. If the deployment is successful then the revenue is 900,000, However, if the deployment is unsuccessful, then losses will materialize and the impact is 90,000, which is the cost of building a new software in all cases.
- **Stay with the legacy software:** If the company decides to stay with the legacy software, the associated cost is mainly maintenance and will amount to 20,000.

You are hired as Business Analysts to investigate and analyse this situation. In your analysis, you are required to do the following:

- a) Develop the payoff table that is associated with all possible combinations of alternatives actions, then decide and evaluate on the optimal solution for the above scenarios. In your evaluation, you should show a comprehensive knowledge of using the five decision models that covered during the classes.

Now consider that another company offers to sell to your organization a new software that meets their requirements. In order to buy this new software, the associated cost is AED 900,000, and will lead to revenue of AED 1 million.

- b) Develop a decision tree that shows all previous set of alternatives with their outcomes (full decision tree is needed).
- c) Deduce and evaluate one optimal solution as a result of the analysis that you have developed in part b.
- d) Consider the probability of having successful upgrade is not known: what is the probability that you will negotiate for and will make you change the decision you indicated at point c above?
- e) Consider that the cost of buying a new software is not known and your organization wants to enter a negotiation with the company that offers selling them the new software, what is the price that your organization can pay so they will change their decision (in part c) and decide to buy the new software?
- f) As a Business Analyst, you are asked to propose another two new alternatives of action, design new full scenarios with their outcomes/costs/profits/probabilities and develop a new decision tree that includes all previous alternatives (including alternatives proposed in this part). Then, deduce and evaluate one optimal solution accordingly, with proper justifications that demonstrate your comprehensive knowledge in decision analysis gained during the course.

Submission Date: 15th of March

Your Terms of Reference:

As a **GUIDE ONLY**, this section outlines some of the aspects you may consider to be significant given the brief shown above. Your report should include:

- Executive Summary
- Payoff table with evaluations (a)
- Decision Tree (b)
- Optimal solution evaluations (c)
- New Decision Tree (d)
- Optimal solution evaluations (d)
- New Decision Tree (e)
- Optimal solution evaluations (e)
- New proposed alternatives (f)
- New Decision Tree (f)
- Optimal solution evaluations (f)

Assessment Rubric: (Reports)

INDIVIDUAL OUT OF CLASS REPORT RUBRIC					
Descriptor	Weight	100-90	89-80	79-70	Under 70
Identified the general purpose of the task given	15%	The written text very clearly and effectively demonstrates the student's ability to identify the specific task in a direct and succinct manner.	The written text adequately demonstrates the student's ability to identify the specific task in a direct manner.	The written text partially demonstrates the student's ability to identify the specific task.	The written text does not demonstrate the student's ability to identify the specific task
Articulation. Literature and information relevant to the context of the task	20%	Thoroughly researched. Literature is gathered from multiple, research-based sources. Identifies gaps and provides sound arguments.	Literature is gathered from multiple sources. Identifies gaps and provides arguments.	Literature is gathered from a limited number of sources. Focused and purpose driven.	Literature is gathered from a single source. Review is not a fit for the purpose of the task.
Careful analysis, assumptions appraisal and interpretation of the main concepts, models and theories tested by the task	30%	Makes careful analysis by making strong assumptions and arguments. Focused, Persuasive and Interesting.	Supports arguments with facts and evidence and relates to aspects of concepts and theories.	Merely describes aspects of theories, issues or concepts.	Does not even know where to begin with the data. Random points, with unsupported conclusions.
Conclusions and recommendations	25%	Synthesizes key points succinctly. Proposes original recommendation based on relevant concepts, theories, models.	Restates the key points. Proposes some recommendation based on relevant concepts, theories, models.	Merely summarises the points. Proposes recommendations based on generic ideas	No key points summarized. No recommendations
The written text demonstrates clear, logical and sequential arrangement of paragraphs which enhance the reader's understanding of the ideas.	10%	The written text demonstrates logical and sequential arrangement of paragraphs which aid the readers understanding. Contains few or no errors in sentence formation but do not interfere with comprehension.	The written text adequately demonstrates a sequential arrangement which aid the understanding of the ideas presented. Contains errors in spelling, grammar, sentence structure but has limited interference with comprehension.	The written text demonstrates an arrangement of paragraphs but not in a logical or sequential manner. The weak organization provides little comprehension of the ideas presented.	The written text demonstrates a confusing arrangement of paragraphs. The lack of organization makes it difficult for a reader to understand the ideas presented
	100%				
Instructor Name and Signature				Date	

Assessment Marking Scheme:

Grading Scale	
Letter Code	Percentage
A	93 - 100
A-	90 - 92
B+	87 - 89
B	83 - 86
B-	80 - 82
C+	77 - 79
C	73 - 76
C-	70 - 72
F	Less than 70

Assessment Format:

One online submission portal copy to be submitted. Please use a front sheet, (Annex A) and include a blank assessment discussion form (Annex B).

Standard academic presentation is required, including:

- Concise and appropriate language
- Fully referenced using the (APA) method, containing all sources used for each piece of work
- Unless advised otherwise, all work should be spaced at 2.0, and handed in via the LMS
- Please note that for all submitted work it is recommended that you use the (Times New Roman) font, regular style and ensure that you use font size (12)
- Insert page numbers

All assessments **must** include a front sheet with your name, degree, course, date, assessment number and title as well as a blank assessment discussion form.

7. Recommended Reading (Guide)

Text Books:

Business Analytics, (2017), James Evans, Second Edition. Pearson Publications

Business Intelligence: A Managerial Approach, Global Edition, 4/E, (2014) Ramesh Sharda, Oklahoma State University, Dursun Delen, Oklahoma State University, Efraim Turban, University of Hawaii, David King, Comshare, Inc. Pearson Publications.

Keeney, R. L. (1982). Decision analysis: an overview. *Operations research*, 30(5), 803-838.

Master of Science in Business Analytics

Assessment Cover Sheet

Instructions For Use

1. Enter below the **Student ID** number and **Name: Cohort, Course Name, Instructor's Name, Assessment Number** and **Semester** in which the course was taken e.g. Spring 2019.
2. Attach this Cover Sheet as the front page of the assessment.
3. Remember to keep a copy of this assessment for your record.

Student Name:	
Student ID:	
Cohort:	
Course Name:	
Instructor's Name:	
Assessment Number:	
Semester:	

DECLARATION

By submitting this coversheet electronically, we confirm that the assignment we are uploading is wholly our own work, with the exception of the work of others which has been referenced. This assignment has not previously been submitted for any studies we have undertaken. I also confirm that we are aware of what constitutes plagiarism, and understand the penalties imposed should plagiarism be detected.

STATEMENT ON PLAGIARISM AND ACADEMIC INTEGRITY

Plagiarism is a form of academic dishonesty. It is taking and using someone else's thoughts, writings or inventions and representing them as your own without giving credit to the original author(s).

If you have any doubts about how to refer to the work of others in your assignments, please consult your instructor or visit the Academic Support Center for relevant referencing guidelines. The intentional copying of someone else's work as one's own is a serious offence and may result in penalties including deduction of marks, or failing the course. Refer to the Student Academic Integrity Policy (5.r) for further information on plagiarism and associated penalties.

Assessment Discussion Form

Academic Year 2019 – 2020

Term: Fall Spring

PURPOSE

The purpose of this form is to ensure the quality and integrity of student answers in assessments used in various courses offered at Abu Dhabi School of Management (ADSM). It will be the joint responsibility of the course instructor and the student to make sure that the student is able to discuss his/her position in the assessment document (uploaded on LMS according to published deadlines) and justify answer's alignment with QFEmirates Level 9 strands required in the assessment.

INSTRUCTIONS

Section A: This section should be completed by the course Instructor responsible for teaching a particular course and for each assessment given in one course.

Section B: This section is to be completed by the course instructor according to the description of assessment in the course syllabus. The instructor needs to report the CLO number, the CLO description, the Program Learning Outcomes (PLOs), and QFEmirates strands as designed and assessed in the assessment.

Instructor will input in each of the following columns related number of PLO and strand assessed in the assessment.

This process must be carried out for all the number of Course Learning Outcomes (CLOs) to be measured in the assessment.

Section C: This section is to be completed by the instructor and signed jointly by both the instructor and student before the marking has been completed for each assessment as shown in section B.

Note: This form will be a part of the course file as it can be reviewed at any time by the Dean or Program Director.

Section A

Course Title:		Course Code:	
Course Credits:		Program Title:	
Section/Session:		Instructor Name:	
Student ID		Student Name:	
Assessment	<input type="checkbox"/> Mid <input type="checkbox"/> Final		

Date:

Section B

**Matrix Linking Assessment to Course Learning Outcomes, Program Learning
Outcomes and QFEmirates Level 9 strands**

Course Learning Outcomes (CLOs) (covered in the assessment)		Program Learning Outcomes (PLOs)			QFEmirates Level 9 strands				
CLO	CLO Description	PLO	PLO	PLO	K	S	AR	RC	SD

Section C

As students, you may be required to attend a submission discussion related to your assessment, to release your grade from IP:

Assessment Topics

		Covered (C)	Not Covered (NC)	
We jointly confirm that the student discussed the above areas				
		Course Instructor:		
		Student:		

Signatures (attended)**COURSE INSTRUCTOR**

Signature

Date

STUDENT

Signature

Date

Annex B

ASSESSMENT FEEDBACK FORM

This form is designed to provide constructive feedback on your written coursework. The comments below present a structured overview of the strengths and weaknesses of your work.

COURSE:

ASSESSMENT:

STUDENT NAME:

STUDENT ID:

STRUCTURE

CONTENT

STYLE

TECHNICAL SKILLS

PRESENTATION

Instructor Name & Signature

Date

Annex C

Aspects of competence				
Level	Knowledge	Autonomy and responsibility	Role in context	Self-development
9	<p>comprehensive, highly specialised knowledge in a field of work, discipline and/or professional practice, and at the interface between different fields, including frontier concepts and recent developments</p> <p>advanced knowledge of applicable research principles and methods</p> <p>critical awareness of knowledge issues, as the basis for original thinking; encompassing appropriate processes of enquiry and current processes of knowledge production</p> <p>detailed body of knowledge of recent developments in a field of work, and/or discipline</p>	<p>advanced skills required in research, analysis, evaluation and/or innovation of complex ideas, information, concepts and/or activities</p> <p>skills to develop new knowledge and procedures and to integrate knowledge from different fields using highly developed cognitive and creative skills and intellectual independence to the field of work or discipline</p> <p>advanced problem-solving skills to analyse highly complex issues with incomplete data and develop innovative solutions and proposals relevant to an academic/ professional field, field of work or discipline</p>	<p>can function autonomously and/or take responsibility for managing professional practices, work, processes or systems, or learning contexts that are highly complex, unpredictable and unfamiliar, and require new strategic approaches and/or intervention or conceptual abstract solutions</p> <p>can account for high level governance of processes and systems</p> <p>can analyse and reflect on socio-cultural norms and relationships and act to build and transform them</p>	<p>can self-evaluate and take responsibility for contributing to professional knowledge and practice including unfamiliar learning contexts</p> <p>can develop and implement further learning consistently and sensitively</p> <p>can consistently and sensitively manage highly complex ethical issues leading to informed, fair and valid decisions</p>