Course Title	MSc Data Science and Artificial Intelligence
Awarding Bodies	University of Suffolk
Level of Award ¹	FHEQ Level 7
Professional, Statutory and Regulatory Bodies Recognition	None
Credit Structure ²	180 Credits at level 7
Mode of Attendance	Full-time and part-time
Standard Length of Course ³	1 year full-time
Intended Award	MSc Data Science and Artificial Intelligence
Named Exit Awards	PgD Data Science and Artificial Intelligence PgC Data Science and Artificial Intelligence
Entry Requirements ⁴	Standard Entry Requirements of undergraduate degree 2.2 Honours, any subject
Delivering Institution	University of Suffolk

This definitive record sets out the essential features and characteristics of the MSc Data Science and Artificial Intelligence course. The information provided is accurate for students entering level 7 in the 2025-26 academic year⁵.

Course Summary

The MSc Data Science and Artificial Intelligence is a postgraduate taught degree. It is also a conversion course which is designed for students who do not have a computing undergraduate degree but who want to become experts in the field of artificial intelligence and data science. The degree has four taught modules which cover introducing programming and data management (for data science and AI), the fundamentals of AI and data science (with an emphasis on ethics, machine learning and statistically-based approaches to AI), cloud computing for big data (with a focus on Amazon Web Services and NoSQL technologies), and deep learning and advanced AI techniques, followed by a capstone masters project. Graduates of this degree are likely to take up roles in industry and commerce as data scientists, but could also progress to undertake PhD degrees perhaps using data science and AI in combination with the domain of their original undergraduate subject.

¹ For an explanation of the levels of higher education study, see the QAA Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies (2024)

² All academic credit awarded as a result of study at the University adheres to the Higher education credit framework for

England. ³ Where the course is delivered both full-time and part-time, the standard length of course is provided for the full-time mode of attendance only. The length of the part-time course is variable and dependent upon the intensity of study. Further information about mode of study and maximum registration periods can be found in the Framework and Regulations for Taught

Postgraduate Awards. ⁴ Details of standard entry requirements can be found in the <u>Admissions Policy</u> and further details about Disclosure and Barring Checks (DBS) can be found on the University's DBS webpage.

⁵ The University reserves the right to make changes to course content, structure, teaching and assessment as outlined in the Admissions Policy.

Course Aims

This course aims to:

- 1. Enable students, regardless of their first degree subject, to gain essential computing knowledge and skills, enabling them to advance deeper into the AI and data science specialism.
- 2. Enable students to gain a deep comprehensive knowledge and systematic understanding of the advanced specialism of AI and Data Science.
- 3. Enable students to apply the theory in practice, designing and developing robust quality architectures and computational solutions.
- 4. Enable students to derive meaningful insights from those solutions with a due appreciation for the uncertainties and unknowns associated with those insights
- 5. Ensure that students are fully aware of the ethical and privacy dimensions of AI and data science.

Course Learning Outcomes

The following statements define what students graduating from the MSc Data Science and Artificial Intelligence course will have been judged to have demonstrated in order to achieve the award. These statements, known as learning outcomes, have been formally approved as aligned with the generic qualification descriptor for level 7 awards as set out by the UK Quality Assurance Agency (QAA)⁶.

On successful completion of this degree, graduates will be able to:

- 1. Evaluate the technical dimensions of AI and data science architectures, solutions and techniques.
- 2. Demonstrate deep knowledge and systematic understanding of Artificial Intelligence and Data Science theory, techniques, tools and applications as informed by research and practice at the forefront of the discipline.
- 3. Combine theory, research and practice at the forefront of the discipline and use it to guide robust and high quality practical programming and computational solutions and architectures.
- 4. Understand the ethical and privacy dimensions of Artificial Intelligence and Data Science, including equality, diversity, and inclusion (EDI), as well as any economic, social, and environmental impact.
- 5. Critically review literature, software and systems.
- 6. Possess system-level competencies in assessing, understanding, creating and improving AI and data science solutions and architectures.
- 7. Possess translational skills to communicate solutions and insights to technical and non-technical audiences.
- 8. Recognise and respond to opportunities for innovation.
- 9. Set goals and identify resources for lifelong learning.

Course Design

The design of this course has been guided by the following QAA Benchmarks:

The QAA subject benchmark for Computing (2022)

(https://www.qaa.ac.uk/docs/qaa/sbs/sbs-computing-22.pdf)

⁶ As set out in the QAA Frameworks for Higher Education Qualifications of UK Degree-Awarding Bodies (2024)

Course Structure

The MSc Data Science and Artificial Intelligence comprises modules at level 7.

Module Specifications for each of these modules is included within the course handbook, available to students on-line at the beginning of each academic year.

	Module	Credits	Module Type ⁷	
Level 7				
	Introduction to Programming and Data Management	30	Requisite	
	Fundamentals of AI and Data Science	30	Requisite	
	Cloud Computing for Big Data	30	Requisite	
	Deep Learning and Advanced AI Techniques	30	Requisite	
	Masters Project	60	Mandatory	

Awards

On successful completion of the course, students will be awarded a MSc Data Science and Artificial Intelligence. Students who leave the course early may be eligible for a Postgraduate Diploma or a Postgraduate Certificate in Data Science and Artificial Intelligence on successful completion of 120 credits or 60 credits, respectively.

Course Delivery

The course is delivered at the DigiTech Centre at Adastral Park and on the Waterfront Campus. Students studying full-time on MSc Data Science and Artificial Intelligence are likely to have approximately 610 tutor structured learning hours. Tutor structured learning will be a mix of 216 class hours of lectures, seminars and practical workshops and 34 hours of individual tutorials as well as 360 hours of research and practical work. Students will normally be expected to undertake 25 hours of independent study in an average week, but should be prepared for this to vary based on assignment deadlines and class exercises.

Course Assessment

A variety of assessments will be used on the course to enable students to experience and adapt to different assessment styles. The assessment methods used will be appropriate to assess each module's intended learning outcomes. Assessments on the course include time constrained assessments, technical reports, programming portfolios, presentations, dissertations and research projects. Each module also has several opportunities for formative feedback which will focus on both strengths and areas for improvement in each module (formative assessment does not count towards the degree classification). Group activities (non-assessed) will encourage peer learning and collaboration skills.

Special Features

Students will have the opportunity to pursue industry certifications (such as AWS Certified Cloud Practitioner, SQL and NoSQL database certifications) as part of this degree.

⁷ Modules are designated as either mandatory (M), requisite (R) or optional (O). For definitions, see <u>the Framework and</u> <u>Regulations for Taught Postgraduate Awards</u>

Course Team

The academic staff delivering this course are drawn from a team that includes teaching specialists and current practitioners. All staff are qualified in their subjects with their own specialist knowledge to contribute.

Course Costs

Students undertaking MSc Data Science and Artificial Intelligence will be charged tuition fees as detailed below.

Student Group	Tuition Fees
Full-time UK	£10,215 per year
Part-time UK	£1,703 per 30 credit module
Full-time EU/International	£15,930 per year
Part-time EU/International	£2,655 per 30 credit module

Payment of tuition fees is due at the time of enrolment and is managed in accordance with the Tuition Fee Policy.

Academic Framework and Regulations

This course is delivered according to the Framework and Regulations for Taught Postgraduate Awards and other academic policies and procedures of the University and published on the <u>website</u>.