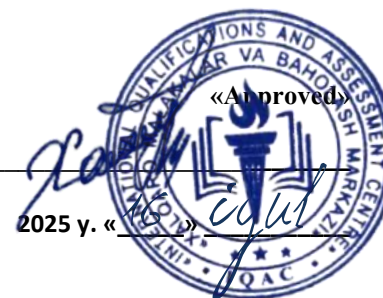




**INTERNATIONAL QUALIFICATIONS
AND ASSESSMENT CENTRE (IQAC)**



Programme	LEVEL 5 EXTENDED DIPLOMA IN DATA SCIENCE		
Unit Number/ Unit Title	UNIT 12 PROFESSIONAL DEVELOPMENT IN DATA SCIENCE		
Cohort Code:	L05PDDS-U12		
Unit Level	Level 5		
Total GLH	Total qualification time 200/ Total Guided learning hours 90/ Self-guided learning hours 110		
Credits	20 CATS/ 10 ECTS		
Lecturer			
Start Date		End Date	

Unit Aims	This module aims to prepare students for professional roles in data science, focusing on career skills and professional conduct.
Differentiation Strategies <i>(e.g. planned activities or support for individual learners according to their needs)</i>	<p>The total number of students to be in the lesson is approximately 20. This is a multicultural group of students predominantly between the ages of 24 – 45, with numerous ethnic, gender, and creed background. These are UK academic level 5 students; hence it is assumed that they have practical, theoretical, or technological knowledge and understanding of a subject or field of work to find ways forward in broadly defined, complex contexts. These students must be able to generate information, evaluate, synthesise the use information from a variety of sources. Various approaches to addressing the various identified students needs will be adopted throughout the lesson. Such will include:-</p> <ol style="list-style-type: none">1. Progressive tasks2. Digital resources3. Verbal support

	<ol style="list-style-type: none"> 4. Variable outcomes 5. Collaborative learning 6. Ongoing assessment 7. Flexible-pace learning
Equality & Diversity	Variety of teaching techniques will be employed to ensure that the needs of each individual learner are met.
Safeguarding & Prevent	Safeguarding policies and the Prevent duty are strictly observed to ensure the safety, well-being, and inclusivity of all students and staff.
Health & Safety	SIRM H&S policies will be maintained.
Learning Resources	Teaching and Learning Materials
	<ul style="list-style-type: none"> • Provost, F., & Fawcett, T. (2013). Data Science for Business: What You Need to Know about Data Mining and Data-Analytic Thinking. O'Reilly Media. • Cao, L. (2018). Data Science. MIT Press. • Davenport, T. H., & Patil, D. J. (2012). Data Scientist: The Sexiest Job of the 21st Century. Harvard Business Review Press.

Learning Outcome	Assessment Criteria
LO1. 1. Develop professional skills in data science.	1.1 Demonstrate proficiency in using data science tools and technologies. 1.2 Apply data science methodologies to solve practical problems
LO2. 2. Enhance communication and teamwork skills.	2.1 Communicate effectively in written and oral formats for professional audiences. 2.2 Collaborate with team members to achieve project goals.
LO3. 3. Prepare for career advancement in data science.	3.1 Develop a professional portfolio showcasing data science projects and achievements. 3.2 Reflect on personal development and identify areas for continuous improvement.

No	Learning Outcome / Topic	Learning and Teaching Activities	Which assessment criteria does the session relate to?	Day/month/year/ signature
1.	Data Science Tool Mastery	Data Science Tool Mastery Python/R, SQL, Git, Jupyter, Tableau/Power BI	LO1: Technical Proficiency & Problem-Solving	
2.	Cloud Platforms for Data Science	Cloud Platforms for Data Science AWS SageMaker, Google Colab, Azure ML	LO1: Technical Proficiency & Problem-Solving	
3.	Agile & CRISP-DM Methodologies	Agile & CRISP-DM Methodologies Sprints, standups, iterative development	LO1: Technical Proficiency & Problem-Solving	
4.	Real-World Problem Framing	Real-World Problem Framing Business understanding, KPIs, success metrics	LO1: Technical Proficiency & Problem-Solving	
5.	Debugging & Optimization	Debugging & Optimization Code profiling, query optimization, model tuning	LO1: Technical Proficiency & Problem-Solving	
6.	Technical Writing for Data Science	Technical Writing for Data Science Reports, documentation, READMEs	LO2: Communication & Teamwork	
7.	Data Storytelling & Visualization	Data Storytelling & Visualization Tailoring visuals for executives vs. technical teams	LO2: Communication & Teamwork	
8.	Half-Term Exam	<ul style="list-style-type: none"> - Review of LO1 topics - Practice questions and mock assessment 	LO1 LO2	

		- Half-term assessment based on LO1 (theory)		
9.	Effective Presentations	Effective Presentations Slide design, storytelling, handling Q&A	LO2: Communication & Teamwork	
10.	Collaboration Tools	Collaboration Tools GitHub, Slack, Trello, Jira	LO2: Communication & Teamwork	
11.	Conflict Resolution in Teams	Conflict Resolution in Teams Active listening, feedback techniques	LO2: Communication & Teamwork	
12.	Building a Professional Portfolio	Building a Professional Portfolio GitHub, Kaggle, personal website (Streamlit, GitHub Pages)	LO3: Career Preparation	
13.	Resume & LinkedIn Optimization	Resume & LinkedIn Optimization ATS-friendly formatting, keyword optimization	LO3: Career Preparation	
14.	Final Exam Preparation & Review	- Comprehensive review of all learning outcomes - Practice questions and revision of key topics		
15.	Final Exam	- Final-term assessment covering all learning outcomes (theory and practical elements)		
16.	Feedback & Reflection	- Review of final exam - Individual feedback on performance - Reflective discussion on key learning points		
17.	Interview Preparation	Interview Preparation Technical screenings (SQL, Python), case studies	LO3: Career Preparation	

18.	Networking Strategies	Networking Strategies Conferences, meetups, LinkedIn engagement	LO3: Career Preparation	
19.	Freelancing & Consulting	Freelancing & Consulting Upwork profiles, proposal writing	LO3: Career Preparation	
20.	Ethical Data Science Practices	Ethical Data Science Practices GDPR, bias mitigation, model cards	LO4: Ethics & Continuous Learning	
21.	Mentorship & Leadership	Mentorship & Leadership Peer reviews, leading projects	LO4: Ethics & Continuous Learning	
22.	Continuing Education	Continuing Education Certifications (AWS, Google), MOOCs, research papers	LO4: Ethics & Continuous Learning	
23.	Half-Term Exam	Portfolio Project Workshop End-to-end project with documentation		
24.	Time Management for Professionals	Time Management for Professionals Pomodoro, Eisenhower Matrix	LO4: Ethics & Continuous Learning	
25.	Stress Management & Burnout Prevention	Stress Management & Burnout Prevention Work-life balance, mindfulness	LO4: Ethics & Continuous Learning	
26.	Mock Interviews and Industry Panel Discussion	Mock Interviews Technical & behavioral practice Industry Panel Discussion Guest speakers from tech companies	LO5: Capstone & Reflection	
27.	Personal Development Plan	Personal Development Plan SWOT analysis, 1-year roadmap	LO5: Capstone & Reflection	
28.	Final Reflection & Peer Feedback	Final Reflection & Peer Feedback Lessons learned, peer evaluations	LO5: Capstone & Reflection	
29.	Final Exam Preparation & Review	LO1, LO2, LO3, LO4	LO1, LO2, LO3, LO4	
30.	Final Exam		LO1, LO2, LO3, LO4	