



MSc

Applied Artificial Intelligence



INFORMATICS
INSTITUTE OF
TECHNOLOGY

UNIVERSITY OF
WESTMINSTER[®]



Why Follow This Programme

The MSc Applied Artificial Intelligence programme is designed to prepare students for the rapidly evolving AI-driven world by combining strong theoretical foundations with practical, industry-focused learning. The programme enables students to develop innovative AI solutions to real-world challenges while gaining exposure to modern technologies and industry practices.

Students will develop expertise in areas such as Artificial Intelligence, Machine Learning, Deep Learning, and Computer Vision while gaining hands-on experience using contemporary AI tools, frameworks, and technologies. The programme emphasises practical and applied learning through projects, workshops, simulations, case studies, and real-world industry applications.

In addition to technical knowledge, students will strengthen their analytical thinking, research, communication, and problem-solving abilities while developing an understanding of ethical and responsible AI practices aligned with global sustainability goals. The independent MSc research project further allows students to specialise in an AI domain of interest and build advanced expertise for future career progression.

Aim of the programme

The programme aims to develop technically skilled and ethically responsible AI professionals capable of designing, implementing, and evaluating intelligent systems for industry and society.

- Critically evaluate the foundational principles and practices of artificial intelligence and machine learning.
- Design, implement, and evaluate AI models using diverse programming languages and mathematical techniques.
- Utilise machine learning in solving complex problems and enhance decision making processes
- Apply AI methodologies effectively within industrial decision-support systems and other relevant contexts.
- Understand and apply deep learning techniques and neural networks in AI systems.
- Leverage diverse AI techniques, tools, and methodologies to innovatively address a spectrum of AI-related challenges.
- Foster professional attitudes as well as the interpersonal and entrepreneurial skills required of a practitioner in the industry.
- Conduct an independent research project, demonstrating a critical understanding of the selected topic and the application of appropriate research methodologies.
- Evaluate the societal and ethical implications of AI applications, and propose actionable strategies for addressing these challenges to promote equity, diversity, and inclusion in real-world contexts.
- Employ sustainability principles and practices in the design, development, and deployment of AI systems, promoting eco-friendly and socially responsible AI applications.

Course structure - Full Time

Module Code	Module Title	Core/Optional	Credits
Semester 01			
7COSC013C	Foundations of Artificial Intelligence	Core	20
7COSC014C	Programming and Maths for AI	Core	20
7DATA001C	Machine Learning in Practice	Core	20
Semester 02			
7BUIS033C	Applied AI and Industrial Decision Support Systems	Core	20
7COSC015C	Deep Learning and Neural Networks	Core	20
7COSC016C	Applied Computer Vision	Optional	20
7DATA002C	Big Data and Cloud Computing	Optional	20
Semester 03			
7COSC017C	MSc Applied AI Project	Core	60

Course structure - Part Time

Module Code	Module Title	Core/Optional	Credits
Semester 01			
7COSC013C	Foundations of Artificial Intelligence	Core	20
7COSC014C	Programming and Maths for AI	Core	20
Semester 02			
7DATA001C	Machine Learning in Practice	Core	20
7BUIS033C	Applied AI and Industrial Decision Support	Core	20
Semester 03			
7COSC015C	Deep Learning and Neural Networks	Core	20
7COSC016C	Applied Computer Vision	Optional	20
7DATA002C	Big Data and Cloud Computing	Optional	20
Semester 04, 05			
7COSC017C	MSc Applied AI Project	Core	60

Core Modules

1. Foundations of Artificial Intelligence (20 Credits)

Introduces core AI concepts including search algorithms, knowledge representation, machine learning, and ethical considerations, with focus on real-world applications and AI evolution.

2. Applied AI and Industrial Decision Support Systems (20 Credits)

Explores AI-driven decision-making systems, simulation techniques, and their use in industry, including challenges such as bias, ethics, and automation risks.

3. Deep Learning & Neural Networks (20 Credits)

Covers key architectures such as CNNs, RNNs, and attention models. Includes hands-on training in building and deploying deep learning solutions with emphasis on interpretability and ethics.

4. Machine Learning in Practice (20 Credits)

Focuses on supervised and unsupervised learning, full ML pipeline development, model evaluation, and ethical deployment of AI systems.

5. Programming & Maths for AI (20 Credits)

Builds foundations in Python programming, data structures, graph theory, linear algebra, and probability with practical AI applications.

6. MSc Applied AI Project (60 Credits)

An independent research or industry project applying AI methods to solve a real-world problem, including development, evaluation, and reporting.

Optional Modules

1. Applied Computer Vision (20 Credits)

Introduces core computer vision techniques and practical implementation for real-world applications.

2. Big Data & Cloud Computing (20 Credits)

Covers scalable data processing, cloud infrastructure, and deployment of data-intensive AI systems.

Teaching and Assessment

Teaching is delivered through a blend of lectures, seminars, workshops, and problem-based and blended learning approaches, with opportunities for practical, hands-on application where appropriate.

Assessment methods are designed to reflect both academic knowledge and real-world application, typically including written examinations, practical assessments, and coursework such as essays, projects, portfolios, and dissertations.

Delivery Modes

All Physical Sessions

- Weekday (Friday) - 5.30 p.m. - 8.30 p.m.
- Weekend (Saturdays) - 9.00 a.m. 4.00 p.m.

Full Time - 3 modules each semester - 1 Year - *September Intake only*

Part Time - 2 Modules Each semester - 2 Years.



Admission Requirement _____

Applicants should possess:

First Class or Second Upper Division in a first degree (subject to Desk Review),

OR

Second Class Lower, Third Class, or General Degree with more than 3 years of relevant work experience. The student must also pass an academic interview,

OR

A recognised Diploma or Advanced Diploma with a minimum of 5 years of relevant work experience. The student must also pass an academic interview.

Employability and work placement opportunities

Graduates can pursue careers in multiple sectors, including technology, healthcare, finance, business analytics, and digital transformation.

Potential Career Roles

- AI Specialist
- Machine Learning Engineer
- Deep Learning Engineer
- AI Solution Architect
- AI Researcher
- Data Scientist
- AI Ethics Consultant
- AI Product Manager
- Prompt Engineer
- AI Strategy Consultant
- Computer Vision Engineer

Scholarships Available

UGC

Recognized