University of Suffolk

DEFINITIVE COURSE RECORD

Course Title	**BSc (Hons) Data Science [Degree Apprenticeship]**
Awarding Body	**University of Suffolk**
Level of Award[1]	**FHEQ Level 6**
Professional, Statutory and Regulatory Bodies Recognition	**None**
Credit Structure[2]	**360 Credits** **Level 4: 120 Credits** **Level 5: 120 Credits** **Level 6: 120 Credits**
Mode of Attendance	**Full-time**
Standard Length of Course[3]	**3 years full-time (plus 6 months typically for EPA)**
Intended Award	**BSc (Hons) Data Science**
Named Exit Awards	**Cert HE Data Science** **Dip HE Data Science**
Entry Requirements[4]	Entry onto the programme will be subject to applicants holding: • 112 UCAS points • Level 2 English and Maths at GCSE grade C/4 or above (or equivalent) Applicants who do not hold these qualifications may be considered on an individual basis based on their overall application, work experience and course applied for. Under apprenticeship regulations apprentices must have the right to work in the UK, be employed and spend at least 50% of their working hours in England. Apprentices are required to meet the specific requirements relevant to their qualification and their employer will need to have registered an apprentice service account.
Delivering Institution(s)	**University of Suffolk**

[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 Admissions Policy and further details about Disclosure and Barring Checks (DBS) can be found on the University's DBS webpage.

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This definitive record sets out the essential features and characteristics of the **BSc (Hons) Data Science [Degree Apprenticeship]** course. The information provided is accurate for apprentices entering level 4 in the 2027/2028 academic year[5].

Course Summary

This degree apprenticeship is a comprehensive, broad ranging and fast moving industry recognised qualification that spans mathematics, statistics, software engineering and communication,

With the exponential growth in the amounts of data produced and its value to business, data informed decision making sits at the heart of all industries and businesses. The role is sector agnostic where strategic and operational decision making is based on sourcing and manipulating relevant data.

Data Scientists are increasingly in demand across all industry sectors. They have the ability to identify information in complex and diverse data sets which can then be used to address business issues and improves organisational process and practices. Within their work they look to address data bias whilst undertaking their analysis ethically and within the complex network of national and international regulatory frameworks.

The future growth and efficiency of the majority of businesses are dependent on these newly developing skills. This is a significant growth sector with the value and amount of data produced growing exponentially. With data informed decision making at the heart of all industries and businesses the need for highly qualified and insightful data scientists has never been greater

Course Aims

In providing this course, the University and course team aim to:

1. Produce adaptable, work-ready and ethically-minded data professionals with strong data engineering skills
2. Enable apprentices to master the full data science lifecycle from data acquisition and engineering through modelling, evaluation and presentation, meshed with business awareness and collaborative mindset.
3. Align the curriculum to the knowledge, skills & behaviours set in the Data Scientist Apprenticeship standard
4. Develop apprentices' ability to integrate modern AI tools to (semi-)automate data science processes
5. Develop apprentices' communication and professional skills

Course Learning Outcomes

The following statements define what apprentices graduating from the BSc (Hons) Data Science 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

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

with the generic qualification descriptor for level 4/5/6 awards as set out by the UK Quality Assurance Agency (QAA)[6].**Knowledge and Understanding**

A1. Systematically understand the end-to-end data science lifecycle from data acquisition and engineering through modelling, evaluation and insight presentation.
A2. Critically compare data management systems and platforms, articulating trade-offs in performance, scalability, governance and cost.
A3. Demonstrate in-depth knowledge and understanding of the ethical, legal and security challenges of AI and data science work—including fairness, transparency, privacy and regulatory compliance—and how to address them.

Cognitive Skills

B1. Reformulate ill-defined business problems into testable data-science hypotheses and robust experimental and research agendas.
B2. Evaluate the technical dimensions of modern data science architectures, solutions and techniques.
B3. Critically synthesise and interpret complex analytical and machine learning outputs to generate evidence-based conclusions and actionable recommendations.

Subject Specific Skills

C1. Design and build reproducible large-scale data pipelines both in the cloud and on-premises.
C2. Implement, tune and operationalise machine learning and AI models for solving complex data science problems.
C3. Engineer full-stack data applications using robust software engineering practices and modern DevOps tools.

Transferable skills

D1. Persuasively communicate strategic data-driven narratives in oral, written and advanced data-visual mediums to influence decision-making among technical and non-technical stakeholders.
D2. Plan and undertake a data science project of significant complexity and scale, from inception to completion.
D3. Demonstrate independent inquiry and innovation by testing strategic questions using rigorous scientific approaches and entrepreneurial insights.
D4. Evaluate and employ emerging AI technologies to automate multi-steps workflows, while aligning with organisational goals and compliance requirements.

Course Design

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

- QAA Subject Benchmark in Computing (2022)
- Data scientist (integrated degree) / Skills England

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

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Course Structure

The BSc (Hons) Data Science comprises modules at levels 4, 5 and 6.

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

Level 4

Module Code and Title	Credits	Module Type[7]
Programming Fundamentals and Developer Tools	30	R
Applied Mathematics for Data Science	30	R
Data Analytics and Visualisation	30	R
Data Management, Ethics and Security	15	R
Project Management and Professional Development	15	R

Level 5

Module Code and Title	Credits	Module Type[7]
Machine Learning	30	R
Big Data and Cloud Computing	30	R
Software Engineering and User Experience	30	R
DevOps (Software Development and Operations	15	R
Advanced Project Management and Professional Development	15	R

Level 6

Module Code and Title	Credits	Module Type[7]
Applied AI	30	R
Data Science Project	30	M
End Point Assessment	60	M

Awards

On successful completion of the course, apprentices will be awarded a BSc (Hons) Data Science [Degree Apprenticeship]. Apprentices who leave the course early may be eligible for a DipHE Data Science on successful completion of 240 credits including all mandatory modules at levels 4 and 5, or a CertHE Data Science on successful completion of 120 credits including all mandatory modules at level 4.

Course Delivery

The course is delivered at the Ipswich Campus of the University of Suffolk. The delivery of each module will vary to meet the specific learning outcomes. Apprentices will receive 25 hours of direct tutor support for 15 credit modules and 50 hours for 30 credit modules. Apprentices will also complete a further 100 hours of blended tutor-set learning using Brightspace.

Apprentice contact time will include alternating weekly face-to-face (6 hours/week) and online sessions (6 hours/week) on the same day. Contact time will also include 2-hour weekly virtual cafes and tutorials. Lectures and Seminars will be the base from which apprentices will be encouraged to develop their knowledge and skills. This will be supported by tutorials, virtual cafes and asynchronous activities Brightspace.

Apprentices will normally be expected to undertake 21 hours of independent study in an average week for 30 credit modules and 10 hours per week for 15 credit modules but should be prepared for this to vary based on assignment deadlines and class exercises. They will usually undertake the apprenticeship alongside their work within an employer providing them a mixture of taught and on-the job training. This allows apprentices to apply what they have learnt directly to their work.

Course Assessment
A variety of assessments will be used on the course to enable apprentices to experience and adapt to different assessment styles. The assessment methods used will be appropriate to assess each module's intended learning outcomes. Assessment on the course overall will be including database design, project reports, presentations, group projects, reflective learning journals, case studies and practical assessments.

Special Features
The experience gained upon completion of the apprenticeship will make apprentices eligible to apply to The Science Council for Registered Scientist (RSci) status through a shortened process upon completion.

End Point Assessment
All apprentices on the course undertake an End Point Assessment (EPA) to complete their BSc (Hons) Data Science. Apprentices will be expected to undertake the EPA as part of their degree. The EPA will be delivered by an Independent End Point Assessor (IEPA) who may be a member of University staff unconnected to the course or from an external training provider

EPA is an assessment of the knowledge, skills and behaviours that apprentices have learned throughout their apprenticeship and confirms that they are occupationally competent in accordance with the relevant Apprenticeship Standard and Assessment Plan. The EPA must be completed over a maximum total assessment time of 6 months after you have met the EPA gateway requirements.

Apprentices can only progress to the EPA once they have satisfied the gateway requirements set out in the assessment plan within the Apprenticeship Standard. As part of this, apprentices, their employer and the University should all be confident that they have attained sufficient skills, knowledge and behaviours to successfully complete EPA. To move through gateway apprentices require:

- English and maths at Level 2
- 300 university credits
- A work-based project (to inform the Report) that consists of 30 credits

- Portfolio of evidence (to inform Professional Discussion) with evidence from between six and eight real work projects/pieces of work with an evidence locator
- Employer agreement that working at right level.
- Statements of authenticity

Terms of Reference for the WBP will be approved by your assessor and apprentices will then have five (5) months from sign off to submit the 5000-word WBP report. Their final assessment Live Assessment Day will take place within six (6) months of the EPA start date and comprises two elements

- Knowledge Test; one hour, 30 multiple choice questions, closed book. Must be passed prior to undertaking other elements.
- Project Report (on a work-based project); 7500 words (+/-10%) including evidence annex and mapping
- Professional discussion; only proceed if you have completed and submitted the Project Report, 90 mins (+/- 10%)

Apprentices will receive an overall EPA grading of Distinction, Merit, Pass or Fail.

Following successful completion of the EPA Apprentices will achieve their Data Scientist Apprenticeship

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

Apprentices undertaking BSc (Hons) Data Science [Degree Apprenticeship] will not be charged tuition fees directly. Tuition fees will be agreed between the University and an apprentice's employer. Apprentices will be required to sign a commitment statement before starting their apprenticeship which will detail the apprentice's, employer's, and University's expectations under the apprenticeship agreement.

Apprentices are likely to incur other costs for books, other learning materials and site visits amounting to a maximum of £200.00 per year.

Academic Framework and Regulations

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