

Dublin Business School Assessment Brief

Assessment Details

Unit Title	Data Mining
Unit Code	B9DA103
Unit Leader	Terri Hoare
Level:	9
Assessment Title	Application of Data Mining Tools&Techniques
Assessment Number	2
Assessment Type:	Group (2-3 students)
Assessment Weighting	30%
Issue Date:	Week of 8 February 2021
Hand in Date:	Sunday 9 May 2021 (23:55)
Mode of Submission:	On-line Moodle

Assessment Task

Working in groups of two-three students:- Select open data source(s); Determine what questions are to be answered; Apply the CRISP-DM methodology to analyse the data.

Reports to be completed and submitted in stages with the full report End Week 12

- End Week 6 (28/03 23:55) Project Proposal
- End Week 8 (11/04 23:55) CRISP-DM Business and Data Understanding
- End Week 10 (25/04 23:55) CRISP-DM Data Preparation, Modelling, Evaluation
- End Week 12 (9/05 23:55) CRISP-DM Deployment, Full Report All Stages

A Presentation should be prepared for the lectures during Week 12. It should include a ten-minute formal presentation followed by five minutes of questioning time from lecturers and the class. Have some slides prepared to cover any relevant back-up / detail for answering questions. Teams will be allocated time slots. Time limits will be enforced to allow all teams adequate time to present. The project will be evaluated as below based on the DBS Grading Scheme included with this document.

- Presentation /Artefact (.10) GROUP (2-3)
- Report (.20) INDIVIDUAL

Two files should be loaded to Moodle on or before Sunday 9th May 2021 (23:55).

1. A SINGLE pdf file named CA02_Surname_First-Name_Student-ID_lessons_learned_report.
2. A zipped file including your team artefact contents.

Key measurable objectives of the INFORMS Certified Analytics Professional exam are included. (Note:- for information only).

INFORMS CAP Certified Analytics Professional competencies

Business Problem Framing

(Ability to understand a business problem and determine whether the problem is suitable for an analytics solution)

Objective 1: For the open data source selected, define the problem to be addressed

Objective 2: Identify the stakeholders

Objective 3: Determine whether the problem is suitable for an analytics solution

Objective 4: Refine the statement of the problem with any constraints

Objective 5: Define an initial set of business benefits

Analytics Problem Framing

(Ability to reformulate a business problem into an analytics problem with a potential analytics solution)

Objective 1: Reformulate problem statement as an analytics problem

Objective 2: Develop ABT attributes and outputs

Objective 3: State the set of assumptions related to the problem

Objective 4: Define the key metrics of success

Data

(Ability to work effectively with data to help identify quality issues and identify potential relationships that will lead to refinement of the business and analytics problem)

Objective 1: Identify data needs and sources

Objective 2: Acquire data

Objective 3: Explore data visually

Objective 4: Harmonize, rescale and clean data

Objective 5: Document and report findings (e.g. quality report, data insights)

Objective 6: Refine the business and analytics problem statements

Methodology (Approach) Selection

(Ability to identify and select potential approaches/methods/algorithms for solving the business problem)

Objective 1: Identify potential problem solving approaches (methods)

Objective 2: Select software tools

Objective 3: Test approaches (methods)

Objective 4: Select approaches (methods)

Model Building

(Ability to identify and build effective model structures to help solve the business problem)

Objective 1: Identify model structures

Objective 2: Run and evaluate the models

Objective 3: Calibrate models and data

Objective 4: Document and communicate findings (incl. assumptions, limitations, constraints)

Deployment

(Ability to deploy the selected model to help solve the business problem)

Objective 1: Perform business validation of the model

Objective 2: Produce the report with findings and recommendations for deployment

DBS Grade Assessment Policy (B9DA103)

Module Descriptor	Mark Band	Criteria	Determinator within grade band
A (Outstanding)	80-100	<ul style="list-style-type: none"> • Displays a thorough and systematic knowledge of module content through choice of scenario, solution and handover process and documentation. • Clear grasp of the issues involved, with evidence of innovative and original use of learning resources. • Knowledge beyond module content. • Clear evidence of independence of thought and originality • Methodological rigour • High critical judgement and confident grasp of complex issues 	Originality of problem and solution presented.
A (clear)	70-79	<ul style="list-style-type: none"> • Methodological rigour • Originality • Critical judgement • Use of additional learning resources 	Methodological rigour, insight
B	60-69	<ul style="list-style-type: none"> • Very good knowledge and understanding of the module content. • Well-argued answer • Some evidence of originality and critical judgement • Sound methodology • Critical judgement and some grasp of complex issues. 	Extent of use of additional or non-core learning resources
C	50-59	<ul style="list-style-type: none"> • Good knowledge and understanding of the module content. • Reasonably well-argued answer • Largely descriptive or narrative in focus • Methodological application is not consistent or thorough 	Understanding of the main issues, sound approach
D	40-49	<ul style="list-style-type: none"> • Lacking methodological application • Adequately argued • Basic understanding and knowledge • Gaps or inaccuracies but not damaging 	Knowledge of and application of data mining tools, techniques and methodology
E (Fail)	0-39		Weakness of approach

General Requirements for Students:

PLEASE READ CAREFULLY

1. It is your responsibility to ensure your file is uploaded correctly.
2. Students are required to retain a copy of each assignment.
3. When an assignment is submitted, it is the student's responsibility to ensure that the file is in the correct format and opens correctly.
4. Students should refer to the assessment regulations in their Course Guide.
5. DBS penalises students who engage in academic impropriety (i.e. plagiarism,
6. Collusion and / or copying). Please refer to the referencing guidelines on Moodle for information on correct referencing.
7. All relevant provisions of the Assessment Regulations must be complied with.
8. Penalties for late submission of assignments are as follows:
 - a. 25% penalty for assignments submitted within 5 working days of the deadline.
 - b. No marks for assignments submitted more than 5 working days after the deadline.
9. Extensions to assignment submission deadlines will be granted in exceptional circumstances only. The appropriate "Application for Extension" form must be used and supporting documentation (e.g. medical certificate) must be attached. Applications for extensions should be made directly to the Head of Year or Programme Leader in advance of the deadline date.