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## Overview

This sub-discipline Data Science (803) is concerned with the competencies required to design and implement data studies to drive organisational decisions and insights. This involves undertaking tasks to develop, implement and evaluate algorithms, predictive data modelling and data visualisation to identify underlying trends and patterns in data using statistical and computational techniques and tools.

Working in the associate professional role (8033) is primarily focussed on assisting with delivering data driven business insights to aid organisational decision making.

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## Performance criteria

You must be able to:

1. assist in the development, implementation and evaluation of algorithms, using statistical and computational techniques
2. use data mining, time series forecasting and modelling techniques to identify and predict trends and patterns in data in line with organisational procedures
3. assist with data transformation, quality checking and cleansing into digestible data sets in line with organisational procedures
4. perform database queries across multiple tables/unions to extract relevant data
5. perform appropriate data analysis on distinct data sets in line with organisational procedures and under supervision
6. produce performance dashboards and insight reports in line with organisational procedures and under supervision
7. assist production of a range of business insights reports in line with organisational procedures
8. summarise and present business insights that are developed from data studies, in line with organisational standards and under supervision

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## Knowledge and understanding

You need to know and understand:

1. the principles of data modelling and data visualisation
2. what is meant by data transformation
3. how to design, implement and maintain database systems
4. what is meant by data programming
5. the different techniques used in data science and how to apply them
6. the range of data protection and legal issues
7. the range of functional languages that can be applied for business insights
8. how to apply statistical techniques and machine learning
9. the importance of the domain context for data science
10. the underlying data structures involved for data science
11. the uncertainties that can exist in the strength of evidence provided in investigating business insights from data

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Assist in Delivering Data Driven Business Insights



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**Developed by** e-skills

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**Originating Organisation** e-skills

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**Relevant Occupations** Information and Communication Technology; Information and Communication Technology Professionals; Database Administration; ICT for practitioners

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**Suite** IT and Telecoms

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