

**UNIVERSITY OF PORTSMOUTH**

Master of Science Artificial Intelligence and Machine Learning

**M33878**

**BUSINESS INTELLIGENCE (BI)**

**Module Handbook**

**UOP MScAI&ML Intake 1&2**

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**Module Overview**

Business intelligence (BI) covers a wide range of software applications used to analyse, visualise and discover new insights from an organisation's raw data. The module will introduce students to the different types of data, reports and ways of better communicating these data. The module will show students how to use data effectively for decision support and critically develop a plan of action. Students will learn how to operate and query a cloud data warehouse. Students will also learn to critically communicate their data-based findings to an audience using coding and visualisation techniques.

**Module Learning Outcomes**

1. Demonstrate a comprehensive understanding of the different types of data, reports and business decision making process.

2. Demonstrate a comprehensive understanding of data warehouse design, multi-dimensional modelling, cloud-based data warehousing, OLAP, aiming to support better business decision making.

3. Use your data warehouse understanding to successfully query and gain business insights about a number of different data sets.

4. Apply suitable data visualisation techniques for a given business intelligence task.

**Module Activities (Hours)**

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| --- | --- | --- |
| 1. | Lectures, Practical Classes & Workshops | 24 |

**Module Assessments**

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| --- | --- | --- | --- | --- |
| **Type** | **Task** | **Weighting** | **Assessment Duration/Length** | **Learning Outcomes Assessed** |
| Other (OT) | Item 1 - Written assignment including essay (CW) | 60 | 2000 Words | LO1, LO2, LO3 |
| Other (OT) | Item 2 - Oral assessment and presentation (CW) | 40 | 10 Minutes | LO4 |

**Second Sitting Information**

One new coursework report.

**BI Module Schedule**

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| **Topic** | **Descriptions** |
| 1 | Intro to BIN unit. Overview of Business intelligence.Data and information and data driven models. |
| 2 | What is a data warehouse. DW vs DB |
| 3 | Dimensionality |
| 4 | Methods to create a schema. Types of schemas |
| 5 | more on OLAP vs OLTP. BI Dimensionality |
| 6 | Data integrityData quality. |
| 7 | BI applications, business performance |
| 8 | Business process modelling |
| 9 | Animated viz |
| 10 | Story & viz |
| Coursework 1 Due Date | 05 May 2025 |
| Coursework 2 Due Date | 13 May 2025 |

***Note: The schedule may be subjected to change until delivered.***