



MSc Artificial Intelligence Programme Specification

1. General Information

UCAS Code	Award	Programme Title	Expected Duration	Study Mode
N/A	MSc	Artificial Intelligence	1 year 1.5 years 2 years	Full-time Part-time 1 Part-time 2
		Programme Code		
		UK-LIBF-MAAI		
	Exit Awards	<ul style="list-style-type: none"> • Postgraduate Diploma • Postgraduate Certificate 		

Credit Count	180 FHEQ credits
Awarding Institution	The London Institute of Banking & Finance
Teaching Institution	The London Institute of Banking & Finance
Delivery Modes	<ul style="list-style-type: none"> • Face-to-face • Blended • Online - Synchronous • Online - Asynchronous

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2. Programme Overview

Programme Summary

With companies and society increasingly influenced and supported by artificial intelligence, there is a growing demand for specialists who can effectively oversee and advance developments in the field and support businesses in implementing AI systems.

The MSc Artificial Intelligence seeks to prepare you for a career in AI and AI-related fields by developing your knowledge and understanding of the foundations, main theories and principles of artificial intelligence such as advanced mathematical concepts, advanced statistics, inference and causality and algorithms used in machine learning as well as the relevant programming languages and paradigms.

The curriculum is designed to demonstrate a transfer between theory and practice and allows you to broaden your professional horizons and gain deep insights into new and innovative developments in AI and its application in industry-relevant fields through a selection of optional modules such as Natural Language Processing, AI in Healthcare, and Concepts of Artificial Intelligence in Supply Chain Management.

Programme Aims

The MSc Artificial Intelligence aims to

- provide you with an advanced and systematic understanding of the theoretical foundations and leading theories used in AI, including its mathematical, statistical, and computational aspects.
- equip you with the practical skills in developing AI systems, including programming using machine learning and deep learning.
- enhance your critical thinking and research skills, enabling you to critically analyse current AI research, concepts, and practices, and to independently propose original solutions and hypotheses and communicate these effectively to a wide range of audiences.
- give you a critical insight and understanding of novel, leading developments and current issues in AI and enable you to broaden your knowledge of new developments relevant to the field through a process of independent and self-directed learning.
- develop your ability to apply AI techniques in complex new contexts as well as practical areas of application such as healthcare, production, engineering, or marketing through a range of elective modules.

Employability & Graduate Outcomes

Graduates of this programme are likely to pursue careers in a number of areas in AI and AI-related fields including data science, machine learning and AI interaction design. This programme of study should support graduates in developing the following employability skills:

- digital, technical, and statistical literacy
- high level of numeracy
- communication skills
- creative thinking and problem-solving skills
- analysis and critical thinking skills
- adaptability and continuous learning

3. Intended Learning Outcomes of the Programme

This programme has been developed in accordance with the QAA Subject Benchmark Statement for Computing (C) (2022).

Please note: The programme’s intended learning outcomes below are described at Masters level (Level 7).

On successful completion of this programme, you will be expected to:

LO1	Demonstrate a systematic understanding of theories and foundational principles of artificial intelligence such as mathematical concepts, advanced statistics, inference and causality and algorithms used in machine and deep learning and comprehensive knowledge of the relevant programming languages and programming paradigms. (C 4.14)
LO2	Demonstrate a critical understanding of current issues, insights, and leading developments in the application fields of artificial intelligence, including the relevant professional, ethical, and legal behaviours and considerations. (C 4.14)
LO3	Critically evaluate the applicability of novel artificial intelligence approaches and methodologies to solve problems. (C 4.14)
LO4	Critically analyse both structured and unstructured data, extracting meaningful insights to effectively guide the development of machine learning models, for enhanced decision-making processes. (C 4.14)
LO5	Systematically apply analytical and critical thinking skills, along with artificial intelligence techniques and mathematical and statistical methods, to devise innovative solutions for complex problems. (C 4.14)
LO6	Develop state-of-the-art artificial intelligence models with an appropriate programming language. (C 4.14)
LO7	Plan and execute small research projects, focusing on the practical applications of innovative artificial intelligence methods, while consistently advancing and enhancing knowledge and skills to harness and leverage artificial intelligence techniques. (C 4.14)

LO8	Adapt artificial intelligence methods to given problems in new application fields, complex unpredictable contexts and changing framework conditions, including the ability to determine, communicate and justify own changes in the applied methods to groups with different levels of expertise. (C 4.14)
LO9	Through independent selection of an optional module, demonstrate a critical understanding of broader theories and concepts within the field of artificial intelligence. (C 4.14)
LO10	Systematically apply qualitative and quantitative research methods to identify the differences and challenges related to biases in data and machine learning models. (C 4.14)
LO11	Derive new hypotheses and research questions in fields related to artificial intelligence and apply state-of-the-art techniques accurately to critically evaluate methodologies and hypotheses. (C 4.14)

4. The Structure of the Programme

The MSc Artificial Intelligence programme is offered as a 1-year full-time programme or in part-time mode over a 1.5 or 2-year period.

The programme is divided into modules which include both compulsory and elective modules weighing 15 credits each and a thesis weighing 45 credits. All modules in the programme are assigned to Level 7.

To achieve the full Master's award, students need to complete modules with a combined weight of 180 credits, including the final thesis.

Table 1: Structure of the Programme

Module Code	Module Name	Credit	Compulsory/ Elective
LIBFWAWADLMDSPWP	Programming with Python	15	C
LIBFEXDLMDSAM	Advanced Mathematics	15	C
LIBFAWDLMDSAS	Advanced Statistics	15	C
LIBFEXDLMDSML	Machine Learning	15	C
LIBFWAWADLMARM	Advanced Research Methods	15	C
LIBFWAWADLMSDL	Deep Learning	15	C

LIBFWAWADLMAIRIL	Reinforcement Learning	15	C
LIBFAWDLMAIIAC	Inference and Causality	15	C
Elective		15	E
LIBFMTMMTHE	Master Thesis	45	C

Table 2: List of Electives

Module Code	Module Name	Credit	Subject Area
LIBFOARNLP	Natural Language Processing	15	n/a
LIBFEXDLMAIWFCV1	Image Processing and Low Level Vision	15	n/a
LIBFWAWADLMAIEFT1	Concepts of FinTechs and Artificial Intelligence	15	n/a
LIBFEXDLMAIEHDMI1	AI in Healthcare	15	n/a
LIBFOARPDMAIEIAI1	AI in Production	15	n/a
LIBFWACSDLMAIESCM1	Concepts of Artificial Intelligence in Supply Chain Management	15	n/a
LIBFWACSDLMAIEECMDF1	Introduction to AI in E-Commerce and Marketing	15	n/a
LIBFEXDLMDSEAAD1	Architectures of Self-Driving Vehicles	15	n/a
LIBFIRPFSINTER	Internship ¹	15	n/a

5. Teaching, Learning and Assessment

Information about teaching, learning and assessment can be found in the Teaching, Learning and Assessment Strategy.

Our programmes are designed to:

- integrate theory with practice,
- develop your ability to critique and challenge models and theoretical frameworks,
- stimulate debate, discussion, and research,
- foster a variety of academic skills,

¹ Check eligibility before booking the module.

- be accessible and inclusive,
- develop global citizens.

You are expected to undertake a considerable amount of independent study, including reading, industry-related research, and personal reflection.

Teaching Formats

You will have access to both asynchronous and synchronous teaching formats.

Via the Course Feed in the virtual learning environment, myCampus, you will be able to contact the module tutor in a flexible and accessible way.

This is also where Intensive Live Sessions are conducted synchronously with video-based elements. They serve to answer students' individual questions as well as to allow for group discussions.

Additionally, Learning Sprints² will offer a seven-week intense learning experience in which the lecturers guide students through the learning material in a very structured manner, with the goal of successfully preparing them to take the final assessment at the end. During this time, frequent synchronous online meetings are held, offering keynote speeches and interactive tasks.

Both the Intensive Live Sessions and Learning Sprints are recorded to further assist asynchronous learning.

Learning Resources

You will have access to a wide range of resources, which may include the following:

- myCampus: This Moodle-based central information and digital learning platform is organized based on programmes and modules. On the respective module pages in myCampus, you can access all study materials (e.g., course books (i.e., text books), reading lists, practice exams, and video galleries) as well as the links to all related resources and databases (e.g., MS Teams, links to the library for further reading, contact details of lecturers, links to the booking tool for online exams, and the Turnitin submissions page).
- Learnhub App: You can access your learning materials in a digital app and have all your notes and highlights synchronised. The app supports different learning formats, such as reading and annotating course books using different colour codes, assessing knowledge with interactive self-tests, or watching the latest videos of the current module.
- Our comprehensive online library is aligned with the study content and kept up to date. Compulsory and further reading is mentioned in the course and module descriptions available for the students and aims to provide them with unlimited access.

² Offered only when the minimum number of participants is reached.

Assessment & Feedback

Regulations relating to progression and assessment, including information on late submissions, are as set out in The London Institute of Banking & Finance's General and Academic Regulations for Students.

Assessment strategies follow The London Institute of Banking & Finance's Higher Education Accessible and Inclusive Learning Policy.

Assessment consists of both formative and summative approaches, and feedback and feedforward are provided as outlined in the London Institute of Banking & Finance's Higher Education Assessing Learning & Feedback Policy. The different types of assessment used by the London Institute of Banking & Finance are described in the Higher Education Types of Summative Assessment Guidance.

Module assessment methods are included in Module Handbooks which are made available in myCampus.

6. Credit and Award

Credit Framework

The MSc Artificial Intelligence is made up of 180 FHEQ credits. One credit approximates to 10 student effort hours; therefore, the total course requires an average of 1,800 hours effort. Typically, one ECTS credit is the equivalent to two UK credits, although this may vary depending on the individual European state's requirements.

Award

On successful completion of the full programme, you will be awarded the MSc Artificial Intelligence.

Regulations

The London Institute of Banking & Finance's General and Academic Regulations for Students detail

- regulations governing the award of credit,
- how grades for awards are granted,
- time limits for completion of programmes of study, and
- capping of marks and regulations relating to the resitting of assessment components
- academic misconduct e.g., malpractice, and
- accreditation of prior learning (APL).

Exit Awards

In line with The London Institute of Banking & Finance's General and Academic Regulations for Students, the following applies:

Postgraduate Certificate (PgCert)	minimum of 60 credits, of which at least 40 credits must be at Level 7
Postgraduate Diploma (PgDip)	minimum of 120 credits, of which at least 90 credits must be at Level 7

Note: The London Institute of Banking & Finance does not award interim qualifications. For example, a student registered for the Master's degree will not automatically be awarded a Postgraduate Diploma or Certificate on completion of the required number of credits.

7. Professional Recognition

Credits gained via accreditation of prior learning (APL) into our awards may mean that students will not get certain exemptions from other institutions' higher education or professional awards that recognise our programmes.

8. Criteria for Admission

Normally, successful applicants will possess a 2.2 Honours degree (or equivalent) from a recognised institution.

Applicants not possessing this requirement may be considered if they can demonstrate their ability to achieve at this level and contribute to the debates, discussions, and work of the learning set. In this case, applicants may be interviewed and / or required to submit a piece of written work in addition to their application to enable an assessment to be made of their suitability for the programme.

Applicants for whom English is not their first language would be expected to demonstrate their competence through achieving an IELTS score of 6.5 or above with no element below 6.0 (or equivalent). An online English test is offered (SPEEX) if IELTS not available. Alternatively, evidence you have previously studied in English at an appropriate level and at a recognised institution, may be accepted.

9. Benchmarks

External

- QAA UK Quality Code, including:
 - Subject Benchmark Statement for Computing (2022)
 - Level 7 descriptors in the Framework for Higher Education Qualifications in England, Wales and Northern Ireland
 - Master's degree characteristics

- The Frameworks for Higher Education Qualifications of UK Degree Awarding Bodies (FHEQ)

Internal:

- The London Institute of Banking & Finance Code of Practice
- The London Institute of Banking & Finance General and Academic Regulations for Students

In addition, research with the relevant sector has been undertaken to ensure that the learning outcomes of the programme addresses identified skills and knowledge gaps.

10. Links

Teaching, Learning and Assessment Strategy

[The London Institute of Banking & Finance's General and Academic Regulations for Students](#)

[The London Institute of Banking & Finance's Code of Practice for Quality Assurance, Chapter 3: Accreditation of Prior Learning \(APL\)](#)

Accessible and Inclusive Learning Policy

Types of Summative Assessment

Higher Education Assessing Learning & Feedback Policy

[Subject Benchmark Statement for Computing](#)

[Framework for Higher Education Qualifications in England, Wales and Northern Ireland](#)

[Characteristics Statement: Master's Degree](#)

[Higher Education Credit Framework for England](#)

11. Curriculum Map of Modules against Intended Learning Outcomes of Programme

Module Code	Module Name	Compulsory / Elective	Programme Learning Outcomes										
			LO1	LO2	LO3	LO4	LO5	LO6	LO7	LO8	LO9	LO10	LO11
LIBFWAWADLMDSPWP	Programming with Python	C	X			X		X					
LIBFEXDLMDSAM	Advanced Mathematics	C	X					X					
LIBFAWDLMDSAS	Advanced Statistics	C	X			X	X						
LIBFEXDLMDSML	Machine Learning	C	X		X	X	X	X		X		X	
LIBFWAWADLMARM	Advanced Research Methods	C								X		X	X
LIBFWAWADLMSDL	Deep Learning	C	X	X	X	X	X	X	X			X	X
LIBFWAWADLMAIRIL	Reinforcement Learning	C	X	X	X	X	X	X	X			X	X
LIBFAWDLMAIIAC	Inference and Causality	C	X			X	X			X		X	
LIBFOARPNLP	Natural Language Processing	E		X	X	X				X	X		
LIBFEXDLMAIWFCV1	Image Processing and Low Level Vision	E		X							X		
LIBFWAWADLMAIEFT1	Concepts of FinTechs and Artificial Intelligence	E		X	X					X	X	X	X
LIBFEXDLMAIEHDMI1	AI in Healthcare	E		X	X					X	X		

LIBFOARPDLMIAIEIA1	AI in Production	E		X	X					X	X		
LIBFWACSDLMAIESCM1	Concepts of Artificial Intelligence in Supply Chain Management	E		X	X					X	X		
LIBFWACSDLMAIEECMDF1	Introduction to AI in E-Commerce and Marketing	E		X	X					X	X		
LIBFEXDLMDSEAAD1	Architectures of Self-Driving Vehicles	E		X	X					X	X		
LIBFIRPFSINTER	Internship ³	E					X			X	X		
LIBFMTMMTHE	Master Thesis	C		X	X	X	X	X	X	X		X	X

This table shows the distribution of the programme's intended learning outcomes (as specified in the programme specification) across the programme modules.

³ Check eligibility before booking the module.

12. Mapping of Teaching Formats and Types of Media used in the Programme Modules

Module Code	Module Name	Compulsory / Elective	Type of Assessment ¹	Teaching Formats ²			Types of Media ³					
				CF	ILSE	LS ⁴	CB	RL	OT	RB	V	PE
LIBFWAWADLMDSPWP	Programming with Python	C	WAWA	X	X	X	X	X	X		X	
LIBFEXDLMDSAM	Advanced Mathematics	C	EX	X	X	X	X	X	X	X	X	X
LIBFAWDLMDSAS	Advanced Statistics	C	AW	X	X	X	X	X	X	X	X	
LIBFEXDLMDSML	Machine Learning	C	EX	X	X	X	X	X	X		X	X
LIBFWAWADLMDSDL	Deep Learning	C	WAWA	X	X	X	X	X	X		X	
LIBFWAWADLMAIRIL	Reinforcement Learning	C	WAWA	X	X	X	X	X	X		X	
LIBFAWDLMAIIAC	Inference and Causality	C	AW	X	X	X	X	X	X		X	
LIBFOARPNLP	Natural Language Processing	E	OARP	X	X	X	X	X	X		X	
LIBFEXDLMAIWFCV1	Image Processing and Low Level Vision	E	EX	X	X	X	X	X	X		X	
LIBFWAWADLMAIEFT1	Concepts of FinTechs and Artificial Intelligence	E	WAWA	X	X	X	X	X	X		X	
LIBFEXDLMAIEHCMI1	AI in Healthcare	E	EX	X	X	X	X	X	X		X	
LIBFOARPDMAIEIAI1	AI in Production	E	OARP	X	X	X	X	X	X		X	
LIBFWACSDLMAIESCM1	Concepts of Artificial Intelligence in Supply Chain Management	E	WACS	X	X	X	X	X	X		X	

LIBFWACSDLMAIEECM DF1	Introduction to AI in E- Commerce and Marketing	E	WACS	X	X	X	X	X	X		X	
LIBFEXDLMDSEAAD1	Architectures of Self-Driving Vehicles	E	EX	X	X	X	X	X	X		X	
LIBFIRPFSINTER	Internship ⁴	E	IRP	X	X	X						
LIBFMTMMTHE	Master Thesis		MT									

This table shows the distribution of teaching formats and types of media used in the programme modules

¹EX = Exam, WAWA = Written assignment, WACS = Case study, WARE = Research essay, WAPR = Project report, P = Portfolio, AW = Advanced Workbook, OARP = Oral Assignment + Reflection Paper, OPRRP = Oral Project Report + Reflection Paper, BT/MT = Bachelor / Master Thesis

²CF = Course Feed, ILSE = Intensive Live Sessions, LS = Learning Sprints

³CB = Course Book, RL = Reading List, OT = Online Test, RB = Review Book, V = Videos, PE = Practice Exams

⁴Offered only when the minimum number of participants is reached.

⁴ Check eligibility before booking the module.