#### **OPEN UNIVERSITY OF MAURITIUS**

#### Taught Undergraduate Programme specification

# BSc (Hons) in Data Science and Artificial Intelligence

Academic year: 2021-2022

Programme documents detail the aims, learning strategies, structure and intended learning outcomes that students should achieve if they fully engage with the learning provided within the programme. The document is intended to support and inform prospective students, current students, academic and support staff, external stakeholders (such as PSRBs) and external examiners.

1. PROGRAMME INFORMATION			
Title of final award	BSc (Hons) in Data Science and Artificial Intelligence		
Code	OUbs035		
Awarding Body	Open University		
Academic Unit	Communication and IT		
Programme Manager	Mr. Devendra BABOOA		
Administrative contact point	Mrs Kalindee Lucknauth		
Programme duration	Minimum 3 years		
	Maximum 6 years		
Total Credits	180		
Credits per year	Normally 60 credits per academic year		
	Number of credits per semester: 30		
MQA NQF level	Level 8		
EHEA level	Level 6		
External Accreditors	Not applicable		
<b>Collaborative Partners</b>	Not applicable		
Programme approval date	Tbc		
Last revision	Not applicable		
Last update	Not applicable		

2. ENTRY REQUIRE	IMENTS
General:	Based on the General Entry Requirements under Direct Entry to Undergraduate Programmes, applicants should fulfil the following conditions:
	OPTION 1 A pass in English Language at Cambridge School Certificate/ 'O' Level or equivalent
	AND
	EITHER Pass in: 3 subjects at A-level and 1 subject at subsidiary level at Higher School Certificate Examination;
	OR Pass in: 2 subjects at A-level and 2 subjects at subsidiary level at the Higher School Certificate Examination;
	OR Pass in: 3 subjects at A-level at the London General Certificate Examination.
	OR any other qualifications acceptable to OU. (refer to OU general rules and regulations)
	OPTION 2 Submission of a comprehensive portfolio for possible recognition of prior learning/experience (RPL/RPE) as an alternative to above along with evidence for the language/numeracy/Information and Communication Technology (ICT) skills required for the programme of study.
	<ul> <li>Note:</li> <li>Mature candidates will be considered on their own merit. (refer to OU general rules and regulations)</li> <li>Learners who do not qualify under Option 1 may initially register for Foundation Courses offered by OU. (refer to OU general rules and regulations)</li> </ul>
Programme specific:	Cambridge Higher School Certificate with a minimum grade C in Mathematics or Statistics

Aims and	This programme combines two key areas of computing, namely data science and
objective of	artificial intelligence, in a synergistic manner. Data science and Artificial Intelligence

the programme:	are two complementary areas of Intelligent Systems, with Data science focusing on statistical techniques and Artificial Intelligence on algorithmic techniques.
	This course emphasises an appropriate understanding and application of integral Artificial intelligence (AI) and Data Science concepts, and their application to solve real-world problems. In addition, an industrial placement of a minimum of 1 and a maximum of 3 months duration will be set-up by the university in collaboration with technology focused and other general incubator centres around the island. The learner will be called upon to investigate a problem within the host company and present a solution which will be form part of a Data Science/AI report to complement the curriculum through practical exposure.
	Al is the simulation of human intelligence processes by machines, especially computer systems, and Data Science is a major input to a working Al model. These processes include learning (the acquisition of information and rules for using the information), reasoning (using rules to reach approximate or definite conclusions) and self-correction. Particular applications of Al include expert systems, speech recognition and machine vision.
	This course introduces students to the foundations of data science, artificial intelligence, and the core technologies that are required to apply AI in the real world.
	The aims of the programme are to enable you to:
	<ol> <li>a strong foundation in both the theoretical and the practical aspects of computational intelligence</li> <li>acquire the theoretical and the practical aspects of data science and artificial intelligence</li> </ol>
	<ul><li>3) a strong ability to critically analyse data, evaluate information, and solve problems</li></ul>
	<ol> <li>learn to program effectively and utilise state of the art tools in machine learning, neural networks and data science</li> </ol>
	<ul><li>5) insight into advanced areas of artificial intelligence and machine learning</li><li>6) the ability to work professionally as an individual, particularly in terms of a large research project</li></ul>
	Graduates mainly go on to work in a wide variety of industries and across a whole range of jobs including as a Data Analyst/Scientist, Software Developer, Machine Learning Scientist/Engineer, Data Science Consultant, Business Intelligence Engineer, Big Data Engineer/Application Developer.
Intended Learnir	<b>ng outcomes:</b> After successfully completing this programme, students will be able to:
Knowledge and understanding	<ul> <li>A1. Key concepts of Data Science and Artificial Intelligence.</li> <li>A2. Advanced concepts in specialist areas of artificial intelligence, such as machine learning and deep learning.</li> <li>A3. State of the art techniques, technologies and tools used in these specialist areas</li> </ul>

	<ul><li>A4. Methods of design, analysis, implementation and verification in these specialist areas.</li><li>A5. Applicable methods of research and enquiry within the discipline.</li></ul>
Subject Specific Intellectual and Research Skills	<ul> <li>B1. Specify, design and realise advanced and specialised AI sub-systems.</li> <li>B2. Test and evaluate the behaviour of AI sub-systems at an appropriate level of detail.</li> <li>B3. Analyse Data Science and AI problems to determine appropriate methods of design, testing and evaluation.</li> <li>B4. Find, read, understand and explain literature related to fundamental and advanced areas of artificial intelligence and new data storage technologies, including scientific publications, industrial documentation, standards, ethical, legal and environmental guidance.</li> <li>B5. Formulate a research project involving the fundamentals and specialised AI application or system using appropriate state of the art techniques, technologies and tools.</li> </ul>
Transferable and Generic Skills	<ul> <li>C1. Use conventional and electronic indexing and search methods to find technical information.</li> <li>C2. Present technical information concisely in written and verbal forms to a range of audiences.</li> <li>C3. Work in a pair or in a small group on a given task, managing your own contribution and the overall task.</li> <li>C4. Work independently on a significant research project, managing time and risk in an effective manner.</li> <li>C5. Recognise legal and ethical issues of concern to business, professional bodies, and society, including but not limited to information security, and follow relevant guidelines to address these issues.</li> </ul>
Subject Specific Practical Skills	<b>D1.</b> Use specialist tools for the design, implementation and verification of Data Science and Artificial Intelligence systems.

## 4. PROFESSIONAL, STATUTORY AND REGULATORY BODIES (where applicable)

Not applicable

## 5. LEARNING AND TEACHING STRATEGY

## Learning and teaching methods:

Students will be provided with opportunities to engage in a diverse range of learning environments so as to maximise their learning. For this programme, students will interact with their tutor and their fellow students mostly through the e-platform.

The e-platform will use the following tools:

- Online Activities: for every unit covered in each module, students will be given opportunities to complete interactive learning activities including discussion forums, quizzes, field trips, webinars and problem-solving activities. Students will be encouraged to work independently but also to engage in collaborative work.
- Independent Study: Independent study forms an essential part in the development of your knowledge and understanding. We will guide you, via the e-platform, on the reading and reflection of primary and secondary texts. Students should use this independent study time to link knowledge with e-class and face-to-face activities and develop their own understanding and critical perspective on the topics they are studying.

We also offer optional face-to-face sessions.

The face-to-face sessions are an opportunity to untangle complex concepts and provide students with an opportunity to apply the knowledge acquired in the preceding weeks. During the face-to-face sessions, students can be expected to:

- Engage in problem solving activities
- Engage with reading material to engage in class discussions
- Review core/complex concepts through applied work.

Research Supervision:

In the final part, students will undertake an applied dissertation project in Artificial Intelligence, supervised by one of our tutors with expertise in the area of the dissertation topic. Students will have the opportunity to meet with the supervisor to explore the topic, receive guidance on the research and receive feedback on the work as it progresses.

Strategy	LO
Practical exercise	A3, A4, B1, B2, B3, D1
Group work	C3
Independent research	C4
Independent learning	A1, A2, A5, B4, B5
Presentation	C2
Technical Report	C1, C5

## **Overall Workload:**

Your overall workload as a student consists of independent learning, e-learning activities and, if you choose to, face to face sessions. The following gives you an indication of how much time you will need to spend on the different components of your programme at each level. Each ECTS credit taken equates to 25-30 hours of study time.

The expected study time for this programme will be as follow:

Year 1: 1,500 to 1,800 hours for 60 ECTS credits. Year 2: 1,500 to 1,800 hours for 60 ECTS credits. Year 3: 1,500 to 1,800 hours for 60 ECTS credits.

Typically, for each year of your degree you will spend 0-15% of your time in face to face sessions, 35-40% of your time engaging with e-learning activities and 60% of your time in independent study time.

A typical study week for a student will involve some optional face to face sessions, required engagement in online discussion forum, the completion of online activities and independent study time to review attached readings, textbooks and relevant sections of the module document. Students should expect to devote 8 to 12 hours of study time per week per module.

These are indicative and may vary from student to student.

#### 6. ASSESSMENT STRATEGY

#### Assessment Methods

A range of formative and summative assessment exercises are designed to enable you to demonstrate and apply your knowledge and understanding.

Most modules will consist of a Tutor Marked Assessment component and an examination. TMAs include:

- technical reports
- software designs and implementation
- group project
- exercises and problem sets
- project presentation
- applied dissertation project
- viva

Assessment mapping: See Appendix Page 12.

#### Academic Feedback

Throughout the course of your studies, tutors will provide informal feedback on your online activities and class contributions. Feedback may be individual or provided to the class as a whole.

Each summative assessment will be accompanied by detailed marking criteria and marking scheme detailing the expectation of the assessment at each grade classification level. Feedback on assessment will be provided along the marking criteria. Marking criteria will be made available to the student at the same time as the assessment details.

Students will receive written individual feedback on all TMA components.

The university policy on assessment feedback and guidance on provisional marks can be found in the General Rules.

Late submission, Extension and Re-sit Policy

The university policy on Late Submission, Extension and Re-sits can be found in the General Rules. Special Circumstances

The university policy on Special Circumstance can be found in the General Rules.

**Continuous assessment and Exam Regulations** 

The university regulations on Continuous Assessment and Examination can be found in the General Rules.

#### Dissertation

The university regulations on Dissertation can be found in the General Rules.

#### 7. ACADEMIC MISCONDUCT

As a safeguard to the quality and standard of Open University's qualifications and awards, the university takes any incidence of academic misconduct seriously and will investigate any reported case.

Academic Misconduct refers to any activity where a student, through unpermitted means, seeks to gain an advantage in the completion of an assessment. Any unpermitted action will be considered as academic misconduct when occurring during a formal examination, a TMA, or any other form of assessment considered by Board of Examiners and undertaken in pursuit of a University qualification or award.

**Plagiarism (**using, intentionally or unintentionally another's person's work and presenting it as its own) will be systematically checked through an automated text-matching detection software that supports the detection of plagiarism: Turnitin.

Any suspected cases of academic misconduct will be reported and investigated. Academic misconduct offences, may lead to suspension or expulsion from the University.

The university regulations on Academic Misconduct can be found in the General Rules.

#### 8. PROGRAMME STRUCTURE

*C*= *Core i.e. modules which must be taken to be eligible for the award* S1 = Semester 1 S2 = Semester 2

Year 1 – Level 6 (NQ-MQA) – Short Cycle Introductory (QF-EHEA)				
All core modules must be taken				
Code	Module Title	Туре	Semester	Credits
OUbs035111	Essentials of Statistics	С	S1	6

OUbs035112	Mathematics for Artificial Intelligence	С	S1	6
OUbs035113	<b>3035113</b> Digital Logic		S1	6
OUbs035114	5114Computer Systems FundamentalsCS1		S1	6
OUbs035115	Introduction to Entrepreneurship	С	S1	6
OUbs035121	Design and Algorithms	С	S2	6
OUbs035122	Software Engineering Fundamentals	С	S2	6
OUbs035123	OO Design and Programming	С	S2	6
OUbs035124	Introduction to Data Science	С	S2	6
OUbs035125	DBMS	С	S2	6
Credit Total			Credit Total	60

Year 2 – Level 6-7 (NQ-MQA) – Short Cycle Intermediate (QF-EHEA) All core modules must be taken				
Code	Module Title	Туре	Semester	Credits
OUbs035211	Project Management	С	S1	6
OUbs035212	Algorithms and Programming Techniques	С	S1	6
OUbs035213	Data Analysis using Statistical packages	С	S1	6
OUbs035214	Data Science for Business	С	S1	6
OUbs035215	Data Visualization	С	S1	6
OUbs035221	Ethics and Law in Al	С	S2	6
OUbs035222	Data Warehousing and Data Mining	С	S2	6
OUbs035223	Blockchain Foundations and Applications	С	S2	6
OUbs035224	Computer Vision	С	S2	6
OUbs035225	Work Placement Project	С	S2	6
Credit Total			Credit Total	60

<b>Year 3 – Level 7-8 (NQ-MQA) – 1 Cycle Honours (QF-EHEA)</b> All core modules must be taken				
Code	Module Title	Туре	Semester	Credits
OUbs035311	Artificial Intelligence	С	S1	6
OUbs035312	Machine Learning	С	S1	6
OUbs035313	Neural Networks and Deep Learning	С	S1	6
OUbs035314	Natural Language Processing	С	S1	6
OUbs035315	Intelligent Agents	С	S1	6
OUbs035321	New Data Storage	С	S2	6
OUbs035322	Big Data Analytics	С	S2	6
OUbs035323	Advanced Topics in Statistical Machine Learning	С	S2	6
OUbs035324	Data Science/ Artificial Intelligence Final Year Project	С	S2	12
	·	(	Credit Total	60

Overall Programme Credit Total 180

#### 9. GRADING

#### Grading system:

Assessments are graded in percentage and correspond to a letter grade and a grade point.

Marks (x) %	Description	Letter Grade	Grade point
X ≥ 70	Excellent	А	5
60 ≤ X < 70	Very Good	В	4
50 ≤ X < 60	Good	С	3
40 ≤ X < 50	Satisfactory	D	2
X < 40	Ungraded	U	0
Non-graded/pending	See section 17.1.1 in assessment rules and regulation for pending grades letter codes		

To pass a module, students need an overall of 40% weighted average of their combined continuous assessment and examination. All components of TMAs will have to be submitted and examination sat to pass the module.

Students will normally not be allowed to postpone more than two modules for the following semester.

If a student obtains grade "U" in three or more modules in the same semester, and the CPA is below 40 for that semester, the student will be requested to repeat the semester unless decided otherwise by the Academic Council upon the recommendation of the Board of Examiners. When repeating a semester, a student may or may not take the modules for which Grade C or above has been obtained.

If after completing a level the student's CPA < 40, the student will have to repeat the entire academic year and retake the modules as and when offered. However, s/he will not be required, if s/he wishes, to retake 3 module(s) for which Grade C or above has been obtained.

Students will not be allowed to repeat more than two semesters during the entire duration of the programme.

University general marking criteria for undergraduate exams and undergraduate dissertations can be found in the General Rules.

## Cumulative Point Average (CPA):

Total CPA for undergraduate degrees is calculated by:

- a) multiplying the module credit by the % marks for the module and then summed up and divided by the total credits attempted over the cumulative period at each level (1 semester or 1 year); AND
- b) Taking the weighted average of the obtained CPAs at each level. The respective weights being set as follows: the CPA of level 5 modules (year 1) will be weighted at 15% (0.15); the CPA of level 6 modules (year 2) will be weighted at 35% (0.35); and the CPA of level 7/8 modules (year 3 and/or 4) will be weighted at 50% (0.5).

Course Level 5	% Scores	ECTS Credit unit	Module Credit x % Score
BAXX1	64	7.5	64*7.5 = 480
BAXX2	71	7.5	71*7.5 = 533
BAXX3	44	7.5	44*7.5= 330
BAXX4	59	7.5	59* 7.5= 443
BAXX5	82	5.0	82*5 = 410
BAXX6	62	5.0	62*5 = 310
BAXX7	65	5.0	65*5 = 325
BAXX8	54	15.0	54*15 = 810
Total		60	3640

Example calculation of the CPA at level 5 for undergraduate programmes:

Example Calculation Total CPA:

Level	Score	Weighted score
CPA level 5 (60 credits)	61.7	61.7 *0.15 = 9.11
CPA level 6 (60 credits)	63.4	63.4*0.35 = 22.19
CPA level 7/8 (60 credits)	65.5	65.5*0.5 = 32.75
Total CPA (180 credits)		64

## **10. PROGRESSION, EXIT POINTS AND AWARD**

Progression	<ul> <li>If a student fails to achieve 60 credits at the end of a year level, the Board of examiners will make a decision with regard to the student's progression. At its discretion, the Board of Examiners may: <ul> <li>allow a student to carry forward up to 15 credits in the following year level in order to retake these units in attendance;</li> <li>require the student to repeat the year;</li> <li>award of an exit award once the student has exhausted all the programmers and the programmers.</li> </ul> </li> </ul>
	opportunities to retrieve failed assessment.
Classification of Awards	For the award of the Honours degree, all modules of the programme must be completed.
	The Certificate of Higher Education and the Diploma of Higher Education are

1	Award	Title	Level NQ- MQA	Total required Credits	Classification
	BSc (Hons)	Artificial Intelligence	8	180	$1^{st}$ Class with Honours: CPA $\geq 70$ $2^{nd}$ Class $1^{st}$ Division with Honours: $60 \leq$ CPA $< 70$ $2^{nd}$ Class $2^{nd}$ Division with Honours: $50 \leq$ CPA $< 60$
	BSc	Artificial Intelligence	7	180	<b>3</b> <sup>rd</sup> <b>Class</b> : 45 ≤ CPA < 50 <b>Pass</b> : 40 ≤ CPA < 45
	Diploma of Higher Education (DipHE)	Artificial Intelligence	6-7	120	Distinction: CPA ≥70 Pass: 40 ≤ CPA < 70 No award: CPA < 40
	Certificate of Higher Education (CertHe)	Artificial Intelligence	6	60	Distinction: $CPA \ge 70$ Pass: $40 \le CPA < 70$ No award: $CPA < 40$

#### 12. Have you say

Open University values student feedback and students will be given opportunities to have their say on their learning experience in the following way:

- Student programme and module evaluation surveys;
- Acting as student representative and participate in a range of committees such as the staffstudent consultative committee;
- Participate in programme validation processes.

The University will respond to student feedback through the following channels:

• Response and action taken following the module evaluation survey will be posted on the eplatform;

- Action from minutes will be monitored by the chair of the relevant committees;
- Annual programme monitoring process will take into account student feedback;
- Programme review process (every five years).

## 13. Curriculum Map of Programme learning outcomes against module intended learning outcomes

Modul	e unit and code				Knov Und	wledge erstar	e and nding			Cog	nitive	Skills		Tra F	ansfer Person	able S al Att	skills a ribute	nd s	Pra	ctical s	kills
Module title	Code	T y p e	Mode	K1	К2	КЗ	К4	К5	C1	C2	C3	C4	C5	T1	T2	Т3	Т4	T5	P1	P2	P3
Year 1 NQ-MQA Leve	el 6																				
Essentials of Statistics	OUbs035111	с	BL	•	•			•		•	•	•		•	•		•	•	•		
Mathematics for Artificial Intelligence	OUbs035112	с	BL	•	•	•			•	•		•			•	•			•	•	
Digital Logic	OUbs035113	С	BL	•	•	•			•	•		•			•	•			•	•	
Computer Systems Fundamentals	OUbs035114	с	BL		•			•		•	•			•	•		•	•			
Introduction to Entrepreneurship	OUbs035115	с	BL		•			•		•	•	•		•	•		•	•			
Design and Algorithms	OUbs035121	с	BL	•	•			•		•	•	•		•	•		•	•	•		
Software Engineering Fundamentals	OUbs035122	с	BL	•	•	•			•	•		•			•	•			•	•	
OO Design and Programming	OUbs035123	с	BL	•	•	•			•	•		•			•	•			•	•	
Introduction to Data Science	OUbs035124	с	BL		•			•		•	•	•		•	•		•	•			
DBMS	OUbs035125	с	BL	•	•	•			•	•		•			•	•			•	•	
Year 2 NQ-MQA leve	el 6-7																				

Project Management	OUbs035211	с	BL	•	•		•		•	•	•		•	•		٠	•	•		
Algorithms and Programming Techniques	OUbs035212	с	BL				•			•		•	•	•		•	•			
Data Analysis using Statistical packages	OUbs035213	с	BL	•	•		•		•	•	•		•	•		•	•	•		
Data Science for Business	OUbs035214	с	BL		•		•		•	•			•	•		•	•			
Data Visualization	OUbs035215	с	BL	٠	•	•		•	•		•			•	•			٠	•	•
Ethics and Law in Al	OUbs035221	с	BL		•		•		•	•			•	•		•	•			
Data Warehousing and Data Mining	OUbs035222	с	BL	٠	•		•		•	•	٠		•	•		٠	•	•		
Blockchain Foundations and Applications	OUbs035223	с	BL		•		•		•	•			•	•		٠	•			
Computer Vision	OUbs035224	с	BL	•	•		•		•	•	•		•	•		•	•	•		
Work Placement Project	OUbs035225	с	BL	٠	•	•		•	•		٠			•	•			٠	•	•
Year 3 NQ-MQA leve	l 7-8																			
Artificial Intelligence	OUbs035311	с	BL	٠	•		•		•	•	•		•	•		•	•	•		
Machine Learning	OUbs035312	с	BL	•	•	•		•	•		•			•	•			•	•	•
Neural Networks and Deep Learning	OUbs035313	с	BL				•			•		•	•	•		•	•			
Natural Language Processing	OUbs035314	С	BL	•	•		•		•	•	•		•	•		•	•	•		

Intelligent Agents	OUbs035315	c	BL	•	•	•			•	•		•			•	•			•	•	•
New Data Storage	OUbs035321	с	BL	•	•			•		•	•	•		•	•		•	•	•		
Big Data Analytics	OUbs035322	с	BL	•	•			•		•	•	•		•	•		•	•	•		
Advanced Topics in Statistical Machine Learning	OUbs035323	с	BL	•	•	•			•	•		•			•	•			•	٠	•
Data Science/ Artificial Intelligence Final Year Project	OUbs035324	с	BL	Subj varic the k unde outc dem	ect to ous con cnowle erstand omes onstra	the to mbina edge a ding le will be	opic, tions ind earnin	of g	•	•	•	•	•	•	•		•	•	•	•	•

C = Core; E = Elective; DL = Distance Learning; BL= Blended Learning; CD = Campus delivery

# Appendix 1: Assessment mapping

Module Code	Module Title	Assessment Method
Year 1 NQ-MQA Le	evel 6	
OUbs035111	Essentials of Statistics	TMA 40%: Online Quiz (10% of TMA) Problem Solving Exercises (30% of TMA) Final Examination 60%
OUbs035112	Mathematics for Artificial Intelligence	TMA 40%: Online Quiz (10% of TMA) Problem Solving Exercises (30% of TMA) Final Examination 60%
OUbs035113	Digital Logic	TMA 40%: Online Quiz (10% of TMA) Problem Solving Exercises (30% of TMA) Final Examination 60%

OUbs035114	Computer Systems Fundamentals	TMA 40%: Online Activities (10% of TMA) Technical Report (30% of TMA) Final Examination 60%
OUbs035115	Introduction to Entrepreneurship	TMA 40%: Online Activities (10% of TMA) Technical Report (30% of TMA) Final Examination 60%
OUbs035121	Design and Algorithms	TMA 40%: Online Quiz (10% of TMA) Problem Solving Exercises (30% of TMA) Final Examination 60%
OUbs035122	Software Engineering Fundamentals	TMA 40%: Online Activities (10% of TMA) Technical Report (30% of TMA) Final Examination 60%
OUbs035123	OO Design and Programming	TMA 50%: Online exercises (10% of TMA) Group Project Presentation includes Individual Component (40% of TMA) Final Examination 50%
OUbs035124	Introduction to Data Science	TMA 40%: Online Activities (10% of TMA) Technical Report (30% of TMA) Final Examination 60%
OUbs035125	DBMS	TMA 40%: Online Exercises (10% of TMA) Technical Report (30% of TMA) Final Examination 60%
Year 2 NQ-MQA le	evel 6-7	·
OUbs035211	Project Management	TMA 40%: Online Exercises (10% of TMA) Technical Report (30% of TMA) Final Examination 60%

OUbs035212	Algorithms and Programming Techniques	TMA 40%: Online Exercises (10% of TMA) Technical Report (30% of TMA) Final Examination 60%
OUbs035213	Data Analysis using Statistical packages	TMA 40%: Online Exercises (10% of TMA) Technical Report (30% of TMA) Final Examination 60%
OUbs035214	Data Science for Business	TMA 50%: Online quiz (10% of TMA) Business Process Report (20% of TMA) Implementation Report (20% of TMA) Final Examination 50%
OUbs035215	Data Visualization	TMA 40%: Online Exercises (10% of TMA) Technical Report (30% of TMA) Final Examination 60%
OUbs035221	Ethics and Law in Al	TMA 40%: Online Exercises (10% of TMA) Technical Report (30% of TMA) Final Examination 60%
OUbs035222	Data Warehousing and Data Mining	TMA 40%: Online Exercises (10% of TMA) Technical Report (30% of TMA) Final Examination 60%
OUbs035223	Blockchain Foundations and Applications	TMA 40%: Online Exercises (10% of TMA) Technical Report (30% of TMA) Final Examination 60%
OUbs035224	Computer Vision	TMA 40%: Online Exercises (10% of TMA) Technical Report (30% of TMA)

		Final Examination 60%
OUbs035225	Work Placement Project	TMA 100%: Technical Report including working Software/Data Model
Year 3 NQ-MQA le	evel 7-8	
OUbs035311	Artificial Intelligence	TMA 40%: Online Exercises (10% of TMA) Technical Report (30% of TMA) Final Examination 60%
OUbs035312	Machine Learning	TMA 40%: Online Exercises (10% of TMA) Technical Report (30% of TMA) Final Examination 60%
OUbs035313	Neural Networks and Deep Learning	TMA 40%: Online Exercises (10% of TMA) Technical Report (30% of TMA) Final Examination 60%
OUbs035314	Natural Language Processing	TMA 40%: Online Exercises (10% of TMA) Technical Report (30% of TMA) Final Examination 60%
OUbs035315	Intelligent Agents	TMA 40%: Online Exercises (10% of TMA) Technical Report (30% of TMA) Final Examination 60%
OUbs035321	New Data Storage	TMA 40%: Online Exercises (10% of TMA) Technical Report (30% of TMA) Final Examination 60%
OUbs035322	Big Data Analytics	TMA 40%: Online Exercises (10% of TMA) Technical Report (30% of TMA) Final Examination 60%

OUbs035323	Advanced Topics in Statistical Machine Learning	TMA 40%: Online Exercises (10% of TMA) Technical Report (30% of TMA)
		Final Examination 60%
OUbs035324	Data Science/ Artificial Intelligence Final Year Project	Project software together with a written report (14,000 to 16,00 words) followed by Viva- 100%